# Centre for Economic Demography
A Linnaeus Centre of Excellence at
Lund University, Lund, Sweden, founded in 2006

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1. Centre for Economic Demography

The Centre for Economic Demography is located at the School of Economics and Management, Lund University, Sweden, and financed by the Swedish Research Council (Vetenskapsrådet) through the first round of Linnaeus Grants in 2006 and Lund University. It includes scholars from the Faculties of Economics and Management, Social Sciences, and Medicine at Lund University as well as scholars from other Swedish universities.

Economic demography explores the relationship between population and economy in a broad sense; how a population is influenced by economic development and how population changes affect the economy. The classical dilemma, still relevant in our times, is whether the economic resources will suffice for an ever-increasing population. Other areas of interest are the impact of economic factors on the long-term decline in mortality, and the diminishing family size that is linked to the demographic transition. Relevant contemporary research topics include the causes and consequences of long waves in births, and the impact of changing demographic age structure and population composition on the economy. Yet another important area deals with the interplay between economic cycles and short-term variations in nuptiality, fertility, mortality and migration. Special interest is also given to studies on family and labour market, migration patterns, and health and mortality issues. All these areas are to a certain degree interrelated and by embracing them in a coherent framework of analysis we can, e.g., study immigrants’ family formation, their fertility behaviour, their entry and exit on the labour market, and their health status and mortality patterns. The interdisciplinary character of the Centre for Economic Demography enables a holistic perspective on such research areas and the access to the Scanian Demographic Database, as well as other databases with longitudinal individual level data, allows a life cycle approach combining economic and demographic factors at micro and macro levels. In addition, the Centre hosts the Swedish Research School in Economic Demography and is involved in the Master Program in Economic Demography at Lund University as well as in several international schools in demography.

1.1 Background

Over the last decades, economic demography has grown and developed into what is now a well-established and expanding research area at Lund University. It started as a research group at the Department of Economic History. Both the works of Gunnar Fridlizius within the field of population development in the agrarian society, and the studies by Rolf Ohlsson on post-war immigration to Sweden, has served as sources of great inspiration for the research at the department. In 1978, Fridlizius and Ohlsson, together with Tommy Bengtsson, initiated a research program on the demographic transition in Sweden. Research, seminars and courses started in 1981 and throughout the 1980’s, collaboration with researchers in economics and statistics were well under way. In the 1990’s, the expanding group of scholars was also complemented by colleagues from the disciplines of social medicine and social work. The members of the group also lecture in economic and demographic history as well as in labour market courses, on under-graduate and graduate levels alike. Today, the Centre comprises more than 20 scholars, with varying degrees of research activity in economic demography, and a large number of doctoral students and research assistants, from three faculties and five disciplines at Lund University as well as scholars from other Swedish universities.
Lund University named the field of economic demography and longitudinal population studies one of its ten prioritized areas of research already in 2000, and special funding from the Faculty of Social Sciences was earmarked for the research on demography and population processes; more precisely for the construction of in-house demographic databases and international research courses in economic demography. The support has since continued and in 2005 the School of Economics and Management funded another international research course in economic demography in collaboration with the International Max Planck Institute of Demographic Research in Rostock, Germany.

Collaboration between senior researchers and graduate students to a large extent take place within externally financed projects. There are a large number of on-going projects primarily focused on either historical demography – including studies of migration, mortality, fertility, and household economy – or modern demography – with emphasis on migration, social welfare, and health-care areas. Supplementing these individual projects, are three ongoing research programs, concentrated on theoretical and methodological issues, on the study of the elderly and the economy, and on immigrant gaps in labour supply and labour market attachment, all three financed by the Swedish Council for Working Life and Social Research (FAS).

The research group has a very extensive international network of contacts and cooperation. A number of the research projects in the group are formed as country comparative studies and continuous international exchange and guest lectures take place within the work of the group. The result of our research has been and is expected to continue to be of major relevance to academia as well as to potential users and policy-makers interested in the dynamics of economic demography. The current main areas of research within the Centre for Economic Demography are:

- Factors behind changes in fertility: the long-term decline, the long waves, and the short-term variations
- Factors behind changes in mortality: the long-term decline, age-specific mortality, and causes of death
- Factors behind immigration, and emigration/return migration: economic and political aspects, and the economic integration of immigrants
- Demographic causes of changes in age composition
- Effects of decreasing child-births: the family, the school and educational system
- Effects of increasing longevity (individual ageing): the individual, the family, geriatric care, and the pension system
- Effects of changes in age composition (population ageing): the labour market, the health care system, and the pension system

1.2 The Centre for Economic Demography at the School of Economics and Management, Lund University – Members, Institutions and Regional Context

The Centre, founded in 2006 by Lund University and located at the School of Economics and Management, consists of researchers from the Faculty of Social Sciences, the Faculty of Medicine and the School of Economics and Management at Lund University, the Baltic Business
School at the University of Kalmar, and from other Swedish universities. Prior to the establishment of the Centre, long-standing cooperation and close contacts had existed between members of the partner institutes and all are individually internationally well-known researchers with solid academic track records. The establishment of the Centre will create further opportunities to deepen such collaboration and secure the potential synergies of more intense collaboration and exchange of ideas and perspectives.

Founded in 1668, Lund University is the largest educational and research unit in the Nordic countries, and has a long-standing reputation for solid knowledge production and distribution in almost all academic fields. Lund University has about 41,000 students, 3,200 Ph.D. students and 6,500 employees (among whom two thirds are active in research and teaching). The wide range of areas researched and taught at Lund University is demonstrated by its faculties: Technology (Lund Institute of Technology, LTH), Social Sciences, Economics and Management, Science, Law, Medicine, Liberal Arts and Theology, and Performing Arts. Within Lund University, there are also inter-faculty centres, including among others Industrial Environmental Economics, the Food Centre, and the Centre for European Studies. The size and quality of Lund University will benefit the Centre for Economic Demography.

Lund is situated in the Øresund Region, the dynamic border region between Sweden and Denmark. Being located in Lund, the Centre will benefit from the regional knowledge potential. Lund University is, for example, a member of Øresund University, a network including twelve universities and university colleges on both sides of the Øresund. Within Øresund University, about 130,000 students and 10,000 researchers are active within a wide spectrum of disciplines.

For further development of the international contacts of the Centre, guest researchers will be invited for extended periods to create an exciting international research and teaching milieu. The establishment of an International Advisory Board (see section 6) will offer the possibility of inviting its members to Lund as guest researchers or to give seminars and lectures within the framework of the Centre for Economic Demography. This will benefit not only researchers and students, but also interested user groups.

The Centre will complement the regional and national knowledge infrastructure by becoming a world-leading Centre of Excellence dedicated to the field of economic demography.

