

GGP Contextual database group: Activities and conclusions

The group met twice: in Rome (La Sapienza, 13-14 June 2002) and in Vienna (Oif, 7-8 November 2002).

The group was composed of¹: Antonella Pinnelli and Filomena Racioppi (La Sapienza), Giulia Rivellini (University Milan), Patrick Festy (INED), Gerda Neyer (MPIDR), Lars Østby (Statistics Norway), Jacques Légaré (Statistics Canada), Martin Spielauer (Oif), Teresa Munzi (LIS), Enrico Bisogno, Martine Corijn, Miroslav Macura and Alphonse McDonald (PAU-UNECE), Mark Pearson (OECD), Pau Baizan (MPIDR, then University Barcelona) and Gösta Esping-Andersen (University Barcelona).

1. We have developed a set of **arguments in favour of a multilevel approach** to GGP data. It is mostly a rejoinder to a mainstream development in contemporary demography and social sciences. According to G. Wunsch at the European Population Conference (Milan, 1995), "good explanations of the causes and consequences of population trend require theories taking into account of both the micro and the macro levels, of individual and society. (...) Individuals are imbricated in a succession of wider more or less overlapping entities, which transcend to some extent the individual decision-making process. Demographic theories thus have to tell us how and why society influences individual behaviours concerning birth, death, and migration, but also how and why individual behaviours are themselves organised into higher-level social conducts. In other words population theories must integrate individual behaviour and social structure." John Hobcraft's paper at the FFS Flagship conference is a good example of a research proposal that combines contextual and individual data in a demographic perspective.

However, this general view is much too general to be operative. Contextual analysis - with the aim of describing the context, according to an ecological approach, using instruments for descriptive analysis, syntheses, classifications - differs from micro-macro integration - with the aim of explanation and interpretation of the relations between context and individual behaviours, the interaction individual/environment, the effects of contextual dimensions, according to a causal approach, using instruments of multilevel modelling. The ambition of the Generations and Gender Programme and the use it intends to have of a contextual database should be clarified. Decisions on the number of participating countries and the geographical level of contextual data (national vs regional) are key elements for that basic orientation. [A paper by Filomena Racioppi and Giulia Rivellini for the Vienna meeting]

¹ Many thanks are owed to all the participants and still more to those who, although non members of GGP, spent so much time and energy for the programme.

2. We have developed a **conceptual framework** for the collection of demographically relevant gender- and generation-sensitive welfare-state data for the GGP contextual database. It is based on a state-market-society-family typology that opens room to the economic dimension (in the market sphere), to the cultural dimension (in the society chapter) and to the policy-dimension.. [An attached document by Gerda Neyer]. Proposals for CB decisions have been made from discussions on this topic:

- The database should include detailed information - whether qualitative (e.g. legal) or quantitative – rather than synthetic indicators, so that the individual researchers can make their choice and their personal synthesis. It is estimated that the database could include “hundreds” (200?) of data for each country;
- The database should certainly be built at national level for the sake of international comparisons: a) to catch for regularities, finding common trends and reconciling apparent differences, and to track common line for behaviour development; b) to highlight country-specific peculiarities, explaining those which are far from common trends, for the timing and the way of behaviours’ realisation. The national dimension can be defined as a contextual unit: belonging to a country means particular contextual conditions, different from those in another country, both from geographical and social point of view. Thus, individuals and the countries are placed together in a complex frame for international comparative analysis;
- To the extent that data are available or can be collected on lower levels, the question of the sub-national level deserves attention. The context the individuals refer to is not only national, it may be local or regional too. The adequate level probably varies according to the topics and according to the countries. Even in the more centralised states, where similar benefits are opened to people throughout the country, access to infrastructures is unequally constrained by their local availability. But the heterogeneity of the situations in Europe is a strong obstacle against a systematic data collection. The question of data scarcity is still more serious: the more detailed the level, the poorer the internationally comparable data, except for censuses at NUTS 5 level in Eurostat;
- The development of a sub-national contextual database should consistently imply consideration of the sub-national level in the survey, i.e. in the sampling design, in the collection of data regarding present and possibly past location of the interviewee, and in keeping that information as detailed as possible in the survey files, despite confidentiality problems [Paper by Pau Baizan at the Vienna meeting and an attached document by F. Racioppi and G. Rivellini];
- The database should certainly be built at survey date and kept updated along the follow-up period. Its historical depth remains an open question linked to the retrospective dimension of GGS. From a welfare-state point of view and given the fact that all European countries experienced major demographic changes during the late 1960s and the 1970s, it would be advisable to start the database from the 1960s.

3. That framework has resulted in a detailed list of headings for the contextual database to be **confronted with the similar list from the questionnaire** [An attached document by Patrick Festy]. The comparison suggests a series of comments:

- The questionnaire does not systematically address the access to social infrastructure and the use of social infrastructures by the individuals (and it is even questionable whether a questionnaire can capture both satisfactorily). Coverage of social infrastructure in the contextual database would therefore allow researchers to better analyse the use (and non-use) of social infrastructures (like education, child care, health & reproductive care or elderly care);

- The links between the individuals and their context are not consistently approached by the questionnaire, so as to organise what John Hobcraft calls “the interplays of individual choice and perception with these institutional supports and constraints”. However, there are important links in the questionnaire for key demographic issues and there is also the possibility to extend the links to other issues in the questionnaire so that the contextual database could then provide sufficient background information for the analyses;
- Part of the association between micro- and macro-levels – the individuals and their context – is to be mediated by various meso-variables, some of which are pretty well developed in the questionnaire (the couple, the household), others only described (family networks), the remaining ones hardly spoken of (peers, neighbours, etc.);
- Given these conditions and since it is difficult to develop the contextual database from a set of preconceived assumptions regarding the action of contextual factors on individual behaviours, it seems better to rely on a more pragmatic approach. It is proposed to move from the detailed list of headings established so far to a list of precisely defined pieces of information to be collected, after consideration of the material actually available in a comparable format in a large number of countries.

