A History of the European Demographic Observatory (ODE) Database

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The International Project of Short Term Demographic Trends Analysis ("Projet international d'analyse démographique conjoncturelle") established by Gérard Calot[1], Director of the INED, was the starting point for a database which later grew into the European Demographic Observatory ("L'Observatoire Démographique Européen – ODE"). New methodology, which permitted computation of the annual TFR when only the total number of live births and the age structure of female population were available, was developed within the framework of this project in the late 1970s. This enabled estimates of the TFR to be made several months or years before the age-specific fertility rates become available. This methodology was also developed in order to compute the monthly TFR, based on the total monthly number of events; figures could be obtained very quickly, a few weeks after the end of a calendar month[2].

The methodology of the database was written and the software developed by Gérard Calot. In the early stages, only French data were collected and computed. Later data were added from neighboring countries, such as West Germany (as it was at that time) and England and Wales (not for the entire United Kingdom, as vital statistics were collected for each area of the UK separately). There was a need to get figures for all countries to be as comparable as possible, as it was evident that values of the age-specific rates were not independent of the way in which they were computed. Indeed, when two consecutives cohorts are substantially different in size (e.g., they were conceived at the beginning of a war) the values of the age specific rates may vary considerably, depending on whether the data used for the computations are organized by

[1] In addition to Gérard Calot, who was the chief developer of the database, acknowledgement and thanks must also be given to Alain Confesson. From 1988 to 2004 the ODE team consisted of three members; Calot, Confesson, and Jean-Paul Sardon. When Alain Confesson left the team there were several other people working on the database, but usually on a temporary basis. At present, the ODE database is located at the Laboratory of Demographic and Social Analyses (University of Thessaly, Volos, Greece), and Pavlos Baltas is in charge of the data updating.

[2] For details, see Calot, G. and Nadot, R. (1977). Combien y aura-t-il de naissances dans l'année. *Population*, 1977 (special issue): 185-230; Calot, G. (1978). Pour une estimation rapide de l'indicateur conjoncturel de la fécondité. *Population* 1978(3): 705-716; and Calot, G. (1981). L'observation de la fécondité à court et moyen terme. *Population* 1981(1): 9-40.

Lexis squares or by vertical parallelograms (i.e., age- or cohort-oriented). This was demonstrated in a book by Gérard Calot[3].

The analysis was later extended to include all European countries, both Western and Eastern, as well as a select few others, giving birth to what at the time was called the "Projet international d'analyse démographique conjoncturelle". For some countries, such as Canada, former Czechoslovakia, or Switzerland, where all data required for analysis were also available at regional levels, the project encompassed data for provinces or cantons. A few years later, the project began to include data on female and male first marriages and later also data on divorce and general mortality.

In 1990, the methodology of the project was proposed to the Eurostat, which was in the process of publishing a demographic yearbook based on data provided directly by national statistical offices (NSO). This methodology allowed elimination of data divergence caused by the diversity of national practices and the generation of comparable figures for all countries included the yearbook. The proposal received strong support from Bernard Langevin, who was in charge of Eurostat's social statistics unit at that time. All demographic data collected from countries of interest, as well as descriptions of statistical procedures and the software required, were given to Eurostat. Several people who were entrusted with preparation of the demographic yearbook attended training sessions at the INED. The "Projet international d'analyse démographique conjoncturelle", newly settled at the Eurostat, was named the Syscodem (Système communautaire démographique) by François Begeot, who was responsible for its functioning.

At that time, the Eurostat data requests made to European NSOs were based on the data request of the INED/ODE. A few years later the ODE was officially founded, and all methodology, data processing, and software were renewed. Once the changes were completed, the ODE offered to prepare all tables and graphs needed for the Council of Europe's demographic yearbook, named "Recent demographic developments". The ODE performed these duties from 1998 until 2005, when the Council of Europe brought all activities in the field of demography to a halt.

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[3] Calot, G. (1984) La mesure des taux en démographie. Age en années révolues ou âge atteint dans l'année. Incidence du choix de la définition. Application à la fécondité générale (France, 1946-1981). Paris: INED, 322 p. (Travaux et Documents, No. 104). This book was also presented in the journal of *Population*: Calot, G. (1984). La mesure des taux en démographie: taux par âge en années révolues et taux par âge atteint dans l'année: Présentation d'un cahier de l'INED. *Population* 1984(1): 107-146.

At the end of the 1990s, the NSOs proposed the use of a common form for demographic data collection to streamline the four different types of requests being made by the ODE, the Eurostat, the Council of Europe, and the United Nations. This was done, and the list of requested data established by the ODE, adjusted to specific needs of the Eurostat (in terms of the format of data), became the basis for the detailed collection of demographic data by the Eurostat, which was supplemented by specific requests from the Council of Europe (data on flows and stocks of migrants), and from the United Nations (data used for the UN yearbook).

However, when the Council of Europe ceased publication of the demographic yearbook, the ODE, recognized as experts of the Council of Europe and not as an international body, was excluded from being part of the international working group on data collection and was removed from the list of recipients of international statistical data. This was unfortunate, not only for the ODE but also for data users, as it affected data quality. The ODE hence had no direct contact with the NSOs and, like all other data users, was obliged to download data from the Eurostat website. Unlike before, when upon discovery of any error (e.g., the use of age definition different from requested) the ODE would write to the NSO and this would be corrected, the ODE was no longer able to identify the origins of an error, i.e. whether it stemmed from the original data files submitted by a NSO or if it had occurred during data processing at the Eurostat. In other words, the procedure of data checking became more difficult. When annual hard copies of national demographic yearbooks were published, the ODE was obliged to check if the figures published by the NSOs corresponded to those included in the ODE database.

By the end of the 1990s the Eurostat, which was unable to directly process data on its own and was therefore obliged to ask the ODE to explain the computation of some indicators in order to provide answers to some users' inquiries, decided to put an end to this uncomfortable situation. The Eurostat sent out a call for submission of methodological proposals for computation of demographic indicators at the Eurostat, with the intention of replacing Syscodem. In the end, the Eurostat selected the proposal of the ODE. Users of ODE data who are interested in obtaining further details on ODE methodology and learning about how this database was built up will want to refer to the publication[4] that was prepared for the Eurostat.

[4] Calot, G. and Sardon, J.-P. (2004). Methodology for the calculation of Eurostat's demographic indicators. Luxemburg: Eurostat: 146 pp. (Working papers and studies; 26). Available on line at http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-CC-04-004/EN/KS-CC-04-004-EN.PDF