1.3 Value Added by the Centre for Economic Demography

The structure, characteristics and objectives of the Centre for Economic Demography imply that it will create value added in relation to research, teaching, public service, and other relevant activities, summarised as follows:

- The Centre will be structured in a multidisciplinary framework which will enable the exploration of research areas from different perspectives within joint projects and research activities.
- The Centre has a cross-faculty structure, bringing together researchers from the Faculties of Social Science and Economic with colleagues from the Faculty of Medicine at LU.
• The international excellence at the Centre will be provided by the director and the senior staff at the Centre as well as by visiting researchers and scholars invited to the Centre, and through joint projects carried out within already established networks of researchers that the members at the Centre have formed. It will be secured by a scientific advisory board, which will include well-known international and national scholars.
• Research on the main areas of interest – health and mortality transitions, family formation and childbearing, labour market participation, and social and geographic mobility – has been, and is presently, carried out within the research group and it will benefit greatly from the synergy effects that will be offered through the formation of a research centre, bringing the researchers from different fields of academia into close and intensive contact.
• The Centre will also undertake teaching at both graduate and undergraduate level and offer students well-integrated courses in line with the aims of integration and synergy mentioned above. Teaching will take place within the framework of the Swedish Research School in Economic Demography and as part of international collaborations within the European Doctoral School of Demography and the International Max Planck Research School in Demography.

2. State of Research and Future Research Areas

2.1 Background

It is possible to distinguish certain topical areas in the field of economic demography in which the group has been active and produced research for a number of years, and which will remain our focus of future research efforts: (I) Classical demography (analyses of aggregated time-series data from 1750 to present day), (II) Historical individual-level analyses (up to 1895) and (III) Modern individual-level analyses (from 1968 onwards). In all three, special attention is devoted to institutional and contextual issues. All three areas have an international comparative dimension, and we have started international projects within the second and third areas.

(I) In analyses of aggregated demographic change, the group can greatly benefit from the access to high-quality demographic data (including migration) of substantial detail. The data stretch far back in time, partly even further than the official census system established in 1749. We are also fortunate to have good economic data back in time. Most of our early work was based on these sources, of which one project covered the demographic transition in Sweden (Bengtsson, Fridlizius, Ohlsson). This work dealt mainly with the causes of the great mortality decline and demographic vulnerability to economic fluctuations, and led to a major rethinking of both the preindustrial population system and the demographic transition as such. More recently, the long-term variation in fertility in Sweden during the 20th century has also been analysed, interconnecting the demographic and economic development (Stanfors). The consequences of demographic changes on the education system and the employment structure in companies and organisations have been widely analysed. This research gained great recognition from the 1980s onwards and also earned a prestigious prize from the Academy of Science in 1988 (Ohlsson). Issues related to intergenerational transfers, e.g., pension systems, inheritance practices, and old age care, have constituted important areas of research both regarding historical
(II) As regards analyses based on historical longitudinal data on individuals combined with community information, we have worked and published extensively in all fields of demography: mortality, fertility, migration, and marriage, using a high-quality database developed within the group (Bengtsson, Dribe, Lindström, Lundh). We have initiated two large-scale international projects, which both took advantage of methodological and theoretical approaches developed by the group in collaboration with Professor Göran Broström, statistician at Umeå University, who is working with us. One of the projects, the Eurasian Project on Population and Family History (EAP), also applies a new standard of living concept developed, by members of our group, and has a special book series with the MIT Press. The first book, in a series of five, dealing with mortality, recently received a book prize from the American Sociological Association. We are now in the process of finalising the second book, on fertility, and analyses for a third volume, on marriage patterns, are on-going. Our second large international project deals with the long-term health impact of conditions in early life and during the life-course, and has received funding both from major Swedish agencies (RJ, SFR/FAS, HSFR/VR) and the US National Institutes of Health. Results from this project have been published in the leading epidemiological and demographic journals and in books by internationally well-known publishers. We argue that the group is at the international forefront within historical demography.

(III) The research on contemporary micro-level demography has been dealing with a wide range of issues, but has especially concerned family dynamics including marriage, fertility, parental work sharing, and leaving home (Bolin, Persson, Meyer, Dribe, Scott, Stanfors), health and health economics (Bengtsson, Bolin, Lindström, Merlo, Scott) and immigrant integration into Swedish society (Klinthäll, Jonsson, Hammarstedt, Lundh, Rooth, Scott). In this research, longitudinal individual-level data based on population registers and surveys have been used mainly for the period from 1968 onwards. We have, for example, investigated why there have been large declines in job opportunities and incomes of immigrants relative to natives in recent decades. Overt discrimination is formally prohibited in Sweden but difficult to prove; hence, we have been working on improving the methods for analysing economic discrimination. We have documented that immigrants have a higher degree of sick-leave and early retirement and low health status vis-à-vis natives with similar characteristics (Bengtsson, Scott). Research has also been done on demographic aspects of unemployment, temporary jobs, and human capital formation (Jonsson, Nordin, Rooth, Wallette). Our analyses in this area are of high international standard and have been reported at international conferences and in international peer-reviewed journals.

2.2 Specification of Research Problems

Our aim is to integrate these research areas, and we are especially concerned with improving the knowledge of the important processes taking place between the end of the “historical period” (before 1895) and the beginning of the “modern digitised period” (after 1968). In the following we outline three important research areas – all with far reaching implications for contemporary society – to which we plan to direct much of our future attention, and to which the extended micro-level database (SDD) will contribute significant new knowledge and increased understanding.
3. Planned Research

The research within the framework of the Centre for Economic Demography will be focused on three research areas. Specific research projects will be formulated in these fields, which may change over the years of the Centre’s operation. The three areas presented below constitute core areas of the Centre’s research. As will become obvious, the research areas are closely related. Additional areas within the general research focus of the Centre may also be added at a later stage.

3.1 Research Area 1: Health and Mortality

A. The Great Mortality Decline

Improvements in real income, human stature, and health have taken place at an unprecedented pace during the last two hundred years. Life expectancy has more than doubled; in best-practice countries it has continuously increased by almost three months per year for females, and slightly less for males (Oeppen & Vaupel 2002). Sweden is one of the countries that have often been in the lead, as has Norway, New Zealand, and Australia, but Japan is the world leader today. Most of the gains were initially due to improved survival at younger ages but by the mid-twentieth century that factor had played out; from then on reductions in mortality at old age became the prime force behind increasing life expectancy (Bongaarts & Bulatao 2000:117-123).