4. It has been decided to start the filling in of the database from existing, well-documented and harmonised international databases and to move to national sources only when the international ones were not available. **An inventory of the content of existing international databases** has been started that covers the UNECE, the LIS and the Oif databases [Papers by Enrico Bisogno and Teresa Munzi and a presentation by Martin Spielauer at the Vienna meeting; a table by Enrico Bisogno is attached as an example of ongoing work]. The documents and their discussion suggest a series of comments:

- The international public databases are many, their content and geographical coverage are unequal and partly redundant, their quality is probably unequal too. A hierarchy of them is to be made on the basis of their efforts to reach international comparability, through harmonisation and thorough documentation. Eurostat Newcronos probably comes first and the others far behind. It needs to be confirmed now by a detailed evaluation. Contacts are active with Eurostat, OECD, UN, ILO.
- Whatever the weight given to the best databases, there will remain a combination to be made between them, so as to build the GGP database. Putting consistency into this heterogeneous material is to be an important objective of the database builders. Imagine that you are to reconcile data on public transfers from the national accounts assembled by Eurostat, from the social protection data system in the Oif family policy database and the results of the LIS surveys on individual incomes! The combination of data from various existing databases will be a major task;
- Whatever can be gained from the existing databases, there will remain a lot to be collected directly from the countries, in particular the non-EU ones. Identifying the relevant information and inserting it in the database implies harmonisation and documentation and will need important and long-lasting efforts;
- Groups of researchers are, like GGP, building their own databases from existing material. LIS has been very active in our group with Teresa Munzi, but important things are also underway at SOFI (Stockholm University), ZUMA (Mannheim University), the European Social Survey, the Atkinson *et alii*'s report on indicators for social inclusion, etc. Extended contacts are to be made with these groups for GGP not to reinvent the wheel.

5. **Conclusions.** The Contextual database group proposes a series of choices that deserve consideration for a possible approval:

- ✓ A welfare-state policy orientation
- ✓ A detailed and raw data content
- ✓ A national rather than a sub-national level
- ✓ A dynamic perspective, incl. an historical stock and a continuous update

Building the database implies a double effort: that of the co-ordinators to finalise the architecture of the database and to organise its building up and its maintenance; that of the countries to fill it in with all the necessary material not available elsewhere. For the co-ordinators, it implies:

- ✓ To evaluate the existing databases and the ongoing GGP-type projects, so as to define the detailed list of information to be included in the GGP database
- ✓ To combine the information from the existing databases and complete it with national sources
- ✓ To convince the participating countries that their contribution to GGP is on the contextual database as well as on the survey

These tasks are time consuming and they will be long lasting. It would be useless getting into them if there is no strong and long term commitment. A right comparison can be made with FFS, which needed one researcher and technical assistance for many years in order to compile the international comparative database. It will not be less for the GGP contextual database.

It would be wise to have that work supervised by a group of persons. The members of the Contextual database group are ready to participate, if the consortium wishes so.

P.F.

Gender and Generations Dimensions in Welfare-State Policies

Gerda Neyer

Max Planck Institute for Demographic Research
Rostock

This note outlines welfare-state research that could possibly provide a framework for the collection of demographically relevant gender- and generation-sensitive welfare-state data for the GGS contextual database.

First, it summarises results of demographic research that deals with the effects of public policies on demographic behaviour. This is followed by a brief outline of what kind of data we need for (comparative) research of policy effects on demographic issues.

Secondly, it gives a brief account of those conceptualisations of the welfare state that seem relevant for the purpose of our project.

Thirdly, it presents a provisional and by no means complete list of some welfare-state-related measures that can be collected for a contextual database. This list serves as an example of what we need and how we should collect data in order to be able to incorporate features of welfare states and public policies in demographic analyses.

Demographic research, public policies, and data requirements

Demographers have repeatedly complained that their discipline has paid too little attention to political and institutional factors and to their influence on demographic behavior. There is some truth in this complaint. If we browse the literature on family and fertility (in highly industrialized countries), for example, we find rather few studies that take political factors into account compared to the bulk of research that deals with the demographic impact of economic or cultural (educational) issues. In addition, most studies that include politics investigate the effects of individual policies, usually of particular family policies. Studies of this kind have rendered ambivalent or even contradictory results. In most cases, researchers could discern no or only very small effects of policies on family and fertility behavior. The results were more pronounced if specific - usually significant - changes in policies were examined. Demographers have concluded from these findings that we may need to pay more attention to the interaction between various policies. Comparative empirical and theoretical research further suggests that two other factors may account for the varying effects of policies on demographic behavior. One is the institutional setting of policies, that is the way in which a particular policy is anchored in the social policy system of a country. Policies may reflect a particular type of welfare state, but they may also run counter to the general welfare-state politics of a country. The other factor is the cultural and economic context in which individual policies are embedded.

Our purpose, therefore, is to provide data that will allow us to investigate the interrelation between policies and their interaction with demographic issues. Furthermore, the database should allow us to test demographic theories that are related to the topics of the GGS (for example: theories of “female economic autonomy”, of “relative economic deprivation”, of “ideational change”, of “wealth flow” etc.). Such an approach suggests that we need to develop a database that fulfills the following criteria:

1. It should allow us to form “clusters of policies” related to the demographic event at stake (e.g.: entry into parenthood, into marriage; divorce; leaving home; retirement; etc.).

2. It should contain information that may be linked to the main assumptions of demographic theories.

3. The database should provide data in time-series to allow for investigations of demographic change and their relationship with changes in public policies or politics. The time-series should be retrospective and cover the respondents’ life span (from the age 15 onward).

4. It should provide data from a gender and generation perspective as well as from a life-course perspective. This implies that the database should contain gender-specific data as well as age-specific data and also collect data that apply to specific groups (women, mothers with small children, elderly, etc.).

5. It should provide data for comparative research, either through standardization of parameters or through extensive documentation of national idiosyncrasies.

6. The database should allow us to construct “contexts” so that we will be able to analyze the data of our questionnaire within an economic, cultural, political framework.

This note does not intend to devise such a comprehensive framework; we leave it to specialists in economic and cultural analyses of demographic behaviour to design a framework for the collection of economic and cultural data necessary for demographic research. We limit ourselves to outlining a welfare-state approach to the collection of contextual data for multi-level analyses of demographic behaviour. As will be shown below such an approach includes economic and cultural aspects and may thus be a good starting point for a comprehensive contextual database.

The choice of data to collect is partly determined by the way in which we conceive of the welfare state. Unfortunately, there is no explicit and universally accepted definition of the welfare state. The way in which researchers have defined the welfare state has largely been determined by two factors, namely, first by their theoretical and empirical interests in phenomena that are not necessarily specific to the welfare state and, secondly, by constraints in data availability and accessibility. Both factors have contributed to conceptualisations that a) largely neglect Eastern European countries and b) that are only partially relevant for demographic analysis.