The research carried out within our group as regards mortality trends has mainly been directed towards the period before 1895. Fridlizius (1989) argued that McKeown’s (1976) conclusion was wrong, i.e. that improvement in nutritional status was the major determinant also of the initial mortality decline (before the mid-19th century). For Sweden, Fridlizius found that the decline was strikingly similar regardless of regional economic and social development. Furthermore, the decline in Western Europe was also equally uniform, despite the fact that some countries were industrialised one hundred years or more before others. The decline was mainly due to a rapid reduction of smallpox mortality, but began prior to the initiation of effective smallpox inoculation (Bengtsson 1998; Sköld 1996). Thus, the pattern bears strong resemblance to the decline in several childhood diseases that became less severe during the latter part of the 19th century, including whooping cough, measles and scarlatina. Instead, the initial phase of the mortality transition was caused by a change in the balance between pathogens and the human host (Fridlizius 1989).

While our own research on mortality trends has been primarily on the period before 1895, we know from macro level data that not only infant and child mortality, but also adult mortality declined rapidly in the beginning of the twentieth century. The improvements in survival are far from smooth and regular. The decline among adults in working ages, for example, came very abruptly in the 1920s. Again, we have very little knowledge about its causes and the same holds true for the decline among the elderly after the 1950s. Likewise, we know little about socioeconomic differences in mortality for earlier decades. Our knowledge about the long-term changes in health and mortality given above is not the outcome of an analysis of any particular geographic areas but an assemblage of information from various locations, from different time periods. Even comparative studies, like Preston’s analysis of the changes in cause-specific mortality at the beginning of the 20th century (Preston 1976), are based on data for a few years and a small amount of countries. Furthermore, these investigations are mainly studies at the macro-level, where details on socioeconomic conditions are lacking. The problem so far
has not been to identify factors that influence longevity but to evaluate the impact of each of these. To do this, we need detailed longitudinal information at individual level as well as at local community level regarding public health interventions, medical practice, economic conditions, etc. By expanding our present database for southern Sweden up to 1968, and then linking it to existing digitised registers, we will be able to analyse the trends in health and mortality by cause of death in great detail and evaluate the impacts of the various factors.

B. Short-term Economic Stress and Death

Another part of our research has focused on the short-term mortality variations, which have been reduced over time as living standards and environmental control have improved. Our first analyses were on the influence of real wage and food-price changes on mortality using cross-spectral analysis, later followed by distributed lag models, and we found pronounced changes over time as living standards improved (Bengtsson & Ohlsson 1985). In analyses using distributed lag models (Lee 1990; Galloway 1988), the mortality response differs much more between countries than the fertility response. By improving both methods and data, we were able to analyse the impulse response function of real wage changes on mortality, which gave details about the response by age and sex (Bengtsson & Broström 1997). Still, the aggregated analyses gave no details as to how different socioeconomic groups responded. To study the interaction between short-term economic stress and socioeconomic status and other factors at individual- and household-level, we therefore combined a time-series and an event-history approach within a Cox regression framework (Bengtsson 1993).

This approach has gained large international interest and Ronald Lee (1993) ranked it as the most important methodological achievement in historical demography during past decades. Since then, it has been used in several international projects, both historical and contemporary. It has been further refined within the Eurasia Project on Population and Family History (EAP), which deals with historical demography from a household perspective in Sweden, Belgium, Italy, China and Japan. The purpose of this project is to investigate the actions taken by families in preindustrial and early industrial societies in response to three different forms of stress: long-run economic stress, short-term economic stress and demographic stress. Long-run economic stress refers to the long-term Malthusian balance between population size and resources, while short-term economic stress refers to the response to short-term changes in income, employment opportunities or food availability. Demographic stress, which of course in some sense is also economic, could be e.g. the death of the head of household, or of an adult worker. The analyses are made using event-history analysis covering about 100,000 individuals in 100 different villages in the five national regions in total.

In 2004, the first collective EAP volume produced in the project was published: *Life Under Pressure: Mortality and Living Standards in Europe and Asia, 1700-1900* (Bengtsson, Campbell, Lee et al.) which deals with mortality, and especially the interplay between economic stress, socioeconomic position and household context. We show that, contrary to the Malthusian claim that the positive check was more important in the East than in the West, mortality responses to short-term economic stress were just as great - or even greater - in the European communities as in the Asian ones. The role of human agency for mortality outcomes is also highlighted. Especially in the Asian communities, families took active measures in times of economic stress, e.g., by increasing infanticide.
The application of the EAP model to living standards, with fertility and migration response to short-term economic stress added, was continued in the book *Living Standards in the Past. New Perspectives on Well-Being in Asia and Europe* (Allen, Bengtsson, & Dribe, 2005). In this book, analyses of the EAP communities are compared with more traditional analyses of historical living standards. The book clearly demonstrates the important contributions made by the EAP project to more general comparative economic history, as it offers new ways of understanding the long-term economic development of Europe and Asia. More specifically, for Sweden, it shows that the commercialisation of agriculture in the beginning of the 19th century led to enlarged social gaps; the landless population became increasingly more vulnerable to short-term economic stress. The society was evidently not capable of satisfying the needs of the lower strata, and not until much later did their living standard improve. Another finding was that the landless were unable to escape dire situations through migration since job alternatives were rare; instead, they postponed births to even out their consumption in the short run (Dribe 2000).

While response to short-term economic stress was reduced during the latter part of the 19th century, it did not disappear, and there is no reason to assume that short-term economic stress was eliminated during the 20th century. Food prices, and later unemployment and income, still varied a lot and so did fertility, migration, and mortality. By closing the gap in micro-level data, we will be able to analyse the impact of short-term economic stress on mortality and evaluate effects of changes in the local environment including changes in the social welfare and health care systems (Edebalk 2002).

C. The Life-Course Approach

In a study of Sweden, using macro-level data, Fridlizius showed that *birth cohorts* experiencing higher child mortality than neighbouring cohorts retained their higher mortality risks throughout life (Fridlizius 1989). This finding is much in line with earlier studies of Kermack et al. (1934) who used a similar approach in analysing macro-level mortality data not only for Sweden, but also for England, Wales, and Scotland. While the cohort approach fell into disuse for a long time, it was brought up again by Preston and van de Walle, Fridlizius, Fogel, Barker and others (see Elo & Preston 1996). At the same time as contemporary analyses have been based on longitudinal micro-data, historical studies have mainly been carried out on macro-level.

Our research is among the very first that use historical micro-level data to test the various early-life hypotheses simultaneously (Bengtsson 1999; Bengtsson & Lindström 2000, 2003; see also Finch & Crimmins 2004). It shows that health status in the later stages of life was greatly influenced by the previous occurrence of diseases, in particular during the first year of life. Children born in times of prevalent outbursts of smallpox and measles often succumbed to pneumatic diseases as adults (Bengtsson & Lindström 2000). Children who were heavily exposed to infectious diseases during their first year of life experienced higher mortality risks as adults than other children. Thus, the negative scarring effects dominated over potential positive effects through increased immunity and escape (see Preston et al. 1998). The effect, however, varied depending on socioeconomic status; for those who had been exposed to diseases during their first year and who did not own any property at the age of 50, the mean expected length of life was seven years below that of the landowning peasant population (Bengtsson & Broström 2003).
We also found that women giving birth to a large number of children risked dying to a larger extent than the mothers of few children (Dribe 2004). Rather than previous biological explanations for the interconnection between childbirth and health in later life, the study shows that the combination of strenuous physical hardship and repeated pregnancies had the heaviest impact.

In recent years the early-life perspective in epidemiology and social distribution of diseases has been investigated in relation to cardiovascular diseases (CVD), diabetes mellitus, obesity, blood pressure, respiratory and allergic diseases, cancer, biological ageing, and neuropsychiatric diseases (Kuh & Ben-Schlomo 2004). The life-course research in Social Medicine at Lund University is mainly concerned with CVD. Many studies have shown differences in the social distribution of CVD according to geographical and socioeconomic factors. The notion that disease determinants are in part environmental was developed in Durkheim’s concept of “social fact” (Durkheim 1964) and in Rose’s idea of “causes of disease incidence” (Rose 1992). Both argued that there are ecological influences on individual health. Individuals from the same population share a number of historical, socioeconomic, genetic, life-style, and health-care system factors that may condition a common level of cardiovascular health over and above individual characteristics.

It is only after the relatively recent introduction of appropriate analytical methods, i.e., multilevel regression (Goldstein 2003), that we are able to use the concepts discussed by Durkheim and Rose in an operative sense and separate ecological from individual determinants of cardiovascular health. The pathways between area characteristics and individual health are insufficiently understood (O’Campo 2003). At present, different conceptualisations like social capital (Kawachi & Berkman 2002), and collective efficacy (Sampson, Morenoff, & Gannon-Rowley 2002), along with other approaches (see, e.g., Macintyre & Elleway 2000; Diez-Roux 2000) try to explain cross-level mechanisms, and we are considering these approaches in an interpretative framework (see also Bolin et al. 2002).

In addition, it is known that individual exposure to both early-life and later-life socioeconomic disadvantage affects CVD risks (Davey Smith, Ben-Schlomo, & Lynch 2002). From a life-course perspective, early exposure to deprived environments could explain some of the geographical differences in cardiovascular mortality and risk factors. However, it is still not sufficiently understood how cumulative exposure to different social environments influences individual CVD risk over and above current socioeconomic position. In a life-course developmental framework, the effects of various aspects of the environment are literally embodied over time. In other words, what is at one point in time classified as an individual-level variable could equally well, at another point in time, be conceptualised as a characteristic of past environments in which those individuals grew up.

Juan Merlo’s LOMAS project combines longitudinal data collected over a 40-year period (1960-2002) and multi-level data collected at the individual, household, parish, municipalities and hospital levels. The project aims to better understand and quantify the life-course and multilevel processes that generate social disparities in CVD risk.
By using the LOMAS database, we have a unique possibility of developing detailed measures of trajectories in socioeconomic characteristics at both individual and community level. By expanding the existing data set for southern Sweden forwards in time, we will be able to analyse mortality and health from a life-cycle perspective for a large number of birth cohorts well into the 20th century. Hence, we will be able to analyse not only the influence of social and economic conditions at birth, and during childhood, but throughout the entire life-course, as well as possible effects of various social interventions. By linking to existing registers we can follow all persons living in the region wherever they migrated to within the Nordic countries. We can obtain a sub-sample of persons for whom we have very detailed information on health and health care, and full information on the socioeconomic situation of both themselves and their families over the entire life-course, which is unique.

3.2 Research Area 2: Family and Childbearing

A. The Making of the Two-child Family

One of the major demographic changes during the last 200 years is the emergence of the two-child norm as part of the creation of the modern family. The beginning of this change took place in the process of the demographic transition in the 19th century. Swedish fertility started to decline around 1880, and after about 50 years total fertility had declined from about 4.5 children per woman to below 2. Since then, although period fertility rates have fluctuated widely, cohort fertility has remained quite stable around 2 children per woman, giving some empirical support to the two-child ideal of modern families, which is also frequently indicated by studies of fertility preferences.

Although the process of fertility decline in Europe has received great attention in demographic research, most of the research has been macro oriented. While we know a great deal about the timing of the fertility transition in different parts of Europe, as well as its demographic details, we know much less about its causes. The dominating view in historical demography since the days of the European Fertility Project at Princeton University has been that fertility in pre-transitional Europe was not deliberately controlled but ‘natural’. In fact, fertility was not considered to have been within “the calculus of conscious choice” (Coale 1973:65), and the main explanation behind the fertility transition was the innovation of families to adjust fertility within marriage to economic circumstances (e.g. Coale & Watkins 1986). As a consequence, females stopped child-bearing after having reached a certain target family size; in other words, the control was parity-specific.

Other scholars have, however, questioned these conclusions, emphasizing that families also in pre-transitional Europe might have controlled their fertility deliberately, even though this often was done in a non-parity-specific way (e.g. Bean, Mineau & Anderton 1990; David & Mroz 1989). Newly presented evidence has further supported the conclusion that fertility was deliberately controlled also before the fertility transition (Bengtsson & Dribe 2006; Van Bavel 2004). Consequently, the explanations behind the great decline in fertility which took place in the Western world around the turn of the century 1900 have also changed. Scholars emphasizing the existence of deliberate non-parity specific control before the transition are also inclined to stress these factors as important in the decline itself, rather than simply focusing on the invention of parity-specific control (Szreter 1996).
There are very few studies of the fertility transition in Europe using micro-level data, i.e., actually studying the behaviour of individuals, examining for example the importance of social position, or income, for the fertility decision. With the extended SDD, the socioeconomic patterns in the fertility transition could be analysed at the micro-level, which would contribute significantly to our understanding of how occupational and economic factors within the family interacts with the economic changes that took place during this period of industrialisation and urbanisation. In this way the extension of micro-level data into the twentieth century will provide new insights into the emergence of modern fertility patterns.

B. Changing Patterns of Partnership – Marriage and Cohabitation

In the late 19th century Sweden fitted well into the European Marriage Pattern (Hajnal 1965), with late marriages (25-30 years) and quite large proportions of never married (10-15 %). Contrary to the modern ideal of romantic marriage, forming a union was much more of a business deal between two families. The marriage of a child was utilised to fit the family strategy of keeping the family farm together or merge it with another property, and of organising the retirement arrangements of the parents (Bourdieu 1976; Ehmer 2002), which led to a strong tendency towards homogamy, especially among landowners (Dribe & Lundh 2005a).

Since the middle of the 19th century extensive societal changes have thoroughly altered the preconditions, and the meaning, of marriage. Between 1860 and 1930 the crude marriage rate decreased, the proportion never married increased and mean age at first marriage remained high for women, and even increased for men. From the 1930s, marriage rates started to increase rapidly, especially among young people, reaching a peak in the mid-1960s. As a consequence, both the proportion never married and the mean age at first marriage declined. From its peak in the 1960s, marriage rates have been declining, while the mean age at first marriage has tended to increase and is today higher than ever: over 30 for both men and women. The main reason for this development is the growing importance of non-marital cohabitation.