For our purpose we now give an account of those welfare-state definitions that may serve as a framework for demographic analyses, that offer links to demographic theories, and that are also applicable to the situation in Eastern and Central Europe.

Social expenditure as a measure of welfare states

The welfare state has often been described as a state that takes responsibility in providing basic economic and social security for its citizens. This conceptualisation encompasses two different traditions in welfare-state research. One tradition rests on assumptions about poverty and basic needs; the other on assumptions about economic and social risks, most notably linked to market risks (unemployment, sickness, accident, invalidity) or to demographic risks (old age, childbearing, widowhood, single parenthood). Empirically, research that uses this definition measures welfare states according to their level of social expenditure. Social expenditure is often regarded as a rather crude measure for evaluating and comparing welfare states, not least because corresponding statistics often fail to elucidate the allocation of benefits and fall short of revealing the effects of welfare-state provisions on gender, class,

race/ethnicity, or inter-generational relationships. Yet, as more refined data of social spending have become available, social expenditure proves to be a useful means of exposing the underlying principles of welfare states (Daly 2000)². And it may be a valuable indicator of gender and generations paradigms governing welfare-state policies, especially in cases where we lack (comparable) data. For example, social expenditure figures may display whether a welfare state attributes more of its social spending to services for families or to individual family benefits; they may reveal whether mothers or fathers are the prime recipients of family benefits (Wennemo 1992/1994), they may show whether a state allots more of its social budget to the elderly or to youth (and families; Esping-Andersen 1999) or how much of the active-labour-market budget goes towards the integration of mothers into the labour market or to the integration of men (Streissler 1998).

The welfare state as an answer to social problems

A second strand of research defines the welfare state as a state that uses public policies to compensate for or prevent social and economic problems. The welfare state thus fulfils regulatory and redistributive functions and aims at attaining security and equality. Guiding research questions are: To what extent do welfare states grant economic and social security to their citizens? To what extent do welfare-state policies contribute to an equalisation of the levels of living (equality of results) and to an equal distribution of life-chances (equality of opportunities) (Flora/Heidenheimer 1982/1995)? To what extent do welfare-state policies support an equal distribution of “agency” (equality of agency) and enhance a person’s freedom to achieve functioning, to have well-being (Korpi 2000)? In general, this type of research uses a broader spectrum of indicators to classify welfare states. It includes additional realms of institutions (education, care, income, political institutions) and it classifies welfare-state provisions according to type, legal regulations, availability, and coverage. Security is measured in terms of the distribution of social security (health, unemployment, old-age, maternity, invalidity insurance), such as the availability of social-security provisions for and the social-security coverage of different groups of the population (Preparing for an Aging world 2000). Equality of results, equality of opportunities, and equality of agency are assessed in terms of offers of social services (education, care services and care-leave provisions), income distribution, income redistribution through welfare benefits (e.g. family benefits, taxing), public presence and public representation of various groups of the population (e.g.: female labour-force participation; female representation in the political sphere). The “equality – security paradigm” has also partly replaced the “poverty paradigm”, especially in research that deals with specific groups of the population, such as lone mothers, single women, and older women. This research looks, for example, at the conditions that are attached to benefits (e.g.: constraints of personal freedom) (Lewis 1997).

Welfare-state policies as structuring policies and the world of welfare-state regimes

This research defines the welfare state as a state that uses (social) policies to structure society and its social and economic relationships. It views the state in relation to the market and the family, and asks how state activities are interlocked with these two institutions in shaping social conditions and providing social welfare. Comparative research based on this approach has shown that western welfare states group into distinct patterns of welfare-state regimes. The most prominent classification (Esping-Andersen 1990) distinguishes between

² The cited literature gives good examples of what to collect and how to collect.

liberal welfare states (USA, Canada, Australia) which support market forces and offer only a minimum of social security;

conservative welfare states (Germany, France, Italy, Austria, the Netherlands) which offer social security, but their social policies are directed towards the support of status differences and traditional family forms; and

universal welfare states (Scandinavian countries) which grant social security on the basis of individual social rights and direct their social policies towards achieving greater equality in the public and the private sphere.

The basis for this classification is a set of indicators of social security arrangements (e.g.: conditions of entitlement, duration of benefit, minimum benefit, standard benefit, benefit replacement level; contribution period; waiting days for benefit) and organisational elements of the social security system (e.g.: private pensions (percentage of total pensions); means-tested poor-relief (percentage of total pensions); degree of universal coverage in the population, measured as percentage of the population (16-65) covered by the social insurance; etc.). The typology has been extended by other authors to include, e.g., southern European countries as a fourth welfare-state regime (familistic welfare states) or the Antipode welfare states. More refined indicators about female/male labour-market participation, child-care provisions, etc. have further disclosed a great heterogeneity among the conservative welfare-state regimes and questioned whether they should be pooled together.

Feminist researchers have pointed out that although this classification is ostensibly based on an analysis of the interrelation between the state, the market, and the family in providing social security, it largely ignores gender relations and “the family”. Feminist researchers have looked at the way in which welfare-state and other policies (social security regulations, parental-leave regulations; entitlements to benefits; inter-family recipients of benefits; care services; divorce regulations; labour-market and employment policies; gendered income distribution; tax regulations; school-systems; etc.) structure gender relations within families, the market, and society. Their work has discerned other typologies of welfare-state regimes, such as strong, modified, or weak male-breadwinner welfare states; male-breadwinner, dual-breadwinner, female-carer models of welfare states; maternal vs. fraternal welfare states; women-friendly welfare states, familiarising vs. de-familiarising welfare states (Lewis 1992; Orloff 1993; Daly 2001; Sainsbury 1999; Gornick et al 1997, Anttonen and Sipilä 1996)). It has pointed to the need to include care and the organisation of care (e.g.: privately through unpaid work, usually done by women or (female) family members; privately through markets or semi-markets; public through welfare organisations; state-organised). Feminist research has further shown that there are links between welfare-state typologies and the socio-cultural context of society (Pfau-Effinger 1999). It has also stressed the importance of including body politics and reproductive politics (such as abortions regulations, legislation of sexual violence, same-sex legislation) in welfare-state research (O’Connor, Orloff, and Shaver 1999).