Remarriage was quite common in pre-industrial Europe in the 19th century (Dupâquier et al. 1981). In this period, high adult mortality was one important precondition for remarriage, while divorces were rare and of little significance. In the absence of modern social transfers, the death of a spouse was a threat to the living standard of the surviving family members, and one solution for the widow/-er was to remarry. The remarriage rate (number of remarriages per 1000 population) declined during the 19th century and up to the 1920s, but from the early 1930s the remarriage rate increased rapidly to peak in the early 1950s, after which it has declined continuously. The divorce rate increased slowly from a low level in the beginning of the twentieth century until the mid-1970s. At this time, it rose sharply due to a legal change making it easier to divorce, and has since remained relatively high. Both remarriages and divorces have been influenced by the modern cohabitation pattern. The divorce rate underestimates the true number of separations and in many cases divorced people cohabit without marrying again formally.

The Swedish official population statistics is considered to be of good quality, covering an extended time period (from 1749 onwards). However, it contains information only on the general pattern and development. In-depth studies based on individual longitudinal data have been undertaken for rural local populations in the pre-industrial period and for recent periods (from 1968 onwards) for which computerised register data are available. While studies on modern marriages are mostly demographic,
the historic demographic studies analyse the interaction between individual behaviour in the marriage market and socioeconomic and environmental influences.

Since longitudinal data at the individual level is needed for analyses of the complex mechanisms behind individual decisions to marry, divorce, remarry or just cohabit, the extension of the SDD would make a major contribution to our understanding of marriage patterns up until 1968. This would enable us to analyse the marriage market behaviour of individuals during the period of industrialisation and urbanisation when many of the preconditions of marriage changed. More specifically, it would make it possible to analyse socioeconomic differences in the timing of first marriage, divorce and remarriage, and whether the old rural pattern of social homogamy remained in the 20th century. It would also make studies of the influence of female education and labour force participation on the probabilities of marriage, divorce and remarriage possible.

Moreover, in order to study partner selection, information about social origin is absolutely necessary, which requires a link to the parental generation. Using register based data after 1968 alone, makes the actual period that can be studied very short. By linking data from the extended SDD to the existing registers we acquire the information needed on social origin.

C. Post-transitional Fertility Variations

In the late 1990s, when fertility rates declined to very low levels, great concern was raised about the future population development and its effects on economic development and welfare systems. Much of the discussion, however, was framed in a very short-term perspective, which tended to obscure the long-term variations in fertility over the 20th century. Since the 1930s period total fertility in Sweden has varied quite widely. Aggregate studies (especially Stanfors 2003) have pointed to economic structural change, business cycles, changes on the female labour market, and the development of the welfare state as decisive determinants of this pattern. The exact mechanisms producing the changing fertility over time differ between different periods connected to changing economic structures and organisation of the welfare state. For example, the period up to the early 1970s witnessed a pronounced pattern of counter-cyclical fertility variations, where improvements in the female labour market and increasing female relative wages depressed fertility because women chose to work in the labour market and postponed childbearing. This was the period of the male breadwinner family, where the wage labour of married women mainly was a supplement to family income. The period since the early 1970s has instead seen pro-cyclical fertility variations where periods of higher female wages also have been periods of higher fertility. To a great extent this is connected to changes in the welfare state with improved day-care and parental leave programs, where benefits are based on previous income, as well as to the emergence of the two-earner family, in which the labour income of women have become crucial for the living standards of the family. Taken together, this has led to a situation where the fertility pattern has become tightly connected to the general economic development. Periods of economic growth, rising income, good job opportunities and a positive expectation for the future implies increasing fertility, while periods of economic recession leads to postponed childbearing.

Although we know a great deal about this development at the aggregate level, we lack micro-level analyses for the period before 1968, apart from a couple of retrospective studies based on interview data for a limited number of cohorts (e.g., The Swedish Family Survey). Here, an extended SDD will contribute significantly, by creating a longitudinal database that will enable a study of the interaction between income, education, and fertility at the micro- and family-level over the entire 20th century.
D. Gender and Changing Patterns of Family and Work

The post-war period has witnessed a dramatic change in the economic role and position of women, and in gender relations both within and outside the family (e.g., Jonung & Persson 1990, 1994). The changing patterns of family and work have evolved within a macro framework of rapid structural change (the rise of the post-industrial, service economy) and growth of welfare state programs and services. The broad outlines of these developments, as revealed by aggregated data on marriage, fertility, female market work and market wages, and by aggregated data on the growth and utilization of welfare state programs, are known for the whole post-war period. There also exists a large number of studies based on micro-data about individuals and households for the period after about 1970; studies that explore the determinants behind individual variation in fertility, educational attainment, age at marriage, female labour supply, wages etc. Such individual/household-level studies are, however, almost lacking for the preceding decades. This means that significant pieces of the puzzle still are missing. Thus, the micro story of the transition from one-earner via one-and-a-half-earner to two-earner families, with accompanying changes in gender relations, in Sweden remains to be told. “Closing the gap” in terms of micro-level data will enable us to make in-depth studies of the crucial “transition” decades of the 1950s and 1960s, a period when everything had been put into place for Swedish families to be able to have the professional full-time housewife – but reality somehow turned out quite differently. From aggregated data we know how Swedish women started allocating more hours to market work, and how Swedish men did the opposite to about the same extent (Jonung & Persson 1993). But this data hides a story of large variations between women – and families – with different characteristics in terms of education, socioeconomic background etc. With the extended SDD, we will be able to make a significant scientific contribution regarding these important developments, which will increase our knowledge and understanding of the making of the modern two-earner family.

“Closing the gap” in terms of micro-data will also enable us to study individual behaviour and outcomes based on a life-course approach with, in particular, more data on the individuals’ early experiences. As an example, the 1940s baby-boom cohorts were also the ones for whom the educational system was greatly expanded and post-secondary (and higher) education became more frequent. Tracing this expansion (and how it affected individuals of different socioeconomic background) will greatly improve our understanding of subsequent life-courses and variations in fertility, marriage patterns and female labour supply. In a similar way, young men and women of today originate from parents who were born and grew up during the “missing micro-data decades”. Here the extended SDD will allow in-depth studies of intergenerational transmission in e.g. the areas of educational attainment, labour supply and family patterns.

3.3 Research Area 3: Geographic and Social Mobility

A. Internal Migration

Over the 19th and 20th centuries, long range internal migration, external migration and social mobility have lead to a composition of the Swedish population that is different from earlier demographic structures. When looking back, migration movements demonstrate both continuity and change. Continuity in the sense that people in the early 19th century moved about as frequently as today; about 10 times on average during a life time as compared to 12 times in contemporary Sweden. Historically, high local mobility was largely an integrated and important aspect of agrarian society and related to
labour exchange between households with the institution of life-cycle service (see, e.g., Dribe 2000; Dribe & Lundh 2005b). In present day, the large majority of moves are still over short distances, best characterized as residential mobility, while only a smaller fraction are longer range moves, involving changes of jobs, investments in education, etc. Migration patterns have, nevertheless, also changed and despite the fact that local migration still predominates, the migration fields have been greatly extended over time.

In the process of industrialisation, regions and industrial sectors were economically integrated, as were the local and regional labour markets. The building of a national railroad system was of most importance in this respect. Migration from agricultural areas to industrial centres and cities could be seen as a response to differentials in wages and job opportunities (Thomas 1941). The creation of a transnational economy started a process of global market integration in which Swedish local labour markets were integrated to foreign labour markets (e.g., Hatton & Williamson 1994; O’Rourke & Williamson 1999). All this implied new and changing incentives to migration, and long-range migration increased.

The continuing process of industrialisation and modern economic growth involved repeated periods of economic structural change, leading to urbanisation and rural exodus when the importance of agriculture in the economy diminished, which also contributed to an increased importance of long-range migration and labour migration to the bigger cities. This development culminated during the golden years of high growth in the 1960s, and in the following period of economic downturn in the 1970s, long-range migration declined in Sweden. Since then, the frequency of long-range migration has increased in periods of economic boom, and declined in times of recession.

Aggregate Swedish statistics provide information at the county level on net migration since 1750 and on in- and out-migration across parish borders since 1900. For the period 1860-1940 the censuses contain figures on the proportion of individuals born outside the county of residence. Aggregate statistics on moves between counties and the direction of internal migration is available only from 1961. Furthermore, digitised data on individuals is only available from 1968 onwards. Consequently most studies on the economic aspects of internal migration deals with the 1970s and onward. In studies based on aggregate data, the influence of regional wage and unemployment differentials on the direction of internal migration is analysed (Dahlberg & Holmlund 1978; Westerlund 1997). Studies based on individual data analyse the factors that influence the risk of moving out, the effect of internal migration on the individual’s income and labour market position and the consequences with regard to tied movers. In some studies, employment turnover and individual probabilities of changing jobs or employer are also analysed (Holmlund 1984; Axelsson & Westerlund 1998; Nilsson 2001).

More recently, a growing number of micro-level studies have also focused on the interaction between family, migration and economy in the period before 1900. This is an important development, since it adds a microeconomic aspect to a very important research area. The SDD has previously been used in a number of studies on preindustrial migration patterns (e.g., Dribe 2000, 2003; Dribe & Lundh 2005b) and the extension of the SDD database into the 20th century would make it possible to also analyse the development of migration following industrialisation, when mobility increased and migration was crucial for the function of the new industrial labour market, at the individual level.

B. Social Mobility
In Sweden, as in other mature industrial nations, the distribution of employment between industries and occupations has changed profoundly over the last two centuries. The numbers of industrial workers increased up to the 1960s due to industrialisation, but has since declined. The continuous rationalisation of agriculture has led to a gradual decline in the number of employed also in this sector. The service sector has, in contrast, grown continuously into a heterogeneous economic sector, involving both private and public enterprises and a large variety of occupations in terms of qualifications. The socioeconomic changes that these developments have brought about have been studied at the aggregate level, based on statistics from the censuses on the occupational or industrial distribution of the population or labour force (Carlsson 1958). However, we know but little about the mechanisms of this process at the individual and firm level.

There are no Swedish aggregate statistics on individuals’ social mobility in terms of own careers or between generations. For the period when digitised data are available, i.e., from 1968 and onwards, it is possible to create longitudinal datasets. For the period prior to 1968, datasets have been created by manual linking of non-digitised registers, or by creating retrospective interviews. One example of the latter is questionnaires containing information also on parental occupation that have been developed by researchers at the Social Research Institute of Stockholm University since the 1970s. These surveys have been used to study intergenerational mobility of cohorts born in the 1920s and later (Erikson & Goldthorpe 1992.)

The SDD contains longitudinal data on individuals that are linked between generations. In one of our studies, downward social mobility in the 19th century, and the influence of current choices between different work careers on future social status, has been investigated (Lundh 1999). Another recent study is on intergenerational social mobility with focus on different family strategies in a rural context (Dribe & Lundh 2005b). By “closing” the micro-level data gap, we will be able to make the same type of analyses for the 20th century, a period where we expect social mobility to increase. We can also analyse how various factors at individual, family, household/kin, and community level influence social mobility. This is an example of an area in which we have limited experience but which we identify as a potentially promising area to develop.

C. Immigrant Integration

Most research into immigrant integration in Sweden and internationally paint pictures of high labour force participation and relative incomes on par with natives during the period from the 1950s through the early 1970s (Chiswick 1978; Borjas 1994). Our research shows that this positive economic integration of immigrant began to deteriorate during the 1980s, also when controlling for human capital characteristics (Rosholm, Scott & Husted forthcoming). Immigrant attachment to the Swedish labour market weakened and unemployment was generally higher for immigrants than for natives, and those immigrants who did find employment were often temporary employees and/or had lower earnings than Swedish born workers with similar qualifications (Rooth & Ekberg 2003; Bengtsson, Lundh & Scott 2005; Wallette 2004; Rooth 1999, 2002; Lundh et al 2002; Scott 1999). In terms of both income and unemployment, a ranking within the group of foreign-born became noticeable. Immigrants from Western Europe and non-European English speaking countries displayed labour market performance roughly equivalent to natives, while non-European immigrants had higher unemployment levels, lower labour force participation rates, higher levels of welfare recipiency and lower incomes than Swedish born individuals with similar characteristics (Edin & Åslund 2001; Scott 1999; Rooth 1999). While the
positive situation from the 1960s turned negative, immigration flows also changed in character from labour migration to refugees and tied movers.

Our contribution to this research has been two-fold. Very early, we showed that it was the demand for labour, and not the supply, that shifted in character in the 1980s. This idea was developed in a comparative European project, initiated by members of the Centre, which showed similar developments elsewhere. Presently, more studies have come to include demand side factors, which was very uncommon when we started in the early 1990s. We have also widened the issue of immigrant integration to include fertility, health, and early retirement. Immigrants arriving in the 1960s are today more likely to be dependent on income from early retirement than natives with the same observable characteristics, which is in stark contrast to how their situation was after arrival.

Current interest focuses on issues of discrimination. Our research has shown that discrimination is likely to be a large factor in poor integration (Rooth 2002), but it does not appear to be an increasing problem. Current research at the Centre for Economic Demography includes experiments testing the prevalence of discrimination on the labour market.