Welfare states and Eastern Europe

Eastern European countries are seldom included in welfare-state research. This is partly due to the lack of (comparable) data, partly to the fact that the interrelation between state, market, and family in former Eastern European countries differed significantly from the one in the West. Social policies in the Eastern European countries followed different ideological and institutional principles than in the Western European countries. During the first years of transition to democratic systems and (capitalist) market economies, most social policy measures, especially family policy measures, were maintained, although their organisation changed (e.g.: services shifted from the workplace to the community). Some policies, such as unemployment policies, were newly introduced, some (like family benefits) were extended (mainly to compensate for the abolishment of price subsidies for basic goods), some were

changed from universal to targeted policies or cut back.³ With the change in politics and economics, however, social policies have acquired quite different and – as far as demographic issues are concerned – often adverse effects (Fajth 1994; Gal and Kligman 2000). Researchers also point out that the revival of nationalism in Eastern Europe gave new directions to pronatalist social policies and to the reproduction and gender policies in the region. The developments of the past 15 years suggest that Eastern European countries do not develop in a uniform way, but that several ‘models’ of welfare-state set-ups are emerging. For our contextual database it is important to collect data that grasps these changes. It is necessary to gather data prior to 1989 so that the demographic, the gender and generational effects of the changes may be better assessed.

Gender and generations: welfare-state policies and demographic analyses

Summarising these different aspects we may address welfare-state effects on gender and generations in a demographic context from three different angles:

First, to what extent does the welfare state enable a person to enter into or exit from social and economic relationships (for example: labour-force participation; entry into parenthood; divorce) – in either case without significantly impairing her well-being or her standard of living?

Secondly, to what extent does the welfare state influence (that is produce or reduce) social and economic equalities (for example: equality between women and men and between the generations in all possible aspects) in the market, in society, and in the family?).

Thirdly, to what extent does the welfare state influence a person’s social, economic, and personal rights? (For example: Are social rights tied to a specific status or granted universally? Does the state protect sexual freedom?).

These questions may serve as guidelines when we decide which data to collect for our data base. Structurally these questions are embedded in a framework in which the state, the market, society, and the family (= parenthood, partnership) form the ‘pillars’ of social organisation in a nation-state.

Furthermore, we regard it as essential for a gender and generations survey to build on feminist research in developing a contextual database. Feminist research stresses the fact that social, political, and economic institutions – such as marriage, parenthood, care, employment, political institutions, policies, welfare-state regulations and so on – are not gender neutral, but gendered, that means structured and organised along gender lines. Women and men act within gendered institutions (in theoretical terms: they are ‘doing gender’ or ‘opposing gender’ within a gendered framework). To get a better insight into demographic behaviour and national differences in demographic trends we therefore need to link women’s and men’s individual behaviour to the gendered (national) social settings. Four dimensions seem to be of importance to grasp the gendered setting from a welfare-state perspective:

first, we need to view the state, the market, society, and the family from a gender perspective, second, we need to introduce care as a gender-generation nexus into welfare-state analyses, third, we need to differentiate between the distinct relationships in families (parenthood, partnership, and intergenerational relationships), and fourth, we need to consider family law and legal provisions in welfare-state analyses.

Some might argue that neither a welfare-state concept as developed for western democracies nor feminist research are suitable to grasp the specificity of Eastern European societies and

³ The list of changes is not complete. There were also many institutional changes that had an impact on policies and policy outcomes.

countries. From a theoretical point of view we see no problem in using feminist and western welfare-state approaches as theoretical frameworks for data collection. The feminist perspective implies viewing the state-socialist resp. transition countries from a gender perspective and also paying attention to issues that are usually regarded as women's issues (and therefore often neglected). The welfare-state approach calls for constructing a database that includes information within a state-market-society-family (couple/parenthood) framework. The fact that the relation between state-market-society-family was different during state-socialist times (and different for different countries in Eastern Europe) needs to be considered when analysing the data, but this does not affect the usefulness of the general framework for the collection of data.

As an example for a guideline to collect data, I add a list for data collection that is structured along the major constituents of welfare states and welfare-state policies (state, market, society, and family), distinguishing between parenthood, partnership, intergenerational relationships on the family level. The list is not complete.

References:

- Anttonen, A., J. Sipilä (1996): European social care services. Is it possible to identify models? In: *Journal of European Social Policy* 6/2, 87-100.
- Daly, Mary (2000): A fine balance. Women's labor market participation in international comparison. In: Scharpf, Fritz W., Vivien A. Schmidt (eds.): *Welfare and work in the open economy*. Volume II. Diverse responses to common challenges. Oxford University Press, Oxford.
- Daly, Mary (ed.) (2001): *Care work. The quest for security*. International Labour Office, Geneva.
- Esping-Andersen, Gosta (1990): *The three worlds of welfare capitalism*. Princeton University Press, Princeton.
- Esping-Andersen, Gosta (1999): *The social foundations of postindustrial economies*. Oxford University Press, Oxford.
- Fajth, Gáspár (1994): Family support policies in transitional economies: Challenges and constraints. *Economic Policy Series* 43. UNICEF.
- Flora, Peter, Arnold J. Heidenheimer (1982/1995): *The development of welfare states in Europe and America*. Transaction Publishers. New Brunswick/London.
- Gal, Susan, Gail Kligman (eds.) (2000): *Reproducing gender. Politics, publics, and everyday life after socialism*. Princeton University Press, Princeton.
- Gornick, Janet.C., Marcia.K. Meyers, Katherin.E. Ross (1997): Supporting the employment of mothers: policy variations across fourteen welfare states. In: *Journal of European Social Policy* 7/1, 45-70.
- Korpi, Walter (2000): Faces of inequality: Gender, class, and patterns of inequality in different types of welfare states. In: *Social Politics* 7/2 (summer).
- O'Connor, Julia S., Ann Shola Orloff, Sheila Shaver (1999): *States, markets, families. Gender, liberalism and social policy in Australia, Canada, Great Britain and the United States*. Cambridge University Press, Cambridge.
- Orloff, Ann Sh. (1993): Gender and the social rights of citizenship: The comparative analysis of gender relations and welfare states. In: *American Sociological Review* 58/3, 303-328.
- Preparing for an aging world. The case for cross-national research (2001): National Research Council, National Academy Press, Washington.
- Sainsbury, Diana (ed.) (1999): *Gender and welfare state regimes*. Oxford University Press, Oxford.
- Wennemo, Irene (1994): Sharing the costs of children. *Swedish Institute for Social Research* 25, Edsbruk.

The contextual dimension in GGP: some methodological issues about data collection and sampling procedures

Filomena Racioppi, University of Rome “La Sapienza”

Giulia Rivellini, Catholic University of Milan

1. Introduction: from contextual variables to contextual units

The GGP outlines stress the role of contextual analysis of individual behaviours. There is therefore a strong interest in understanding how to collect data that can be analysed looking for contextual effects on individual demographic behaviour.

The issue of interaction between micro and macro level is particularly complex and it is not easy to manage it with a traditional survey sampling or core questionnaire.

In the following we will mention some of the most relevant questions that can be dealt with more in depth.

About “territorial macro level”

We should ask about:

- place of actual residence at the survey time
- place of residence during the adolescence
- place of birth
- place of residence some years before the survey time

About the “size of territorial macro level”

We could collect information on:

- municipality/town
- province
- region
- country

About the meso level

We should remember that the contextual effects can also be studied looking at an intermediate level between micro and macro dimension, taking into account e.g. the individual frame, the relational ties, or the availability of non public places for living together. The “meso level” dimension could be measured through structural variables.

From the questionnaire we could collect information about the:

- network (household, kinship, extending family)
- couple
- family

2. Towards a methodological reflection

The multilevel techniques are applicable when individual observations are sufficiently grouped at higher levels (geographical, institutional, social units). So the key assumption of independence among the observations fails because of this clustering; the regression coefficients obtained from the OLS will have too small standard errors estimates, conditioning the statistical significance. Multilevel models represent a solution to these problems as they are based on a decomposition of the error structure into parts pertaining to each level involved (between context and within context). They also allow inclusion of characteristics of the context.

If we want to analyse a hierarchical structured dataset, procedures involving random variables or random effects would be more accurate than any other method.

More and more data combining information on individuals and the contexts in which they live are becoming available. But not every hierarchical data structure allow for application of multilevel techniques. If we have clusters with few individual/cases, we don't need multilevel models and in some cases we can't use them because it's impossible to calculate variation within context; and, also, if we have a small number of clusters (for example we want to compare 2-3 or even 7-8 countries) we can't refer to MLM.

This could be a problem for analyses at infra-national level: there could be insufficient numbers of observations within lower level of geography (e.g. census tracts) to support the calculation of within-context variance. This is particularly true in nationally representative samples, when we are interested in lower levels of aggregations as some local areas (Teachman J. and Crowder K., 2002)⁴.

Kreft (1996)⁵ stresses that in RC models (Random Coefficient) the variance components are new parameters compared to those in the traditional regression models, but for theoretical developments in the social science the possibility to fit cross-level interactions is the main attraction of the RC models.

But the interaction effects need large data sets in order to be detected. Simulations studies show that the minimal number of groups and observations within groups is 30/30 in order to obtain sufficient power for cross level interactions. Some more specific results are that 60 groups with 25 observations per group (total n = 1500) produce sufficiently high power. Few groups, for instance 30, need many more observations within groups. When many groups are present, like 150, 5 observations within each group are sufficient. Generally speaking, when the main goal is to estimate the micro-macro interactions effects, it is possible to increase the number of groups (2nd level), even if the number of units within them (1st level) decreases.

⁴ Teachman J., Crowder K. (2002), *Multilevel Models in Family Research: Some Conceptual and Methodological Issues*, *Journal of Marriage and the Family*, 64, May.

⁵ Kreft I., (1996), *Are Multilevel Techniques Necessary? An Overview, including Simulation Studies*, California State University, Los Angeles.

The methodological issue of sample and clusters size is really important. So we would like to start from two recent papers (Cohen 1998⁶ and Moerbeek and Wong 2002⁷) to give some indication about that.

3. Regard the survey sampling

If data users are planning to analyse survey data using hierarchical linear models rather than concentrating on means, totals, and proportions, this needs to be accounted for in the survey design.

There is a large and growing literature on hierarchical linear models. The bulk of this literature emphasises estimation and interpretation rather than sample design questions.

With the following short notes we intend to give some suggestions in order to study how to sample the statistical units, taking into account the hierarchical structure. We remember that this particular structure is connected to the contextual analysis, where individuals (level 1) are grouped in second level units.

We refer to 5 papers that could be useful to the researchers involved in the task of sample design.

1) Cohen (JOS 1998)

In this paper the implications for determining sample sizes (for example the number of first level units sampled within each second level unit) are explored.

In order to gain insight into the problem, the a. restrict the attention to a simple two-stage sampling design with a simple cost function .

What about Cohen's paper?

Traditional sample size determination

(by Hansen, Hurwitz and Madow (1953), cit. in Cohen)

$$n_{opt} = \sqrt{\frac{C_s}{C_k} \times \frac{1-\rho}{\rho}}$$

C_s = Cost to include a second-level unit

C_k = Cost to include a first-level unit

m = number of second level units

n = number of first level units for each second level unit.

$C = C_s m + C_k mn$

⁶ Cohen, M. P. (1998) Determining sample size for surveys with data analysed by hierarchical linear models, Journal of Official Statistics, 14(3): 263-275.

⁷ Moerbeek M., Wong W. K. (2002) Multiple-objective optimal design for the hierarchical linear model, Journal of Official Statistics, 18: 291-303.

ρ = intraclass correlation coefficient (measure of homogeneity), under the HLM model we have:

$$\rho = \frac{\tau^2}{\sigma^2 + \tau^2} \text{ where } \tau^2 = \text{Var}_{\text{WG}} \text{ (first level variance) and } \sigma^2 = \text{Var}_{\text{BG}} \text{ (second level variance);}$$

then, the number of second level units sampled is:

$$m_{opt} = \frac{C}{C_s + C_k n_{opt}}$$

If we introduce the variance ratio $\omega = \frac{\tau^2}{\sigma^2}$ the optimal size for the first level unit becomes:

$$n_{opt\text{TRAD}} = \sqrt{\frac{C_s}{C_k} \times \frac{1}{\omega}}$$

so that

(WARNING 1)

The number of first level units (for example students) to sample from each second level unit (for example school) in the traditional setting varies inversely with the square root of the variance ratio ω .

We can try to explain it better:

$$\omega = \frac{\tau^2}{\sigma^2} = \frac{2^\circ \text{LevelVariance}}{1^\circ \text{LevelVariance}}$$

ω is higher if the second level variance is higher comparing the first level variance. This happens when the mean values are particularly different between the groups. In this case the nested structure is highly significant.

But, if ω is higher then $1/\omega$ is smaller and n_{opt} is still smaller. This relation can serve as a guide in survey planning.

Sample size determination for hierarchical linear modeling

- a) First and second level variance

In analysing HLM models it is important to estimate not only regression coefficients, but also the second level and the first level variance ($\tau^2 = \text{Var}_{\text{WG}}$; $\sigma^2 = \text{Var}_{\text{BG}}$) because this quantities are of substantive interest to study contextual effects.

In Longford (1993⁸) we can find that the maximum likelihood estimates of $\tau^2 = \text{Var}_{\text{WG}}$ and $\sigma^2 = \text{Var}_{\text{BG}}$ σ^2 are:

$$\text{var}(\hat{\sigma}^2) = \frac{2\sigma^4}{mn - m}$$

$$\text{var}(\hat{\tau}^2) = \frac{2\sigma^4}{mn} \left(\frac{1}{n-1} + 2\omega + n\omega^2 \right)$$

The aim is to minimise these variances subject to the cost constraint.

The first one is relatively flat even for moderate n. It is minimised subject to the cost constraint by taking n (first level unit per second level unit) as large as possible. Remember that

$$m = \frac{C}{C_s + C_k n}$$

The second variance is the critical one to minimise.

Cohen resolves the fourth degree polynomial in n and found:

$$n_{optHLM} = \frac{1}{2\omega} + \sqrt{2 \frac{C_s}{C_k} \times \frac{1}{\omega} + \frac{1}{4\omega^2}}$$

then

$$n_{optHLM} > n_{optTRAD}$$

(WARNING 2)

The estimation of τ^2 requires a large sample of first level units within each second level (and hence fewer second level units) for a fixed cost than does estimation of traditional quantities (means, totals, ratios).

In particular, comparing $n_{optTRAD}$ with n_{optHLM} we see from the first term under the square root that n_{opt} will be at least $\sqrt{2}$ times as large as it is for $n_{optTRAD}$. If $1/\omega$ is large relative to C_s/C_k , the difference is even more marked.

b) The regression coefficients

Cohen, after writing the covariance matrix in terms of σ^2 , ω , m, n, minimise the coefficient's variance subject to the simple cost constraint $C = C_s m + C_k mn$. The results, considering a 3x3 matrix (an intercept plus two coefficients), are:

⁸ Longford, N.T (1993), Random Coefficient Models, Oxford: Clarendon.

$$n_{opt,0} = \sqrt{\frac{3}{2} \frac{C_s}{C_k} \times \frac{1}{\omega}}$$

$$n_{opt,1} = \frac{C - C_s}{C_k}$$

$$n_{opt,2} = \sqrt{\frac{C_s}{C_k} \times \frac{1}{\omega}}$$

As we can see, we have three different value of n. To settle on a single value for n_{opt} , one might consider minimising $a\text{var}(\gamma_0) + b\text{var}(\gamma_2)$ for some $a \geq 0$, $b \geq 0$, $(a + b) \geq 0$, subject to $C = C_s m + C_k mn$ (the variance of γ_1 is small in comparison to the γ_2 and γ_0 variance). The solution is

$$n_{opt;a,b} = \sqrt{\frac{3a - 4b}{2a + 4b} \times \frac{C_s}{C_k} \times \frac{1}{\omega}}$$

In particular, if the two variances are weighted equally so that $a = b$, we have:

$$n_{opt;1,1} = \sqrt{\frac{7}{6} \times \frac{C_s}{C_k} \times \frac{1}{\omega}}$$

from which we can deduce the following:

(WARNING 3)

The $n_{opt,2}$ value is the same and the $n_{opt,0}$ value is similar to that obtained in the traditional case. This means that the traditional sample design may do very well in enabling to estimate the regression coefficients. In analyses where it is important to estimate also the variance components, τ^2 in particular, one must instead sample more first level units per second level unit (and fewer second level units).

2) Moerbeek and Wong (Jos, 2002)

“Optimal designs are usually constructed under a single optimality criterion. But such designs are not very realistic in practice because a researcher seldom has just one objective in mind when designing an experiment. This problem can be overcome by multiple-objective designs” (Moerbeek and Wong, 2002).

A Cohen’s paper update, dealing with an extended determination of the sample size taking into account multiple criteria, can be found in Moerbeek and Wong (2002).

The a. defines the optimality criterion. “Choosing a single-objective optimal design means finding a design ξ^* among all the designs ξ such that an optimality criterion $\Theta(\xi)$ is minimised. The optimality criterion $\Theta(\xi)$ is the variance of the estimator of a regression coefficient or a variance component. For the hierarchical linear model, the optimal designs ξ^*

minimises this variance and gives the optimal number of second level units, and the optimal number of first level units per second level unit to be included”.

The added value of this paper can be summarised in the following points:

1. It shows five different optimality criteria with linked variances of the estimator of regression coefficient and optimal second level unit size;
2. It stresses the role of the budget, as one of the main criteria to establish the sample size;
3. It shows an existing relationship between the sample efficiency and the intraclass correlation coefficient (better to have *a priori* considerations);
4. The definition of a “compound optimal design” (see above)
5. It deals with the sample design robustness based on one or two purposes.

Reading the following other 3 papers it is possible to go more in depth:

3) Snijders and Bosker (1993)⁹ get formulas for the covariance matrix of the estimators of the regression coefficients. They showed how to use these formulas to derive approximately optimal sample size by searching among possible within-school sample sizes, holding costs constant. Snijders e Bosker give a rule of thumb for regarding effects of schools as fixed statistical parameters or random variables.

4) Mok M. (1995)¹⁰ found that design using more schools and fewer students per school are generally less biased and more efficient than ones with fewer schools and more students per school, holding the total sample size constant.

5) Afshartous, D. (1995)¹¹ performed an interesting empirical study. He found that for estimates of variance components, 320 schools are needed whereas to estimate regression coefficients as few as 40 schools may suffice.

⁹ Snijders, T.A.B. and Bosker, R.J. (1993), *Standard errors and sample sizes for two level research*. Journal of Educational Statistics, 18, 237-259.

¹⁰ Mok M. (1995), Sample Size requirements for 2-level Designs in Educational Research. *Multilevel Modelling Newsletter*, 7, 2, 11-15.

¹¹ Afshartous, D. (1995). Determination of Sample Size for Multilevel Model Design. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

**From GGS to GGP; from micro- to macro- via meso- levels.
Variables in the survey [GGS] and in the contextual database [CDB].**

P. Festy (INED)

Partner to partner relationships [GGS]

- Starting and ending a partnership [retrospective and prospective]
 - Having partnered, incl. marriage
 - Having separated, incl. divorce
 - Having re-partnered, incl. remarriage
 - Intentions to partner, incl. marriage
 - Intentions to separate
- Content of partner to partner relationships
 - Quality of relationship
 - Disagreements
 - Respective contribution to household tasks
 - incl. contribution to child care
 - incl. contribution to elderly care
 - Respective contribution to household income
 - Respective economic activity
 - Partner alimony

Parent-child relationships [GGS]

- Starting, staging and ending parent-child relationships [retrospective and prospective]
 - Having had children
 - Having left parental home
 - Children having left respondent's home
 - Having lost one's parents
 - Intentions to have children
 - Intentions to leave parental home
- Content of the parent-child relationships
 - Quality of relationship with his/her parents and with his/her children
 - Emotional support to (or received from) parents, to (or received from) children
 - Frequency of contacts with parents and with children
 - Care to parents and care to children
 - Economic transfers to and from parents, to and from children (incl. inheritance)
 - Children alimony

Individual covariates [GGS]

Gender
Birth year
Present age, age at different events
Present location
Location during childhood
Present economic activity
Present income
Present health
Present well being
Present attitudes towards life, incl. religion and religiousness
Present attitudes towards family and social matters
Present attitudes towards gender and generations matters

Household and network covariates [GGS]

Present and past partners' gender
Present and past partners' birth year
Present and past partners' present age, age at different events
Present partner's present economic activity
Present partner's present income
Present total household income
Present housing conditions
Parents' survival and present health
Parents' present living arrangements
Present distance to parents, incl. co-residence
Number of brothers and sisters
Brothers' and sisters' survival
Number of children
Children's survival
Present distance to children, incl. co-residence

Contextual variables [CDB]

1. State

- Legal regulations
 - Family law, family policies (see 4)
 - Educational policies
 - Health and health care policies, incl. reproductive health
 - Employment, unemployment policies
 - Income policies
 - Old-age pension policies
 - Gender policies
 - Special policies for the young, the elderly
- Welfare state and state institutions (federal state, provincial state, municipalities, other):
who are the main providers of
 - Education
 - Child care
 - Health and reproductive health care
 - Elderly care
- Political indicators
 - Spells of majorities in parliament
 - Spells of governmental composition
 - Share of women in government, parliament, etc.

2. Market

- Activity of persons
 - Numbers of actives/inactives and rates by ...
 - Numbers of employed/unemployed and rates by ...
- Incomes
 - Income, income distribution
 - Income from present activity (wages, ...)
 - Income from past activity (unemployment benefits, pensions, ...)
- Gendered indicators
 - Gendered indicators of activity and employment
 - Gendered indicators of income
 - Share of women in economic positions
- Family indicators
 - Family indicators of activity and employment
 - Family indicators of income

3. Society

- Access to social infrastructures
 - Access to education (conditions, costs, availability, effective use)
 - Access to child care(conditions, etc.)
 - Access to health and reproductive health care(conditions, etc.)
 - Access to elderly care(conditions, etc.)
- Norms and attitudes
 - Norms and attitudes towards life, incl. religion and religiousness
 - Norms and attitudes towards family and social matters
 - Norms and attitudes towards gender and generations matters
- Gendered indicators
 - Share of women in associations, etc.
 - Military service conditions

4. Family

- Legal regulations, family laws (situation and major changes since ...)
 - regulations of marriage/cohabitation (incl. same-sex partnership)
 - consequences of marriage/cohabitation (incl. same-sex partnership)
 - regulations of divorce/separation
 - consequences of divorce/separation
 - regulations of filiation
 - consequences of filiation
 - family obligations
 - children's rights
- Welfare state regulations (situation and major changes since ..., entitlements, amounts)
 - marriage-related benefits
 - birth-related benefits
 - birth-related leave benefits
 - child-related benefits (cash benefits, tax credits and deductions)
 - childcare-related leave benefits
 - elderly care benefits
 - handicapped care benefits

UNECE data of possible interest to GGP contextual database

Enrico Bisogno (Population activities unit, UNECE)

UNECE data of possible interest to GGP Contextual Database

| Source | Topic | Variable type | Derived indicators | Notes |
|---------------------|--|---------------|---|--|
| <i>Demographics</i> | | | | |
| GDB | Population by sex and age | Number | Age structure indicators: median age, dependency ratios, %65+, sex ratios, etc. | |
| GDB | Population by sex, age and marital status | Number | Age/marital status structure indicators | The following marital status are used: (a) Single (i.e. never married); (b) Married; (c) Widowed and not remarried; (d) Divorced and not remarried |
| | Population by sex, age and urban/rural | | | Sparse data available, national definitions -> reduced international comparability |
| GDB | Live births by age of the mother | Number | TFR, Mean age of women at birth | |
| GDB | Live births, first order, by age of the mother | Number | Mean age of women at birth of first child | |
| PAU | Live births, by birth order | Number | Live births by birth order, % distribution | |
| PAU | Legitimate live births by age of mother | Number | % of extramarital births to live births | |
| PAU | Number of legal abortions | Number | Legal abortions per 1000 live births Legal abortions per 1000 women aged 15-49 | |
| PAU | Marriages | Number | | |
| PAU | First Marriages by Age of Bride/Groom | Number | Total first marriage rate Mean age at first marriage Remarriages to total marriages | |
| PAU | Divorces | Number | Divorces per 100 marriages | |
| GDB | Total number of one parent families, by sex | Number | | |
| GDB | Children living in one parent families | Number | | |
| GDB | One person households by age and sex | Number | | |
| GDB | Private households by type | Number | Composition by household typology: - One person household - One parent family household - Total couple households with children (of which: married and cohabiting) - Total couple households without children (of which: married and cohabiting) - Other private households (of which: three generations households) | A private household is either: (a) <i>One person household</i> consists of a person living alone in a separate housing unit or who occupies, as a lodger, a separate room (or rooms) of a housing unit but does not join with any of the other occupants of the housing unit to form part of a multi-person household. (b) <i>Multi-person household</i> consists of a group of two or more persons who combine to occupy the whole or part of a housing unit and to provide themselves with food and possibly other essentials for living. The group may be composed of related persons only or of unrelated persons or of a combination of both. The group may also pool their income Families are defined in the narrow sense of a family nucleus consisting of a couple without children, a couple with one or more children or a lone parent with one or more children. |

| <i>Market</i> | | | | |
|---------------|--|-------------------|--|--|
| | Employment | | | |
| GDB | Labour Force by age and sex | Number | Participation (activity) rates, by age and sex The labour force participation rate is defined as the ratio of the labour force to the working age population | The labour force/economically active population comprises all persons who fulfil the requirements for inclusion among the employed and the unemployed |
| GDB | Persons in employment by broad sector of activity | Number | Composition by main sector of activities: <i>Agriculture, Industry and Services</i> | |
| GDB | Persons in employment by status of employment | Number | employees, among whom it may be possible to distinguish between employees with stable contracts (including regular employees) and other employees; - employers; - own-account workers; - contributing family workers; - members of producers' co-operatives; - persons not classifiable by status | |
| GDB | Total employment by occupation and sex | Number | Total employment distribution by occupation (i.e.: professionals, technicians, clerks, etc.), sex ratios, etc. | A set of jobs whose main tasks and duties are characterised by a high degree of similarity constitutes an occupation |
| GDB | Part time employment by sex | Number | Ratio of part-time to full-time employed persons, by sex | Regular employment in which working time is substantially less than normal (definition is not universally accepted) |
| GDB | Time spent in paid work, unpaid work, other | Hours/week | | Very sparse data <u>Paid work</u> comprises production activities which are done within the System of National Accounts production boundaries <u>Unpaid work</u> is defined as production activities which are done within the general production boundary but outside the SNA production boundary. The categories comprised are: - Work providing unpaid domestic services for own final use within the household. - Work providing unpaid care-giving services to household members. - Work providing community services and help to other households. <u>Other activities</u> are those that cannot be produced by one person for the benefit of another. For example: socialising and community participation, learning, etc. |
| GDB | Unemployment by age and sex | Number | Unemployment rates by age and sex. <i>Unemployment rates represent unemployed persons as a percentage of the civilian labour force</i> Employment rates by age and sex. <i>Employment rate represent persons in employment as a percentage of the population in the same age group.</i> | |
| GDB | Long term unemployment and sex | Number | Long term unemployment rate by sex, that is long-term unemployment as a percent of total unemployment | Long-term unemployment is defined as that involving people out of work and looking for work for 12 months or more |
| GDB | Employment in public and private sector, by sex | Number | | |
| GDB | Average annual earnings (full time, full year) by level of education completed and sex | National currency | | Very sparse data |

| | | | | |
|-----------------------|---|-------------------|---|---|
| | Economics | | | |
| <i>DB</i> | <i>Gross Domestic Product</i> | National currency | GDP growth, GDP per capita (using Purchasing Power Parities), productivity per employed | |
| <i>DB</i> | <i>Consumer Price Index</i> | Rate | | |
| <i>Society</i> | | | | |
| | Education | | | |
| GDB | Upper secondary pupils by sex | Number | | Upper secondary pupils (ISCED 1997, level 3 and 4) |
| GDB | Net enrolment rate at secondary level by sex | Rate | | The net enrolment ratio is the enrolment of the official age group for a given level of education expressed as a % of the corresponding population |
| GDB | Tertiary students by level, fields of study and sex | Number | | Students at tertiary level (5A, 5B, 6) according to ISCED 1997 |
| GDB | Graduates by sex | Number | | Graduates (level 5A, 6) according to ISCED 1997 |
| GDB | Teachers by ISCED levels and sex | Number | Ratios pupils to teacher, by level; % distribution of teachers by sex and level | Teachers by level according to ISCED 1997 |
| GDB | Adult population by educational attainment, age and sex | Number | | |
| GDB | Total expenditure on education as % of GDP | Rate | | |
| | Gender issues | | | |
| GDB | Members of national parliament by sex | Number | | |
| GDB | Government ministers by sex | Number | | |
| GDB | Senior level civil servants by sex | Number | | These are defined according to ISCO 1120 (e.g. government administrators, ambassadors, consul-general, etc.) |
| GDB | Judges by sex | Number | | Judges are defined according to ISCO 2422 |
| GDB | Members of municipal councils or other local area governing bodies by sex | Number | | Local administrative levels as defined by each country. For EU and candidate countries, local level = NUTS 5. |
| GDB | Central bank board members by sex | Number | | |
| GDB | Heads of universities by sex | Number | | A university is an institution of higher learning providing facilities for teaching and authorised to grant academic degrees. Their main focus should be on ISCED 97 level 5A programmes. |
| GDB | Chief editors of national newspapers by sex | Number | | Newspapers with national circulation. |
| GDB | Journalists by sex | Number | | Journalists are defined by ISCO 2451 |
| GDB | Voters voting by sex | Number | | Voters are the persons in the country who have the legal right to vote. Voters voting are the persons in the country who actually voted. Data refer to national parliament elections |
| GDB | Top executives in most important businesses by sex | Number | | Since there is no internationally agreed methodology on how to measure the ("X") most important businesses, national cut-off points are to be used, for example the number of employees. Top executives are defined by ISCO 1210. |

| | Health | | | |
|-----|--|--------|---------------------------------------|--|
| GDB | Life expectancy at birth and at 65, by sex | Years | | |
| GDB | Disability Adjusted Life Expectancy by sex | Years | | DALE summarises the expected number of years to be lived in "full health" |
| GDB | General medical practitioners | Number | Number of physicians per 1000 persons | A General medical practitioner is a person who has completed studies in medicine at a university level and is working in primary health care |
| PAU | Infant deaths | Number | Infant mortality rate | Deaths at age 0 |
| GDB | Total health expenditure as a % of GDP | % | | Total expenditure on health includes public and private expenditure |

GDB: Gender Database (UNECE Statistics Division). Data are being collected for years: 1980, 1990, 1995, 2000 and 2001 (from 2002 onwards they'll be collected annually). The country list is enclosed.

PAU: Demographic Database (UNECE Population Activities Unit). Time series start as of 1982 and go up to 1999 or 2000. The country list is enclosed.

EDB: Economic Database (UNECE Statistics Division). Time series date back to the 70's as for Western Countries while generally start at early 90's for Transition economies. Data are collected for all UNECE countries but the smallest ones (S.Marino, Liechtenstein, Andorra)