While we have amassed a good amount of information concerning the situation of immigrants in Sweden today, we are less certain about the situation during the labour migration era (late 1940s-1960s). During that period, the situation for immigrants was most likely better but since the Swedish data registers began only in 1968, almost all research has focused on the period after 1968. Very little work has been done on immigrant integration during the 1950s or 1960s; thus, collecting individual data for this period will provide us with an invaluable source of information for investigations of the integration process, during a period of full employment and open borders. The areas included in the SDD provide a good foundation for understanding immigrant integration during the initial period of Sweden’s immigrant experiences. Kävlinge was the location of textile industries, which absorbed much of the early immigration flows, while Helsingborg was an industrial centre that also attracted many immigrants.

3.4 Closing the Gap between Historical and Modern Data

The Centre for Economic Demography aims to expand the coverage of the database by entering data for the period 1895–1968. In the first step, the church records with information on demographic events and family context (births, marriages, deaths, migration) for the period 1896 onwards are registered and linked to the exiting database. This data will form an immediate continuation of the data already available in SDD, and thus provide a complete and continuous record of families and demographic events from the 17th century up till today. From 1829 onwards, the database also includes information on household structure and individual-level migration. The first stage of this expansion is funded by the Swedish Research Council.

In the second step, individual information from tax registers, available in the archives of the local administration board and county administration board from 1862 up until about 1950, and from the local tax authorities thereafter until present times, will be added. This will result in continuous information on economic characteristics from 1766 onwards. From 1766 until 1862 the information is based on the productive potential of the farms from 1862 until about 1900 it is mainly based on tax assessments of property in the parishes and income of part of the population (mainly craftsmen and non-agricultural labourers), and thereafter that on income of the entire population. By expanding the dataset
in this direction, we will gain more information about the economic situation of individuals and households than we currently have in the historical database.

In the third step, we will link the database to existing national registers from 1968 onwards containing information about demographic events, income, property, housing, sick care, etc. Most of these data are available in LOMAS. Since these registers provide less detail about household relationships than the church records, we will add this information from the church records for the period up until 1991, after which point the tax authorities take over the responsibility for the population registers.

In the fourth step, information on education, stature and health will be added. Educational rolls are well-preserved and have been used by several projects at the Department of Economic History in Lund. Information about stature and health for males are available from 1902 onwards for all men from muster records. Information on health is also available from schools from the early 20th century onwards and taxation records since they started. Reports from midwives are available from the mid-19th century and from the first physicians on the countryside from 1900, from the city of Helsingborg even earlier.

SDD will, after the extensions have been made, contain detailed economic, demographic and health information for more than 100,000 persons. It will be totally unique in Sweden and, without doubt, also internationally. While it will share certain characteristics with other databases, making comparisons possible, it will constitute one of very few databases of equivalent standard and magnitude, in which a micro-population can be followed from preindustrial times up until today, including information not only on demographic events, but also on the social and economic context of individuals in this population. It will not only be useful in economic and demographic research but also in several other research areas.

4. Relations to the Swedish Research School in Economic Demography (SRSED)

4.1. Importance of Research Training

The aims of the Centre for Economic Demography can be summarised as: (1) improve our knowledge of individual behaviour and demographic outcomes during the period when Sweden was transformed from an agricultural to an industrial society and the welfare state was founded, (2) improve our understanding of contemporary behaviour, taking a full life-course approach, (3) analyse the role of intergenerational factors on such behaviour, and (4) analyse the influence of economic change and development of welfare institutions on behaviour and the macro consequences thereof. The Centre further offers a unique opportunity to combine first-class research with education on different levels, within an internationally leading Centre of Excellence. The relationship between teaching and leading research is extremely important for creating the intellectually stimulating environment that will be realised within the Centre. Great demands for both technical expertise and contextual understanding in order to allow for quality research will be posed and the Swedish Research School in Economic Demography (SRSED) will provide the appropriate tools to PhD candidates as well as post-docs with an interest in the field.

One important aspect of the activities of the Centre for Economic Demography will be the training of Ph.D. students. While the involved departments have their own Ph.D. programs and will provide bachelor’s degree education in their respective fields, a number of Ph.D. students
will be active within the Centre, although formally connected to the involved departments. With the establishment of the national research school, SRSED, Ph.D. candidates with connections to the Centre will be offered doctoral courses that constitute a common core. These courses will also be offered to other qualified and selected Ph.D. students on an international basis. The common denominator among the Ph.D. students associated with the Centre for Economic Demography will be emphasised, creating an exciting interdisciplinary environment.

4.2 Goals of SRSED

• **Provide training of future demographers.** The SRSED will be of invaluable assistance in creating a dynamic centre. The school’s primary mission is to provide students with the training needed to produce research of high international standard. Importance in this respect is placed on both advanced methodological training and thematic courses in fields where members of the Centre are exceptionally qualified. The expertise and interdisciplinary nature of the school will fill an important gap in European demographic teaching and allow for the education of well-rounded demographers. The training attained at the school will help the students to continue their careers as post-doctoral researchers either with the Centre or with other institutions after completion of their doctoral degrees.

Since many participants at SRSED will come from other universities, the school will also provide a unique opportunity to assess individual characteristics prior to a potential recruitment decision. In addition, the fact that a number of students will come from other universities/countries will vouch for a continuous input of new impulses and perspectives to the Centre through their participation in the school and eventual recruitment into the centre.

For those students affiliated to Lund University, the school will provide an important contact network of junior researchers in the field. This network will give them opportunities to spend shorter or longer periods of time working at other universities and in other research environments. This broadening of perspective is seen as one of the key benefits of the school, both for the participating students and teachers.

• **Provide a platform for interdisciplinary collaboration.** While much of the teaching at SRSED will be undertaken by researchers associated with the Centre, a need to invite individuals to teach in areas where they are exceptionally qualified will at times be present. A main idea of the SRSED is that researchers, who are invited to teach on a full course, or only portions of one, can simultaneously be invited for an extended stay for purposes of collaboration. In this way not only the students but also the researchers at the Centre will benefit from the visit, and the visitor will be given opportunity to devote time to research as well as teaching.

• **Allow for dissemination of research results.** The courses offered by the SRSED will be situated at the frontier of demographic research. It is assumed that participants in the school will have attained fundamental knowledge in demography prior to acceptance, allowing the courses to begin at more advanced level. Since the courses will reflect the research orientation of the Centre and be given by experts within the respective research field, they will provide an opportunity to present the most recent academic findings and to discuss them in a critical manner.
• **Integrate demographic studies at the national level and beyond.** A number of institutions of higher education throughout Europe providing courses in demography already exist; some provide only individual courses within another discipline (such as sociology or economics), while others offer bachelors, masters, or doctoral degrees in demography or in another field with an orientation in demography. The SRSED will serve as a resource which provides courses in topics which are not currently covered by these educations. The Centre’s expertise in the field of economic and historical demography is unique among the demographic centres in Europe, and as such serves as a complement to the training offered there. Students from other universities are expected to comprise a large share of the total student body, and students from Lund will be encouraged and expected to attend courses at other universities as well. At the national level, it is hoped that this school will attract interest from students studying demography at the two other centres in Umeå and Stockholm. The research areas of the Centre for Economic Demography serve as excellent complements to the focus at these centres. At the regional level, discussions have been carried out with Niels Keiding at the Institute of Public Health, University of Copenhagen concerning the development of joint courses in demography.

In the near future, SRSED plans to give the following courses: Population and Economic Development; Population, Education and the Labour Market; Population, Savings and Economic Growth; Population Ageing; Population and the Welfare State; Immigrant Integration; Historical Demography; Public Health; Population and the Labour Market; Human Capital Theory; Event History Analysis (with application); Multi-level Analysis (with application). As the school will develop, more courses will also be included, based both on the students’ needs and wishes and on the research interests of the faculty.

Given financial and time restrictions, each course will not be given every term, but given on a rotating schedule with two courses held each term. The courses planned for the first two years are as follows:

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<td>Intensive</td>
<td>Population and Economic Development</td>
<td>Population Ageing</td>
<td>Historical Demography</td>
<td>Immigrant Integration</td>
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<td>10 week</td>
<td>Event History Analysis</td>
<td>Multi-level Analysis</td>
<td>Human Capital Theory</td>
<td>Population and the Labour Market</td>
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The general plan is to offer two methodological courses every second year as 10 week courses and rotate other thematic courses in the free slots. It will be assumed that more basic courses in demography will be provided for students either at their own universities, or via the Max Planck Institute in Rostock, Germany. The students from Lund will have an opportunity to study basic courses within the framework of their Ph.D. programs.

As the school develops, the current plan for two courses per term may well be expanded.

**5. Expected Results and Communication of Results**

**5.1 Expected Results for the First Two Years**
The Centre for Economic Demography will have its main organisational functions operational from start. The goals for the first two years include:

- Development of medium- and long-term strategies and priorities
- Realisation of short-term research goals in the following areas:
  - Factors influencing life-course mortality over the entire twentieth century
  - Survey of local health care institutions and social welfare systems
  - Economic change and social mobility
- Development of a recruitment programme and recruitment of research scholars
- Development of database management and routines to make it efficient for our research needs, structured according to the international standard we are developing together with other groups. Data shall be accessible for two parishes up to 1968 and tests of linking with data for the period afterwards will be performed.
- Development of publication/communication strategies

As indicated previously in this plan of action, the results will be produced by means of collaboration between representatives of various disciplines, thus exploiting the different competence bases of the participants in the Centre. This is indicated by the fact that synergy is created by mixing individuals of different background in all the research areas.

5.2 Dissemination of Results

The results of the research conducted at the Centre will be communicated in a number of ways intended to address both the academic community and potential users, such as policy-makers and members of the business community.

Members of the Centre have a respectable track record in communicating their research findings to the scientific community as well as to policy makers and the public at large. The research group intends to extend and intensify its activities in the area of diffusion and communication of research findings. We will give special attention to the new opportunities offered by the Internet and have established a web site of the group that will be developed further in coming years, see [http://www.ekh.lu.se/ed/English/default.asp](http://www.ekh.lu.se/ed/English/default.asp). We also have plans to cooperate with communications specialists in order to more effectively communicate our results. Some of the major indicators of activities undertaken within the group to actively diffuse the research findings during recent years will follow below.

A. Communication within the Scientific Community

Great efforts have been invested in increasing the number of international and national publications in journals and anthologies, and also in research presentations at important scientific conferences. With regard to these issues, we have paid special attention to copyright issues in writing contracts to make our results available over the internet. We try, likewise, to retain the rights for translation, which has allowed us, for example, to have one of our recent books published in Japanese and Chinese. With regard to the academic community, the means of communication are:
• *Articles in scientific journals.* The results of the research conducted within the framework of the Centre are to be published in leading international, peer-reviewed scientific journals.
• *Books.* In addition to articles in scientific journals, the results of the projects will be reported in books published by international publishers.
• *Dissertations* (Ph.D. and M.A.).
• *Conferences.* The Centre intends to hold an international conference every third year.
• *Workshops.* In the fields of the three different research areas within the Centre, occasional workshops will be arranged.
• *Seminars.* On a smaller scale, a seminar series will be arranged, with seminars taking place twice a month.
• *Public/governmental assignments and investigations.* Several of the researchers have substantial experience within this area.

**B. Communication with the Public at Large**

Several of the group’s members have been active in giving contributions to popular science journals and anthologies, governmental reports, lectures at venues of general interest, interviews in media, including both the national and international press and Swedish Radio and Swedish Television. An important aspect also of the future activities within the Centre for Economic Demography will be a continual communication of research results to users and other interested groups in society, via so-called ‘third task’ activities. A number of activities will be designed to secure the communication between the Centre and users, including relevant policy actors:

• *Publications and other activities specified above.* Publications and other activities of the Centre will not only be relevant to the academic community but also of interest to a wider group of users. The results will be made accessible to a larger public by popularization of research and debate articles.
• *Public lectures.* The staff of the Centre will give lectures in various fora outside academia.

**6. Organisational Plan and Leadership**

The Centre will be directed by Professor Tommy Bengtsson at the Department of Economic History during the first three-year period. Professor Bengtsson has successfully led a large number of research projects, most of which involve international collaborations, as well as three large research programs. Professor Bengtsson will work closely in a leadership capacity with the *Board,* comprising five members representing different scientific competences within the group as well as a student representative. All senior researchers within the Centre for Economic Demography have well-established international contacts. This makes it possible to create, within the Centre, an international milieu of benefit to researchers and students as well as other users (thereby fulfilling the objectives of the ‘third task’ activities of the Centre). An *International Scientific Advisory Board,* consisting of a small group of well-known national and international senior scholars, will meet annually to give recommendations regarding the research program, recruitment, collaborations, and other general issues. Between meetings of the *Board,* the Centre will keep up a continuous dialogue with the members.
The research environment has a large number of younger researchers who will participate both in research activities and in the daily management, which will lead to a natural increase in their responsibilities as the environment develops. Since several of the younger participants have become associate professors shortly after taking their PhDs, they have shown great potential for further scientific careers, and for, further on, taking over the leadership of the Centre for Economic Demography. The Board of the Centre is appointed for a three-year period by the School of Economics and Management.

Specific units under the Centre for Economic Demography:

**Scanian Demographic Database**

**Swedish Research School in Economic Demography**

**Master Program in Economic Demography** (as part of the School of Economics and Management, Lund University)

7. Web Site

[http://www.ed.lu.se](http://www.ed.lu.se)
List of References:


