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GGS Wave 1 Belgium:
Final Disposition Codes & Standardised Response Rates

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1 Preface

Changing families and populations are presenting growing challenges for industrialized societies. As a result of low fertility levels prevailing for a long time, many countries are now expected to face labour shortages simultaneously with the demand to support a rapidly growing number of retired persons (UNECE, 2008). At the same time, younger generations tend to postpone marriage and parenting. Increased prevalence of consensual unions, decreasing stability of co-residential partnerships and the emergence of non-residential partnerships are other trends that can be seen in many countries (UNECE, 2008). Multifaceted family change requires that governments and other social partners monitor and, when necessary, step in to help families preserve and strengthen the ties that bind their members. To successfully meet these and other challenges, the UNECE Population Activity Unit launched the Generations & Gender Programme (GGP) to equip policy makers with a better understanding of the causes underlying recent developments and their consequences, with particular attention given to the relationships between children and parents (generations) and between partners (gender).

The GGP has two main pillars. The first is the system of national Generations & Gender Surveys (GGS), which are panel surveys of a representative sample of the 18 to 79 year-old resident population. The second is the set of Contextual Databases (CDB) that provide information on macrolevel factors influencing demographic trends. By pursuing a multidisciplinary and comparative approach, GGP reveals much more about demographic behaviours and offers explanations and solutions with respect to current demographic changes and their consequences. Fourteen UNECE countries and two countries outside the UNECE region are currently implementing GGP (UNECE, 2008).

GGP Belgium is part of the international programme launched by the UNECE Population Activities Unit. The implementation is financially supported by Belgian Science Policy within the AGORA-programme, Statistics Belgium (ADSEI/DGSIE), the Studiedienst van de Vlaamse Regering (SVR) and the Institut Wallon de l'Évaluation, de la Prospective et de la Statistique (IWEPS). The scientific team supporting GGP Belgium consists of researchers from the following research centres: Vrije Universiteit Brussel (VUB), Universiteit Antwerpen (UA), Universiteit Gent (UGent), Université Catholique de Louvain (UCL), Studiedienst van de Vlaamse Regering (SVR), Institut Wallon de l'Évaluation, de la Prospective et de la Statistique (IWEPS) and the Association pour le Développement de la Recherche Appliquée en Sciences Sociales (ADRASS).

United Nations Economic Commission for Europe, Population Activity Unit:
http://live.unece.org/pau/ggp/welcome.html

Generations & Gender Programme:
http://www.ggp-i.org

2 Introduction

Response rates are one of the most widely used indicators for survey quality and validity. They are the indicators that are most likely to be quoted in survey reports, and are very often used by survey commissioners as an indicator of the quality they wish to achieve for their survey (Lynn et al. 2001, Simard & Franklin 2005). Response rates are also frequently used to compare survey quality between surveys, between survey organizations or between countries and to compare surveys over time. Response rates are thus frequently interpreted as indicators of potential risk of selectivity or bias in survey data: to the extent that non-response is higher, the risk of selectivity is considered larger. Conversely, a high response rate is considered important in order to ensure that the respondents interviewed in the survey accurately represent the population from which the sample was drawn (Simard & Franklin, 2005).

Differences in sample design and survey implementation, however, result in considerable variation between surveys in the way that response rates are calculated. For this reason comparisons of response indicators between surveys are not always valid. In order to make valid comparisons between response rates obtained in different surveys and/or by different organizations, response rates are increasingly defined and calculated in a standardised way (Lynn et al., 2001). In line with this practice, the UNECE Population Activity Unit issued guidelines concerning the definitions and documentation of the final disposition codes to be used in the Generations and Gender Survey (Kveder, 2005). In addition to the harmonized definitions of outcome codes and response rates, the sample design guidelines issued by the UNECE Population Activity Unit recommend that the final estimation weights of the GGS should be validated by comparing weighted GGS-based estimates with other sources (e.g., Vital Statistics) to verify that the survey's estimates are accurate (Simard & Franklin, 2005). Whereas the response rates provide a general indication of survey quality, the validations of GGS-based estimates thus provide a direct assessment of the validity of the core indicators in the GGS.

In this paper we focus on the methodology that was used to calculate standardised response rates and we document the main results of the analysis of (non-)response in GGS Wave 1 Belgium. To this end, section 2 documents the main methodological issues of the analysis. In section 2.1, we review a limited number of classifications of outcome or disposition codes available in the literature and document how these classifications have been modified and implemented in GGS Wave 1 Belgium. Subsequently, section 2.2 discusses the available algorithms that are frequently used to establish final outcome codes for sampled individuals and documents the algorithm that was implemented in GGS Wave 1 Belgium. Section 2.3 documents the definitions of standardised indicators based on the guidelines issued by the UNECE Population Activity Unit. In section 3 we turn to the main results of the analysis of (non-)response in GGS Wave 1 Belgium: the distribution of final disposition codes (section 3.1), motives for refusal and non-response (section 3.2) and results for the standardised indicators (section 3.3). Finally, section 3.4 looks at variation of non-response in terms of housing conditions and neighbourhood characteristics of sampled individuals. A summary of

findings is included in section 4. The results regarding the validation of (demographic) indicators based on GGS Wave 1 Belgium against other sources (e.g. vital registration) are documented in a separate volume of the GGP Belgium Paper Series (see Neels, 2011b).

3 Methodology

Given the international character of the Generations and Gender Programme (GGP) and the explicit aim to conduct cross-country comparative research on the causes and consequences of demographic change in industrialized countries (UNECE, 2008), the UNECE Population Activity Unit has issued specific guidelines regarding definitions and documentation of final disposition codes to be used in the Generations and Gender Surveys (GGS). However, given the variety of sample and survey designs to be expected in participating countries (e.g. the type of sampling frame used, method of selection, sample allocation, …), the GGS Wave 1 Questionnaire does not incorporate a contact form designed to register the information that is required for the calculation of standardised response rates (Vikat et al. 2005). As a result, it was left at the discretion of countries participating in the GGP to develop a contact form and a classification of outcome codes suited to their design of the GGS. In this section we document the contact form that was used to collect the required information in GGS Wave 1 Belgium (section 2.1), the classification of (final) disposition codes (section 2.2) and the definitions of standardised response rates (section 2.3).

3.1 Contact form and interviewer guidelines

Given the lack of a contact form in the international Wave 1 Questionnaire, a contact sheet was introduced into the questionnaire of GGS Wave 1 Belgium to monitor the fieldwork and to collect information on housing conditions and neighbourhood characteristics of sampled individuals (see appendix A). The contact form of GGS Wave 1 Belgium is largely based on the contact form the European Social Survey (ESS)[1] used. The decision to adopt the contact sheet from the ESS was based on the methodological quality of this survey and the availability of additional technical documentation on the extraction of (final) disposition codes (Billiet, 2006).

The main function of the GGS Wave 1 contact form is to register each contact or contact attempt with a sampled individual. In short, the contact form provides i) information on the result or outcome of each contact (attempt) with a sampled individual, ii) information on the reasons and motives behind refusal and non-response, iii) information on whether respondents where fully cooperative or reluctant to cooperate and also iv) some information on non-respondents (Billiet et al, 2005). The role of the contact form is multi□dimensional. The main functions can be summarized as follows (Matsuo et al, 2010; Stoop et al, 2008):

1. The contact form collects information on *all sampled individuals*, both respondents and individuals who did not cooperate in the survey. Particularly the information collected on non-respondents makes the contact form relevant to monitor non-response bias and gauge the potential impact of non-random response on results. For refusals (one specific type of non-response), for instance, information is collected on age and gender, reasons

[1] www.europeansocialsurvey.org

for refusal and the interviewer's assessment of possible cooperation in future contact attempts;

2. The contact form includes questions about the *timing and mode of contact* attempts and the outcome of each attempt. This enables the identification of patterns and trends in terms of respondent availability and survey cooperation and further potential problems in data collection;

3. For all sampled individuals, the contact form contains the interviewer's evaluation of *housing conditions and neighbourhood characteristics*. In order to monitor response bias it is relevant to study the effect of these characteristics on non-response, i.e. 'housing and neighbourhood effects'. Differences in response rates and response bias across countries can be due to differences in target respondents and their social environment, or to differences in fieldwork organizations and their procedures;

4. Finally, the contact form collects the information throughout the fieldwork period and allows the construction of standardised response indicators.

In addition, the contact form also collects the practical information needed for the follow-up (e.g. phone numbers, information about the possibility to find the address and/or respondent, new address in case of moved respondents, date of availability of the respondent, …).

A specific interviewer training was organized to give instructions on how to use the contact form and to enhance reporting of the housing and neighbourhood characteristics. Apart from specific instructions concerning the contact form, interviewers were given additional guidelines to maximise the response rate. Interviewers were required to contact sampled individuals at least three times, with the possibility to register up to 10 attempts in the CAPI contact form. The first contact was recommended to be face-to-face. In addition, interviewers were required to contact individuals at different times of the day (e.g. at least one attempt after 6PM) and make at least on contact attempt during the weekend[2]. In many surveys, interviewers are required to contact individuals who issued a (soft) refusal during an earlier contact attempt (e.g. when the respondent was reluctant to participate and refused, the interviewer can re-contact in an attempt to convert the initial refusal into a completed interview). No refusal conversion was implemented, however, during the GGS wave 1 fieldwork.

3.2 Outcome codes

The information in the contact form is used to generate result codes or 'outcome codes' for each registered contact attempt as well a 'final outcome code' for each sampled individual. The final outcome or disposition codes constitute the required input for the calculation of standardised response rates. The subsequent sections provide an overview of frequently

[2] De Winter et al. (2011) provide a detailed analysis of contact attempts during the GGS Wave 1 fieldwork. The manuals used during the interviewer training are available from the GGS Belgium website (www.ggps.be).

used classifications of outcomes codes in social surveys (section 2.2.1) and of different algorithms used to determine the final outcome code for a sampled individual (section 2.2.2). Finally, section 2.2.3 documents the classification of outcome codes and the extraction algorithm implemented in GGS Wave 1 Belgium.

3.2.1 International standards

Response rates are one of the most widely used indicators for survey quality and validity. They are the indicators that are most likely to be quoted in survey reports, and very often used by survey commissioners as an indicator of the quality they wish to achieve for their survey (Lynn et al, 2001). Response rates are also frequently used to compare survey quality between surveys, between survey organizations or between countries and to compare surveys over time. However, due to differences in survey implementation and different ways of calculation, comparisons of response rates are not always valid. In order to be able to make valid comparisons between response rates obtained in different surveys and by different organizations, response rates should be defined and calculated in a standard way (Lynn et al, 2001).

The American Association of Public Opinion Research (AAPOR, 2000) was the first to draw up standard definitions applicable to random surveys. However these definitions were limited and not widely applicable for several reasons. First, they deal only with surveys involving a single respondent within a household. Second, they only deal with RDD telephone surveys, in-home surveys based on samples of residential addresses and mail surveys of specifically named persons. Third, the AAPOR document does not provide practical guidance for field implementation, nor does it deal with a number of technical issues that are important for Lynn et al (2001).

Lynn et al (2001) have taken the AAPOR standards as a starting point and have adapted and extended them to propose standards that are more widely applicable to major government, academic and public sector surveys. The adoption of these standards enables meaningful comparisons between surveys and aids understanding of trends and patterns in response rates. However there will inevitably always be some degree of variation between surveys, therefore Lynn et al. (2001) have aimed to develop a standardised system that is applicable to most surveys (Lynn et al,2001).

Lynn et al. (2001) provide standards and definitions covering three key aspects of the definition and calculation of response rates:

- A hierarchically ordered list of final outcome categories or final disposition codes (FDC)[3];
- Detailed definition of each disposition or outcome code;

[3] The term 'disposition code' was introduced by AAPOR (2000) whereas Lynn et al. (2001) use 'outcome code ' to define the categories or codes. In this paper the terms 'disposition code' and 'outcome code' are used interchangeably.

- Standard definitions of indicators (e.g. response rate) based on the final outcome categories.

The list of outcome categories for surveys of individuals proposed by Lynn et al (2001) is added in appendix B.

3.2.2 Algorithms for the extraction of final disposition codes

For fieldwork monitoring purposes, each registered contact or attempt to contact a sampled individual is coded using a standard outcome code. At the termination of the fieldwork, however, a single or final outcome code has to be attributed to each sampled individual. For individuals with multiple registered contact attempts, a procedure is thus required to merge or combine the separate outcomes for the different contact attempts into one final code, the so-called *final disposition code* (Billiet et al, 2005; Lynn et al, 2001). In general, there are two basic methods used to accomplish this:

1) the outcome of the *last contact attempt* (with any member of the household) is considered to represent the final outcome code.
2) a *priority ordering* of visit outcomes can be constructed to select the outcome with the highest priority

The first method is the one proposed by AAPOR (2000). They only take the outcome of the last contact into account and do not use a hierarchy for the outcome codes. The second method using a hierarchy of outcome codes was documented and applied by Lynn et al (2001). They claim that the procedure to convert multiple issue outcomes into a final single case outcome, should be as objective and automated as possible. Therefore, Lynn et al (2001) suggest a simple priority ordering of the outcome codes. The outcome with the highest priority code should be taken as the final outcome case. For example, a refusal code that comes earlier in a sequence of visits is given priority over a non-contact code occurring at a more recent and final visit. The full list of priority ordering of outcomes is included in appendix C (Lynn et al., 2001). Finally, Billiet et al (2005) propose an algorithm combining elements of the previous methods. The outcome of the last contact is generally used as the final nonresponse code. An exception is made when a refusal was issued at an earlier visit and subsequent contacts with the household resulted in other eligible nonresponse outcomes. In this case, 'refusal to participate' is given as the final nonresponse code. When a nonresponse code has been followed by a response because of successful nonresponse conversion, then the final outcome is a response code because it has higher priority in the coding procedure (Billiet et al, 2005).

3.2.3 Final disposition codes in GGS Belgium

Given the data recorded in the contact form of GGS Wave 1 Belgium, an outcome code was attributed to each registered contact attempt. Given the elaborate character of the list proposed by Lynn et al. (2001) - distinguishing no less than 53 different outcome codes - a selection of 19 outcome codes was made from the elaborate classification to be implemented in GGS Wave 1 Belgium, following the selection of outcome codes made by

Billiet (2006) and previously implemented in the ESS. This selection is still exhaustive and provides the information required to calculate the standardised indicators. Based on the closed-form information in the contact form, the following 19 outcomes categories are distinguished in GGS Wave 1 Belgium:

11 'Complete or partial interview'
21 'Partial interview'
31 'Non-contact'
43 'Refusal by respondent or proxy'
41 'Office refusal'
45 'Broken appointment'
52 'Away throughout field period'
53 'Physically or mentally unable'
54 'Language barrier'
56 'Other non-response'
61 'Not attempted'
63 'Unable to locate address'
68 'Moved: unable to contact at new address'
71 'Not yet built, under construction'
72 'Demolished or derelict'
73 'Vacant, empty'
74 'Non-residential address'
76 'Communal establishment, institution'
78 'Out of sample'

The SPSS syntax to calculate outcomes codes from the data registered in the contact form is included in appendix D. The method chosen to extract the final disposition code for each selected individual from the multiple outcomes over subsequent contacts or contact attempts is based on the method prosed by Lynn et al (2001), assuming a hierarchy of outcomes codes. The SPSS syntax used to calculate the final outcome codes is included in appendix E. An example helps to illustrate the priority of outcomes codes. Imagine that the first contact attempt made by an interviewer results in a refusal because the respondent does not have enough time to participate. Subsequently, the interviewer tries to contact the respondent a second and third time to see whether (s)he is willing to participate now. The third time the respondent is not present, but another member of the household now refuses on behalf of his housemate. In this case, the final outcome code will be refusal by respondent rather than refusal by proxy since the former is higher in the priority ordering, even though the latter the outcome code of the last contact.

The automated attribution of outcome codes only takes into account the information recorded in the closed form questions in the contact form. To also integrate the information from text fields in the contact form and information available from the national register, a number of additional steps were implemented to attribute the final disposition code. In summary, three steps were followed to calculate the final dispositions codes for GGS Wave 1 Belgium:

- First, the SPSS syntax for the calculation of the FDC was applied, based on the hierarchy proposed by Lynn et al. (2001) (see appendix D). As a result every sample unit receives an initial final disposition code;
- Second, a manual correction of the final disposition codes was made considering the information given by the interviewer in the open text fields of the contact form. Some interviewers did not find the correct description in the list of reasons for refusal or did not follow the correct order of the questions. Instead they gave a comment in the field for general comments on the contact form. In some cases this comment did not correspond to the final disposition code that was generated automatically. Hence, the final disposition codes generated by the algorithm were checked and if necessary corrected based on the information in the open text fields. A manual correction was implemented for 1.24 per cent of the 17836 the individuals selected into the GGS wave 1 sample.
- Third and finally, the final disposition codes were verified against information drawn from the National Register. Sampled individuals who had deceased, emigrated or moved to a collective household during the fieldwork period were considered to be out of sample For GGS Wave 1 Belgium, 2.3 per cent of the 17836 cases were attributed 'out of sample' as final outcome code as a result of this correction procedure.

3.3 Standardised indicators

The final disposition codes constitute the main input for the calculation of standardised response rates following the guidelines issued by the UNECE Population Activity Unit and documented in Kveder (2005). Before these indicators could be calculated it was necessary to collapse the detailed final disposition codes in GGS Wave 1 Belgium into a smaller number of categories based on the classification of final disposition codes proposed by Kveder (2005) (see appendix E). Table 1 documents the correspondence between the codes based on Lynn et al. (2001) implemented in GGS Wave 1 in Belgium and the final disposition codes suggested by UNECE for the calculation of standardised response rates.

Based on the set of eight final disposition codes suggested by UNECE several standardised indicators are computed. We make use of the formulas of Lynn et al. (2001) as proposed by Kveder (2005) for the Generations and Gender Surveys. Lynn et al (2001) describe the calculation of 4 rates based on the final dispositions codes, each of them with their own specific interpretation: i) response rate, ii) contact rate, iii) cooperation rate and iv) refusal rate.

Table 1: Belgian selection of final disposition codes versus UNECE final disposition codes

FDC *19 categories* *(GGS Belgium)*	*UNECE FDC* *8 categories* *(GGS international)*	
Complete interview	Complete interview	I
Partial interview	Partial interview	P
Not yet built, under construction; Demolished or derelict; Vacant, empty; Non-residential address; Communal establishment, institution; Out of sample[4]	Not eligible	NE
Non-contact	Non-contact	NC
Office refusal; Refusal by respondent or proxy; Broken appointment	Refusal	R
Away throughout field period; Physically or mentally unable; Language barrier; Other non-response	other non-response	O
Not attempted; Unable to locate address; Moved: unable to contact at new address	unknown eligibility, contacted and non-contact	UC UN

Source: Lynn et al. (2001) & Kveder (2005)

The first and most commonly used standardised indicator, is the *response rate*. The ultimate purpose of the response rate is to serve as an overall survey performance indicator. The response rate indicates how many interviews were achieved as a proportion of those eligible for the survey.

$$\text{Response Rate} = \frac{I+P}{(I+P)+(R+NC+O)+(e_C UC + e_N UN)} \quad (1)$$

The numerator of the response rate contains all interviews, both complete (I) and partial (P). The denominator consists of the eligible sample, including the complete and partial interviews and the other outcome codes such as refusal (R), non-contact (NC), other non-response (O). The denominator also includes an estimation of the eligible fraction among sampled individuals with unknown eligibility who were actually contacted (i.e. e_CUC)[5] and of the eligible fraction among cases with unknown eligibility who were not contacted during the fieldwork period (i.e. e_NUN) [6]. To this end, the definition of the response rate includes in the denominator an estimate of the number of eligible non-responding cases amongst those cases where eligibility is uncertain. The most frequently used assumption when estimating the ratios is that the proportion of eligible units within the resolved units is the same as the eligibility ratio within the units of unknown eligibility. The estimation of e_C and e_N is as follows:

$$e_c = e_n = \frac{(I+P)+(R+NC+O)}{(I+P)+(R+NC+O)+NE} \quad (2)$$

[4] The 'out of sample'-category includes individuals that were identified as being out of sample based on i) the closed form information recorded in the contact form, ii) the information provided by interviewers in the open text fields and iii) information drawn from the national register (i.e. sampled individuals who had moved or emigrated, or who had moved into a collective household) (see 3.2.3).

[5] e_C = estimated proportion of contacted cases of unknown eligibility that are eligible

[6] e_N = estimated proportion of non-contacted cases of unknown eligibility that are eligible

The response rate is a general indicator of survey quality, but it does not give additional insight in the possible reasons behind low or high response. Therefore the information from the response rate is complemented by additional indicators.

The *contact rate* measures the proportion of all cases in which a household member was reached by the interviewer, even though they might have refused or been unable to give further information about the household composition or to participate to the survey. (In order to have "contacted" someone, verbal interaction is required – leaving a note through a letterbox or a message on an answerphone is not sufficient). So the contact rate expresses the success of the fieldwork in terms of contacting the sampled individuals, regardless of whether this contact resulted in an interview or not:

$$\text{Contact Rate} = \frac{(I+P)+R+O+e_C(UC)}{(I+P)+(R+NC+O)+(e_C UC+e_N UN)} \quad (3)$$

Thirdly, the *cooperation rate* expresses a specific aspect of the quality of the fieldwork and data collection. The cooperation rate indicates the number of achieved interviews as a proportion of those ever contacted during the fieldwork period. Whereas the response rate can be strongly influenced by high numbers of non-contacts, the cooperation rate specifically looks at response among selected individuals who have effectively been contacted:

$$\text{Cooperation Rate} = \frac{I+P}{(I+P)+R+O+e_C(UC)} \quad (4)$$

From the definitions it follows that the response rate is the product of the cooperation and the contact rates.

The final indicator calculated from the final outcome codes is the *refusal rate*. In recent years the proportion of refusals has increased significantly in many general population surveys. Therefore it has become increasingly important to monitor refusals separately. The purpose of the refusal rate is to indicate the proportion of all (estimated) eligible cases that refuse:

$$\text{Refusal Rate} = \frac{R}{(I+P)+(R+NC+O)+(e_C UC+e_N UN)} \quad (5)$$

4 Results

In this section we document the main results of the analysis of non-response in GGS Wave 1 Belgium. Section 3.1 documents the distribution of the final disposition codes for Belgium as a whole and subsequently by sample strata in terms of age, sex and region (NUTS1). The latter characteristics were used for stratification in the GGS Wave 1 sample design and also for the calculation of post-stratification weights (Neels et al., 2011a). Section 3.2 subsequently focuses in detail on the motives for refusal and non-response. The results for the standardised response indicators are documented in section 3.3. Both section 3.2 and section 3.3 present the results at the national level and broken down for strata defined by age, sex and region. Finally, section 3.4 discusses the effects of housing conditions, neighbourhood characteristics and degree of urbanization on both the distribution of final disposition codes and the response rate.

The presented distributions are not weighted using the final estimation weights (see Neels et al., 2011a). Weighted response rates would be adjusted to the structure of the survey population, not the eligible survey population. As a result, unweighted response rates are considered more appropriate as indicators of fieldwork quality (Lynn et al, 2001).

4.1 Distribution of the final disposition codes

Although 19 distinct outcome codes have been implemented during the fieldwork of GGS Wave 1 Belgium, the classification of outcome codes in this section is collapsed into seven categories to facilitate the presentation of the results (see table 2).

Table 2: Correspondence between the classification of final disposition codes implemented in GGS Wave 1 (19 categories) and the collapsed classification used in the results section (7 categories)

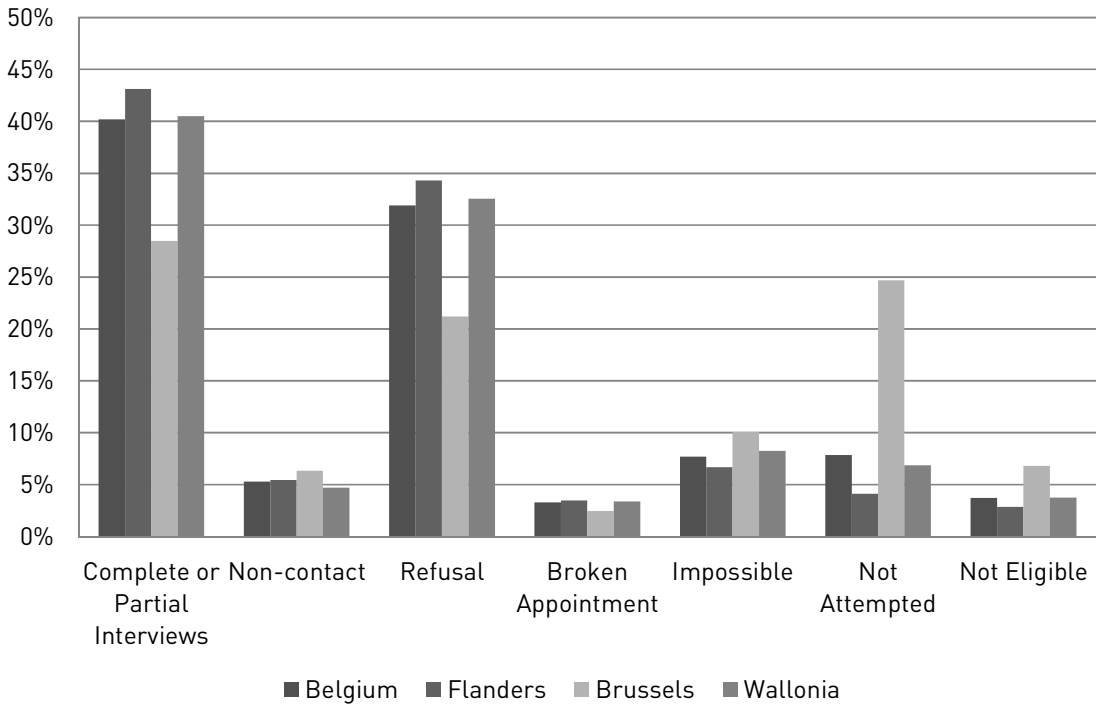
FDC 7 categories (Selected categories)	*FDC 19 categories (GGS Belgium)*
Complete or partial interview	Complete interview; Partial interview
Non-contact	Non-contact
Refusal	Refusal by respondent or proxy; Office refusal
Broken appointment	Broken appointment
Impossible	Away throughout field period; Physically or mentally unable; Language barrier; Other non-response
Not attempted	Not attempted; Unable to locate address; Moved: unable to contact at new address
Not eligible	Not yet built, under construction; Demolished or derelict; Vacant, empty; Non-residential address; Communal establishment, institution; Out of sample

4.1.1 Final disposition codes by NUTS1 region

For Belgium as a whole, 40.2 per cent of the sample resulted in a 'completed or partial interview' and 31.9 per cent resulted in 'refusal'. The frequency of the other outcome codes

ranges from 3.3 per cent for the 'broken appointments'[7] to 7.9 per cent for 'not attempted'. The latter category encompasses individuals where no contact attempts have been made or registered. The distribution of final outcome codes is similar in Flanders and Wallonia. In Brussels, the distribution of outcomes codes is somewhat different: the percentage of cases registered as 'not attempted' is considerably higher, resulting in lower percentages for 'complete or partial interview' and 'refusal'.

Figure 1: Distribution of final disposition codes by NUTS1 region, Belgium, N=17836.



Source : GGS Belgium, Wave 1 – Calculations by authors

Compared to Wallonia, the percentage of cases resulting in a completed or partial interview is nearly 3 per cent higher in Flanders. Also the percentage of refusals is 1.7 per cent higher in Flanders compared to Wallonia. On the other hand, in Wallonia the percentage of respondents 'not attempted', 'impossible' and 'not eligible' is consistently higher than in Flanders. Hence the results suggest that the higher percentage of refusals in Flanders is the result of a larger percentage of individuals effectively being contacted, resulting in larger numbers of interviews and refusals. The percentage of cases being classified as 'non-contact' and 'broken appointment' is similar in Flanders and Wallonia.

[7] A 'broken appointment' refers to the situation where the Contacted person(s) is/are willing to be interviewed later at an agreed time, but interviewer is unable subsequently to re-contact them (see definitions of outcome codes in Appendix B).

Table 3: Distribution of final disposition codes by NUTS1 region, Belgium, N=17836

	Complete or Partial Interviews	*Non-contact*	*Refusal*	*Broken Appointment*	*Impossible*	*Not Attempted*	*Not Eligible*	*Total*
Belgium	7171	945	5689	589	1373	1406	663	17836
	40.2%	5.3%	31.9%	3.3%	7.7%	7.9%	3.7%	100%
Flanders	3861	488	3068	311	597	369	256	8950
	43.1%	5.5%	34.3%	3.5%	6.7%	4.1%	2.9%	100%
Brussels	683	152	509	59	242	592	163	2400
	28.5%	6.3%	21.2%	2.5%	10.1%	24.7%	6.8%	100%
Wallonia	2627	305	2112	219	534	445	244	6486
	40.5%	4.7%	32.6%	3.4%	8.2%	6.9%	3.8%	100%

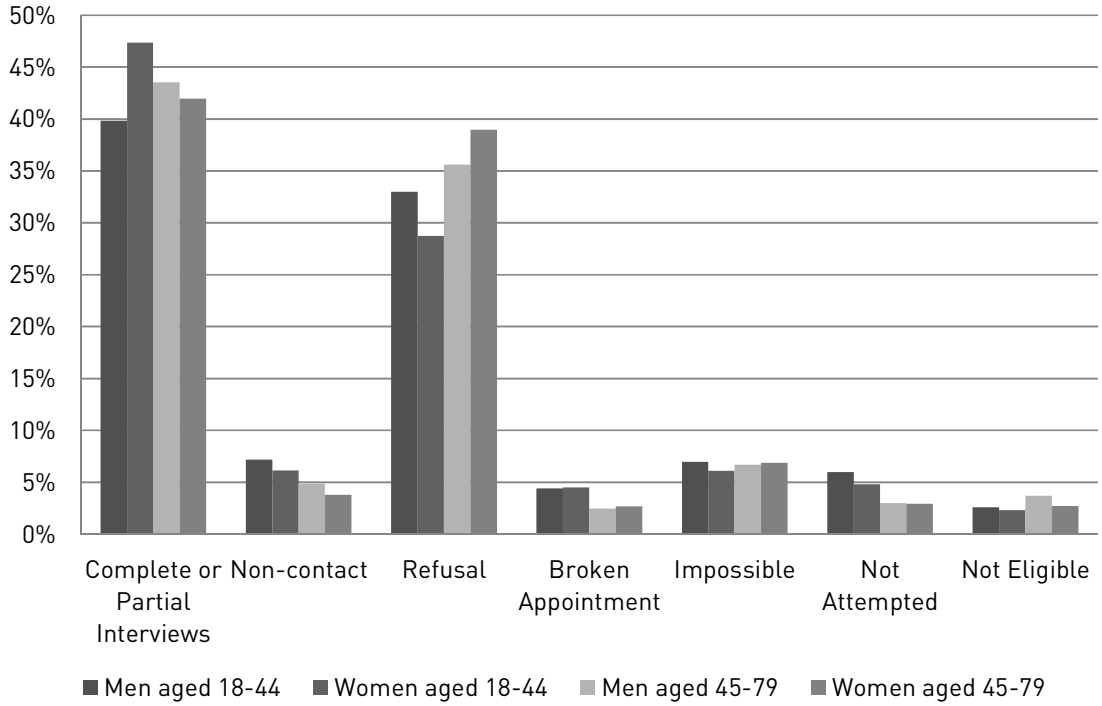
Source : GGS Belgium, Wave 1 – Calculations by authors

Compared to the distribution found in the other regions, the final disposition codes in Brussels show a number of remarkable differences. The percentage 'completed or partial interviews' (28.5 per cent) and 'refusals' (21.2 per cent) is much lower: the frequency of both categories is more than 12 percentage points lower than is the case in Flanders or Wallonia. The main difference between Brussels and the other regions, and presumably the cause for the other differences, is situated in the high frequency of the category 'not attempted' (24.7 per cent): the less people are contacted, the less this can result in an interview or refusal. If interviewers manage to contact sampled individuals in Brussels, however, the number refusals are rather low (cf. infra: cooperation rate). Also the percentage of 'interviews impossible to conduct' is higher in Brussels than in the other regions (10.1 per cent). This may be due to a language barrier. The outcome code 'not eligible' is also much higher in Brussels. This could possibly be explained by a higher migration in Brussels. Compared to Flanders and Wallonia, 'non-contact' is only a little more frequent in Brussels, whereas the percentage of 'broken appointments' is lower.

4.1.2 Final disposition codes by sex and age-group: Flanders

The breakdown of the final disposition codes by sampling strata (figure 2), reveals limited variation by sex and age-group of individuals selected into the GGS Wave 1 sample in Flanders.

Figure 2: Distribution of final disposition codes by sex and age-group, Flanders, N=8950



Source : GGS Belgium, Wave 1 – Calculations by authors

The percentage of 'completed or partial interviews' is the highest for women between 18 and 44 years old (47.3 per cent). This corresponds to a low percentage of refusals in this group compared to the other strata. The lowest percentage of interviews is situated in the category of the younger men (39.8 per cent). Conversely, this group has higher numbers of non-contacts, refusals, broken appointments and not attempted addresses.

Given the results in table 4, we assume that the differences in 'completed interview' are not just caused by 'not attempted', because we notice the opposite distribution within the 'refusals': more refusals among younger men and less refusals among younger women. Whereas younger women are more willing to participate at the interview, contact with younger men not always results into a complete interview, which also explains the higher percentage of 'refusals' (33 per cent) and interviews that are 'impossible' to conduct (7 per cent) among younger men compared to younger women. Women are more willing to cooperate, the percentage of 'refusals' is the smallest for this group (28.7 per cent) as well as the percentage 'impossible' (6.1 per cent).

Table 4: Distribution of final disposition codes by sex and age-group, Flanders, N=8950

	Complete or Partial Interviews	*Non-contact*	*Refusal*	*Broken Appointment*	*Impossible*	*Not Attempted*	*Not Eligible*	*Total*
Men 18-44	846	153	701	94	148	127	55	2124
	39.8%	7.2%	33.0%	4.4%	7.0%	6.0%	2.6%	100%
Women 18-44	1000	130	607	95	129	102	49	2112
	47.3%	6.2%	28.7%	4.5%	6.1%	4.8%	2.3%	100%
Men 45-79	1014	114	830	58	156	70	87	2329
	43.5%	4.9%	35.6%	2.5%	6.7%	3.0%	3.7%	100%
Women 45-79	1001	91	930	64	164	70	65	2385
	42.0%	3.8%	39.0%	2.7%	6.9%	2.9%	2.7%	100%

Source : GGS Belgium, Wave 1 – Calculations by authors

The differences between men and women show a reverse patterns in the older age-group. Here we find a higher frequency of 'completed or partial interviews' among men (43.5 per cent), whereas the number of refusals is lower (35.6 per cent). For the other outcome codes, the differences between men and women in the same age-group are generally small.

Another obvious conclusion that can be drawn from figure 2 is that younger age-groups are harder to contact. The percentage 'non-contact' as wel as 'not attempted' is lower between 45 and 79 years old. Also the percentage 'broken appointments' is small for the older age group. They are able and willing to take enough time for a complete interview. The 'refusals' are higher for the older age group. This can be linked to the fact they are easier to contact which increases the chance for a refusal, or older people are more suspicious and refuse more often.

4.1.3 Final disposition codes by sex and age-group: Brussels

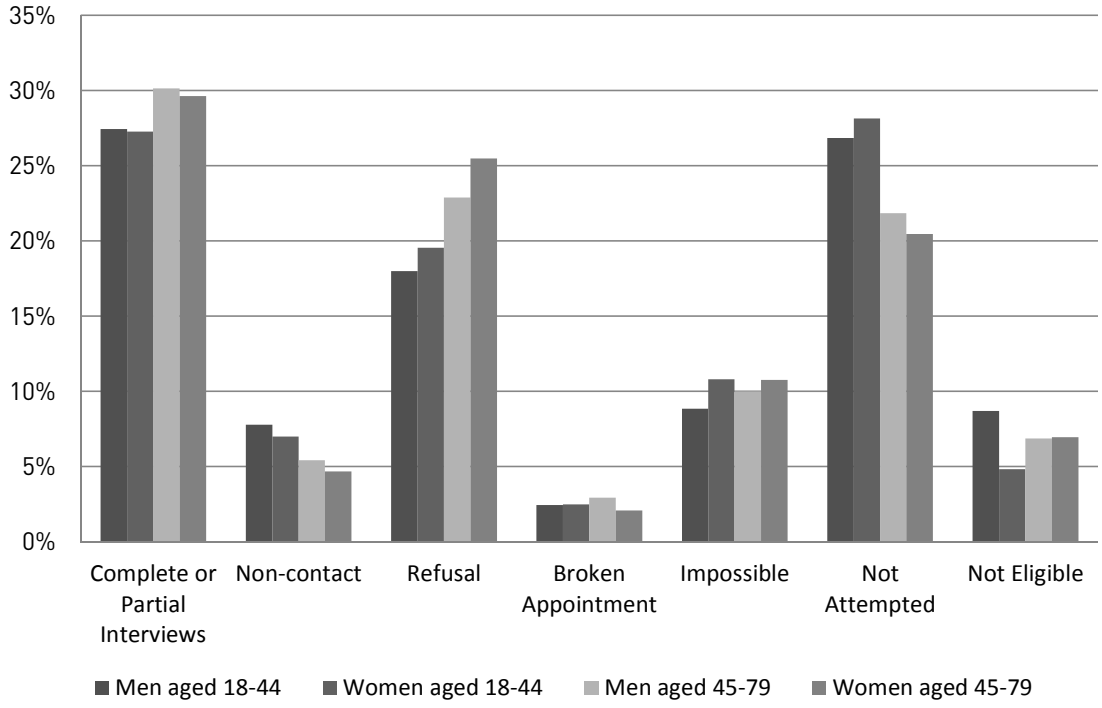
As mentioned earlier, the distribution of final disposition codes in Brussels differs from what is found for the other regions. The number of sampled individuals that are 'not attempted' as well as the number of interviews that proved impossible to conduct are substantially higher. Figure 3 and table 5 provide the breakdown of the distribution of final disposition codes by age and sex of sampled individuals. In general, the differences between men and women are smaller than the differences between the age-groups, for example in the category 'completed or partial interview'. The percentage of 'completed interview' is about 3 percentage points higher in the older age-group compared to the younger group, whereas gender differences are lower than 1 percentage point.

Table 5: Distribution of final disposition codes by sex and age-group, Brussels, N=2400

	Complete or Partial Interviews	*Non-contact*	*Refusal*	*Broken Appointment*	*Impossible*	*Not Attempted*	*Not Eligible*	*Total*
Men 18-44	180	51	118	16	58	176	57	656
	27.4%	7.8%	18.0%	2.4%	8.8%	26.8%	8.7%	100%
Women 18-44	187	48	134	17	74	193	33	686
	27.3%	7.0%	19.5%	2.5%	10.8%	28.1%	4.8%	100%
Men 45-79	145	26	110	14	48	105	33	481
	30.1%	5.4%	22.9%	2.9%	10.0%	21.8%	6.9%	100%
Women 45-79	171	27	147	12	62	118	40	577
	29.6%	4.7%	25.5%	2.1%	10.7%	20.5%	6.9%	100%

Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 3: Distribution of final disposition codes by sex and age-group, Brussels, N=2400



Source : GGS Belgium, Wave 1 – Calculations by authors

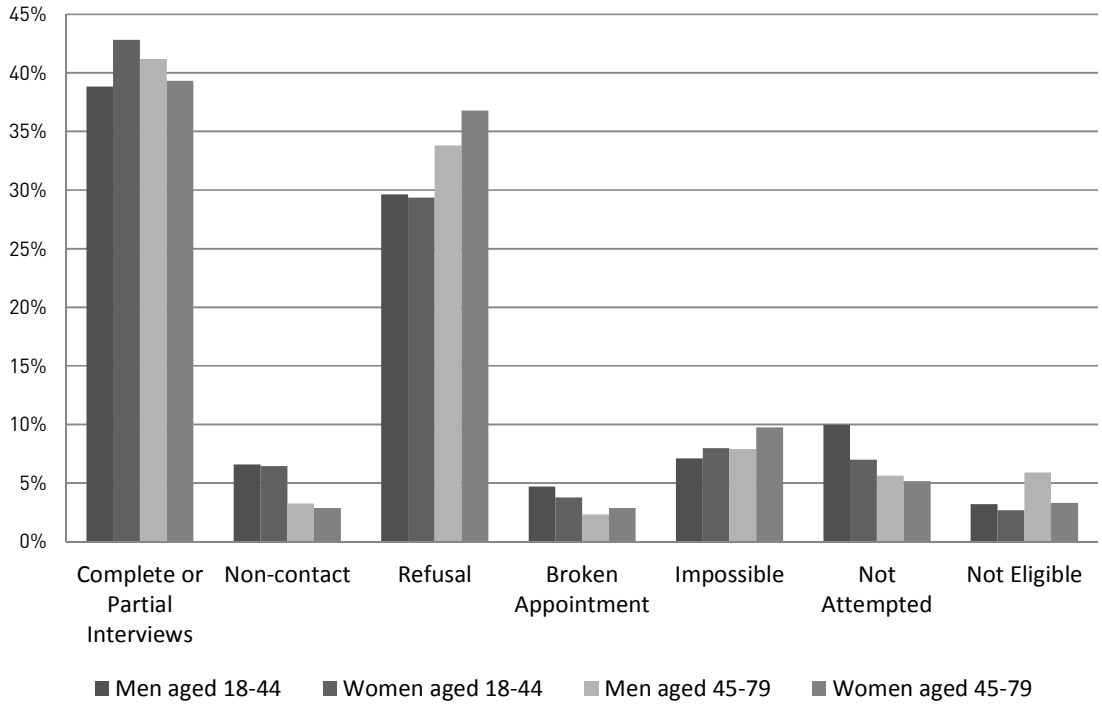
The most important age-differences in Brussels are found for 'not attempted' and for the categories 'complete of partial interview' and 'refusal': both 'refusals' ánd 'positive interviews' are more frequent in the older age-group, whereas the percentage 'not attempted' is the highest for the younger age group (the difference exceeding 5 percentage points). Again the results suggest that sampled individuals in the older age-group are more easy to contact, resulting in lower percentages of 'non-contacts' and 'not attempted' individuals. Conversely, sampled individuals in the younger age-group are harder to contact,

resulting in lower numbers of completed interviews. If interviewers succeed in contacting individuals in the younger age-groups, the number of refusals is lower.

4.1.4 Final disposition codes by sex and age-group: Wallonia

Figure 4 presents the breakdown of the distribution of final disposition codes in Wallonia by age and sex of the sampled individuals. The pattern by age and sex is reminiscent of the pattern encountered in Flanders: women seem to be more willing to participate in the younger age-group, whereas women refuse more frequently than men in the older age-group. In the younger age-group, the difference between men and women is situated in the number of 'completed interviews' and the percentage of cases that are 'not attempted'. Younger men have less positive interviews, primarily because they are harder to contact, not because they are more likely to refuse or because of the higher percentage 'non-contacts' and 'broken appointment'.

Figure 4: Distribution of final disposition codes by sex and age-group, Wallonia, N=6486



Source : GGS Belgium, Wave 1 – Calculations by authors

'Broken appointments' occur more frequently in the younger age-group than in the older age-group. The percentage of 'impossible interviews' is higher for older women (9.7 per cent), whereas the percentage 'not eligible' is higher for older men (5.9 per cent).

Table 6: Distribution of final disposition codes by sex and age-group, Wallonia, N=6486

	Complete or Partial Interviews	*Non-contact*	*Refusal*	*Broken Appointment*	*Impossible*	*Not Attempted*	*Not Eligible*	*Total*
Men 18-44	596	101	455	72	109	153	49	1535
	38.83%	6.58%	29.64%	4.69%	7.10%	9.97%	3.19%	100%
Women 18-44	672	101	461	59	125	110	42	1570
	42.80%	6.43%	29.36%	3.76%	7.96%	7.01%	2.68%	100%
Men 45-79	657	52	539	37	126	90	94	1595
	41.19%	3.26%	33.79%	2.32%	7.90%	5.64%	5.89%	100%
Women 45-79	702	51	657	51	174	92	59	1786
	39.31%	2.86%	36.79%	2.86%	9.74%	5.15%	3.30%	100%

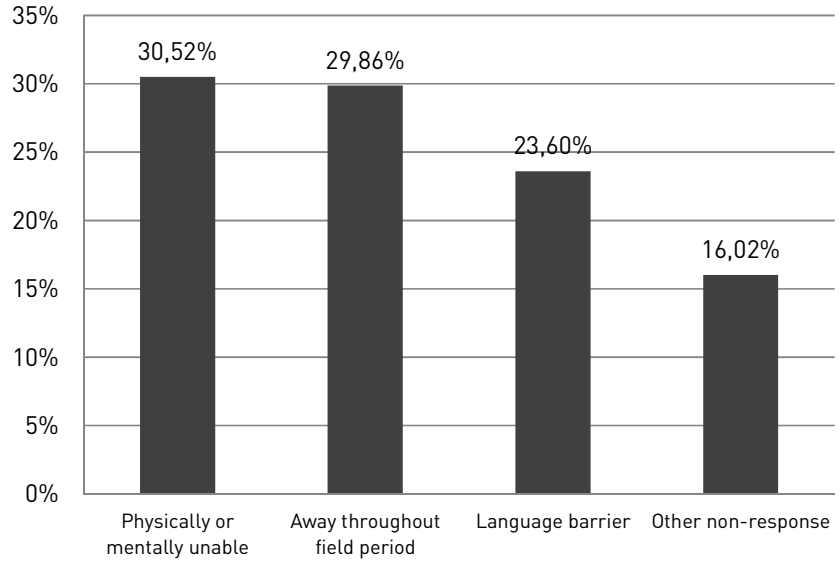
Source : GGS Belgium, Wave 1 – Calculations by authors

The number of 'non-contact' is substantially lower for the older age categories. As mentioned before, this can be due to the fact that older respondents are more likely to be found at home, while younger respondents are more likely to be absent during the day. However, a higher contact rate does not inevitably lead to a larger number of complete interviews: the refusals and impossible interviews are higher among the older respondents.

4.2 Motives for non-response and impossible interview

Apart from the information required to calculate outcome codes, the GGS Wave 1 contact form also provides additional information on the reasons behind specific outcome codes such as refusals and interviews that proved impossible to conduct. Figure 5 to 7 present the distributions of the different reasons and motives for GGS Wave 1 Belgium, whereas tables 7 to 9 provide additional details by age, sex and region.

Figure 5: Reasons for impossible interview, Belgium, N=1373



Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 5 shows the reasons why an interview proved impossible to conduct among 1373 sampled individuals, constituting 7.7 per cent of the total sample of N=17836. The most frequently mentioned reason why the interview was impossible to conduct, is because the respondent was physically or mentally unable at the time of the interview (e.g. due to illness). With a minor difference of only 0.66 percentage points, another equally important reason is that the respondent was away throughout the fieldwork period. This includes respondents who left on vacation or lived elsewhere for professional reasons during the interviewing period. A language barrier between the interviewer and the respondent constitutes another reason why an interview was frequently impossible to conduct: this reason is mentioned for 23.6 per cent of the respondents where the interview was impossible to conduct. This includes not only a limited number of French speaking individuals in Flanders or vice versa, but also Turkish or Moroccan people who could not appeal to an interpreter. Finally, in 16 per cent of the cases where the interview was impossible to conduct, interviewers selected 'other reason' (i.e. a reason not mentioned among those readily stated on the contact form). These cases have been classified as 'other non-response'.

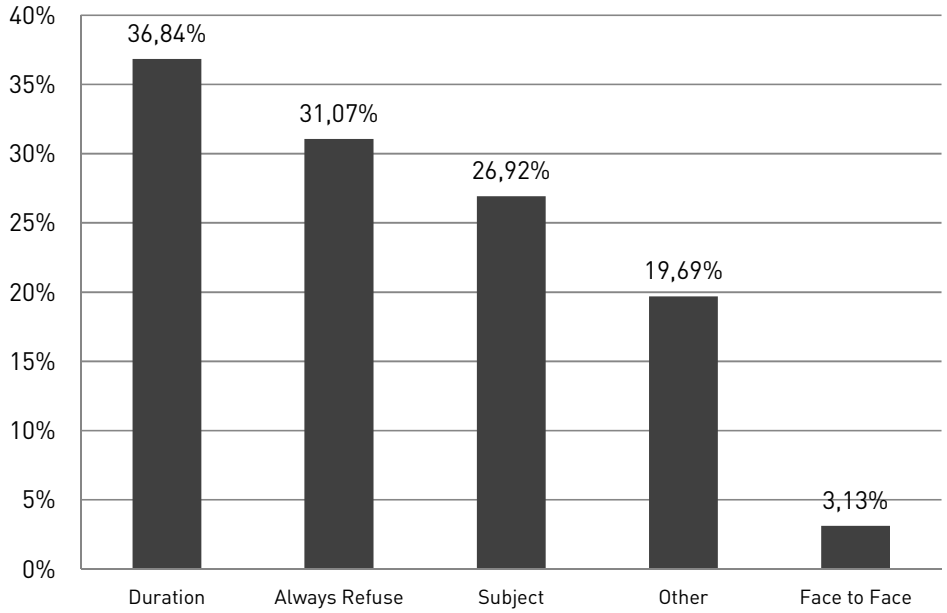
Table 7: Reasons for impossible interview by NUTS1 region, sex and age-group, Belgium, N=1373

	Physically or mentally unable	*Away throughout field period*	*Language barrier*	*Other non-response*	*Total*
Flanders					
Men 18-44	14	54	41	39	148
	9.46%	36.49%	27.70%	26.35%	100%
Women 18-44	21	38	50	20	129
	16.28%	29.46%	38.76%	15.50%	100%
Men 45-79	70	36	35	15	156
	44.87%	23.08%	22.44%	9.62%	100%
Women 45-79	85	26	45	8	164
	51.83%	15.85%	27.44%	4.88%	100%
Total	190	154	171	82	597
	31.83%	25.80%	28.64%	13.74%	100%
Brussels					
Men 18-44	3	31	10	14	58
	5.17%	53.45%	17.24%	24.14%	100%
Women 18-44	6	37	23	8	74
	8.11%	50.00%	31.08%	10.81%	100%
Men 45-79	11	20	12	5	48
	22.92%	41.67%	25.00%	10.42%	100%
Women 45-79	27	9	21	5	62
	43.55%	14.52%	33.87%	8.06%	100%
Total	47	97	66	32	242
	19.42%	40.08%	27.27%	13.22%	100%
Wallonia					
Men 18-44	13	45	16	35	109
	11.93%	41.28%	14.68%	32.11%	100%
Women 18-44	20	51	17	37	125
	16.00%	40.80%	13.60%	29.60%	100%
Men 45-79	57	31	24	14	126
	45.24%	24.60%	19.05%	11.11%	100%
Women 45-79	92	32	30	20	174
	52.87%	18.39%	17.24%	11.49%	100%
Total	182	159	87	106	534
	34.08%	29.78%	16.29%	19.85%	100%
Belgium					
Men 18-44	30	130	67	88	315
	9.52%	41.27%	21.27%	27.94%	100%
Women 18-44	47	126	90	65	328
	14.33%	38.41%	27.44%	19.82%	100%
Men 45-79	138	87	71	34	330
	41.82%	26.36%	21.52%	10.30%	100%
Women 45-79	204	67	96	33	400
	51.00%	16.75%	24.00%	8.25%	100%
Total	419	410	324	220	1373
	30.52%	29.86%	23.60%	16.02%	100%

Source : GGS Belgium, Wave 1 – Calculations by authors

Turning to variations in terms of age, gender and region, we notice a higher frequency of the reason 'physically or mentally unable' among the older age groups, particularly among older women. Conversely, the number of respondents who were 'away throughout the fieldwork period' is higher for the younger age groups, particularly in Brussels and Wallonia. The language barrier is more often invoked as a motive why the interview was impossible to conduct in the case of women, both older and younger age-groups. This motive is less frequent in Wallonia, however, compared to Brussels and Flanders.

Figure 6: Motives for refusal, Belgium, N=5781



Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 6 provides insight into the reasons mentioned by sampled individuals to refuse participation in GGS Wave 1 Belgium. In total, 31.9 per cent of the 17863 respondents refused their cooperation. Note that respondents were allowed to give several reasons for their refusal. The results presented in figure 6 and table 8 indicate percentages of the individuals refusing the interview invoked a particular reason mentioned in the contact form.

The reason for refusal that is mentioned most frequently is the duration of the interview: this reason was mentioned by 36.84 per cent of the individuals refusing the cooperation. Before the interview, the respondents were informed that the interview would take up to an hour on average and also that participation in the survey was not obliged (in contrast to e.g. the Labour Force Survey). Evidently, not all of the respondents wish to spend their time on an interview they are not obliged to take, particularly if the interviewer drops by at an inconvenient moment. Other reasons are mentioned somewhat less frequent: about 30 per cent said they always refused interviews, another 26.9 per cent mentioned the subject of the survey as a reason for refusal. Since the respondents were informed in advance about the topics included, some respondents may have considered the topics too personal. Finally, only 3 per cent mentioned face-to-face interviewing as a reason to refuse particpation in the survey.

Table 8: Motives for refusal by NUTS1 region, sex and age-group, Belgium, N=5781

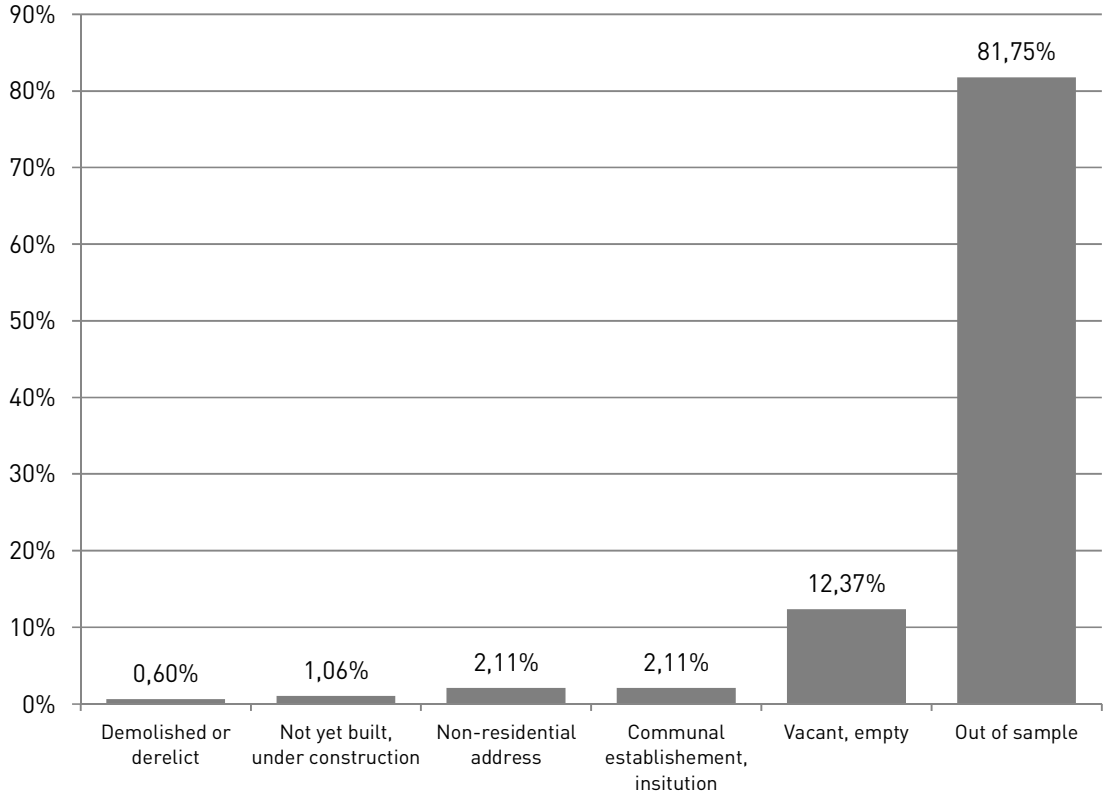
	Duration	*Always refuse*	*Subject*	*Other*	*Face to Face*	*Total*
Flanders						
Men 18-44	312	218	180	97	17	702
	44.44%	31.05%	25.64%	13.82%	2.42%	
Women 18-44	277	172	163	96	15	615
	45.04%	27.97%	26.50%	15.61%	2.44%	
Men 45-79	258	322	266	129	31	844
	30.57%	38.15%	31.52%	15.28%	3.67%	
Women 45-79	246	377	284	181	27	949
	25.92%	39.73%	29.93%	19.07%	2.85%	
Total	1093	1089	893	503	90	3110
	35.14%	35.02%	28.71%	16.17%	2.89%	
Brussels						
Men 18-44	49	31	25	24	4	117
	41.88%	26.50%	21.37%	20.51%	3.42%	
Women 18-44	55	32	21	30	10	135
	40.74%	23.70%	15.56%	22.22%	7.41%	
Men 45-79	45	35	20	27	4	111
	40.54%	31.53%	18.02%	24.32%	3.60%	
Women 45-79	46	44	21	49	5	150
	30.67%	29.33%	14.00%	32.67%	3.33%	
Total	195	142	87	130	23	513
	38.01%	27.68%	16.96%	25.34%	4.48%	
Wallonia						
Men 18-44	247	90	95	88	12	456
	54.17%	19.74%	20.83%	19.30%	2.63%	
Women 18-44	223	89	120	108	26	468
	47.65%	19.02%	25.64%	23.08%	5.56%	
Men 45-79	169	182	134	133	12	555
	30.45%	32.79%	24.14%	23.96%	2.16%	
Women 45-79	203	204	227	176	18	679
	29.90%	30.04%	33.43%	25.92%	2.65%	
Total	842	565	576	505	68	2158
	39.02%	26.18%	26.69%	23.40%	3.15%	
Belgium						
Men 18-44	608	339	300	209	33	1275
	47.69%	26.59%	23.53%	16.39%	2.59%	
Women 18-44	555	293	304	234	51	1218
	45.57%	24.06%	24.96%	19.21%	4.19%	
Men 45-79	472	539	420	289	47	1510
	31.26%	35.70%	27.81%	19.14%	3.11%	
Women 45-79	495	625	532	406	50	1778
	27.84%	35.15%	29.92%	22.83%	2.81%	
Total	2130	1796	1556	1138	181	5781
	36.84%	31.07%	26.92%	19.69%	3.13%	

Source : GGS Belgium, Wave 1 – Calculations by authors

Table 8 provides the breakdown of motives for refusal by age, sex and region. The duration of the interview is frequently mentioned as a reason to refuse participation in the youngest age-group, particularly in Flanders and Wallonia. In Brussels, the percentages mentioning this reason are lower and more equally distributed among the age groups. As can be seen, the older age groups are more likely to refuse, because they always refuse for interviews: these age differences are noticeable in all three regions. Compared to Brussels, the subject of the survey is more frequently mentioned as a reason to refuse participation in Flanders and

Wallonia. 'Other reasons' for refusal have higher frequencies in Brussels and Wallonia. Finally, refusal because the interview was conducted 'face to face' is less common, but nevertheless mentioned more frequently as a reason for refusal among younger women in Brussels and Wallonia.

Figure 7: Not eligible addresses, Belgium, N=663



Source : GGS Belgium, Wave 1 – Calculations by authors

The outcome 'not eligible' is attributed to sampled individuals where the interview could not take place because the address of the respondent was not correct, because the new address could not be traced or because the sampled individual had deceased, emigrated or moved into a collective household. For GGS Wave 1 Belgium, only 3.7 per cent (663) of the 17863 sampled individuals were considered not eligible. More than 80 per cent of these 663 respondents are considered 'out of sample' because they had emigrated, died or moved to a collective household according to the National Register, or because they did not fit into the prescribed age range from 18 to 79 years old.

Table 9: Not eligible addresses by NUTS1 region, sex and age-group, Belgium, N=663

	Demolished or derelict	*Not yet built, under construction*	*Non-residential address*	*Communal establishment, institution*	*Vacant, empty*	*Out of sample*	*Total*
Flanders							
Men 18-44	1	2	2	0	18	32	55
	1.82%	3.64%	3.64%	0.00%	32.73%	58.18%	100%
Women 18-44	0	1	1	2	12	33	49
	0.00%	2.04%	2.04%	4.08%	24.49%	67.35%	100%
Men 45-79	0	0	2	0	8	77	87
	0.00%	0.00%	2.30%	0.00%	9.20%	88.51%	100%
Women 45-79	0	0	1	5	5	54	65
	0.00%	0.00%	1.54%	7.69%	7.69%	83.08%	100%
Total	1	3	6	7	43	196	256
	0.39%	1.17%	2.34%	2.73%	16.80%	76.56%	100%
Brussels							
Men 18-44	0	1	0	0	3	53	57
	0.00%	1.75%	0.00%	0.00%	5.26%	92.98%	100%
Women 18-44	0	0	0	2	3	28	33
	0.00%	0.00%	0.00%	6.06%	9.09%	84.85%	100%
Men 45-79	0	0	1	0	0	32	33
	0.00%	0.00%	3.03%	0.00%	0.00%	96.97%	100%
Women 45-79	0	0	0	0	8	32	40
	0.00%	0.00%	0.00%	0.00%	20.00%	80.00%	100%
Total	0	1	1	2	14	145	163
	0.00%	0.61%	0.61%	1.23%	8.59%	88.96%	100%
Wallonia							
Men 18-44	1	0	0	2	6	40	49
	2.04%	0.00%	0.00%	4.08%	12.24%	81.63%	100%
Women 18-44	0	2	1	1	9	29	42
	0.00%	4.76%	2.38%	2.38%	21.43%	69.05%	100%
Men 45-79	1	1	4	2	6	80	94
	1.06%	1.06%	4.26%	2.13%	6.38%	85.11%	100%
Women 45-79	1	0	2	0	4	52	59
	1.69%	0.00%	3.39%	0.00%	6.78%	88.14%	100%
Total	3	3	7	5	25	201	244
	1.23%	1.23%	2.87%	2.05%	10.25%	82.38%	100%
Belgium							
Men 18-44	2	3	2	2	27	125	161
	1.24%	1.86%	1.24%	1.24%	16.77%	77.64%	100%
Women 18-44	0	3	2	5	24	90	124
	0.00%	2.42%	1.61%	4.03%	19.35%	72.58%	100%
Men 45-79	1	1	7	2	14	189	214
	0.47%	0.47%	3.27%	0.93%	6.54%	88.32%	100%
Women 45-79	1	0	3	5	17	138	164
	0.61%	0.00%	1.83%	3.05%	10.37%	84.15%	100%
Total	4	7	14	14	82	542	663
	0.60%	1.06%	2.11%	2.11%	12.37%	81.75%	100%

Source : GGS Belgium, Wave 1 – Calculations by authors

Table 9 provides the breakdown of reasons for non-eligibility by age, sex and region. As is evident from the table, the frequency of the first four motives - demolished or derelict; not yet built, under construction; non-residential address; communal establishment, institution -

is generally low and subject to little variation in terms of age and gender. For the category 'vacant, empty', percentages are higher in Flanders and Wallonia particularly in the younger age-groups. In Brussels, this reason is more frequent among older women (20 per cent). In all strata, the outcome code 'out of sample' constitutes the most important reason why the respondents are not eligible. The percentages are the highest for the older age groups.

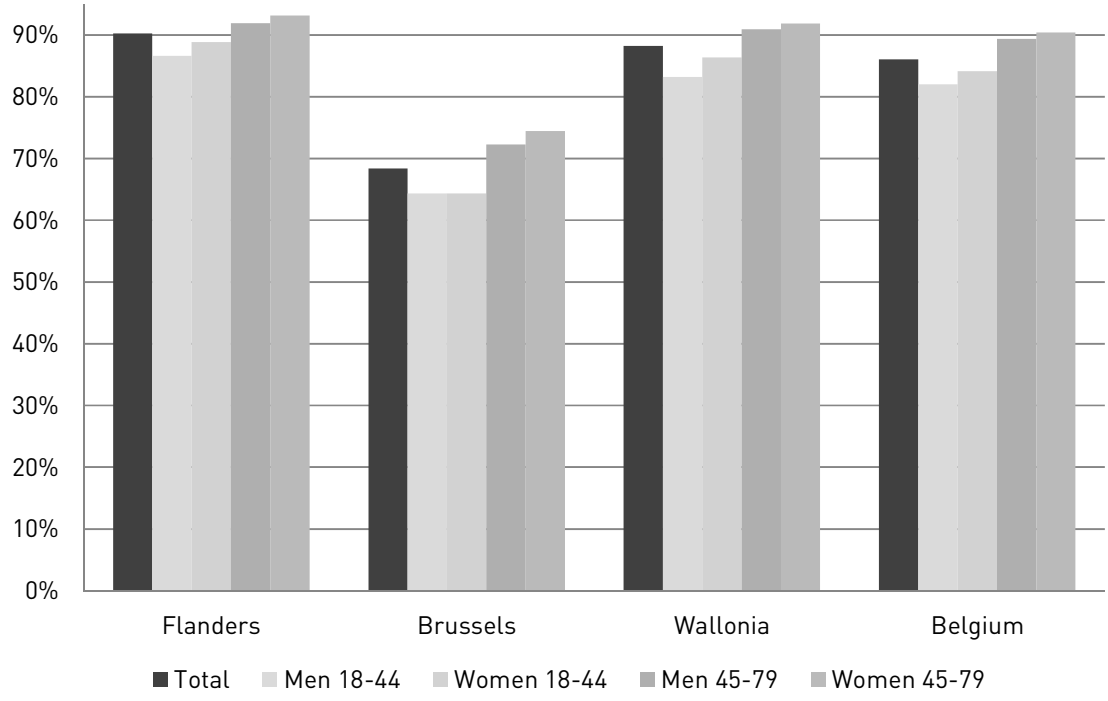
4.3 Standardised indicators

Based on the final disposition codes and the definitions of response rates mentioned earlier, this section documents the results for the different standardised indicators proposed by Lynn et al. (2001) for GGS Wave 1 Belgium.

4.3.1 Contact Rate by NUTS1 region, sex and age-group

At the national level, the contact rate during the fieldwork for GGS Wave 1 Belgium is 86.03 per cent. Broken down by NUTS 1 regions, the highest contact rate is situated in Flanders (90.26 per cent) followed by Wallonia with 88.24 per cent. In Brussels the contact rate is substantially lower (68.37 per cent) due to the higher number of sampled individuals who were 'not attempted'.

Figure 8: Contact rate by NUTS1 region, sex and age-group



Source : GGS Belgium, Wave 1 – Calculations by authors

Table 10: Contact rate by NUTS1 region, sex and age-group

	Flanders	*Brussels*	*Wallonia*	*Belgium*
Men 18-44	86.61%	64.35%	83.21%	82.06%
Women 18-44	88.86%	64.37%	86.37%	84.13%
Men 45-79	91.90%	72.25%	90.88%	89.39%
Women 45-79	93.14%	74.42%	91.89%	90.41%
Total	90.26%	68.37%	88.24%	86.60%

Source : GGS Belgium, Wave 1 – Calculations by authors

The results for the contact rate are further broken down by age and sex in table 10. Significant variation in the contact rate is found in terms of region, age and sex[8]. Only in Brussels the gender differences are no longer significant. In all NUTS1-regions, the contact rate is slightly higher among older respondents (both men and women). Presumably, older people are more likely to be found at home by the interviewer, while the younger people are absent more frequently during the day (e.g. in education, at work,...). In all regions, the gender differences are generally very small, with the contact rate being slightly higher for women.

4.3.2 Cooperation Rate by NUTS1 region, sex and age-group

For Belgium the overall cooperation rate levels off at 48.36 per cent. The cooperation rate is also very similar between the NUTS1-regions: Flanders has the highest rate (49.27 per cent), followed by Wallonia (47.83 per cent) and Brussels (45.75 per cent). The cooperation rate for Brussels differs little from the results found in other regions: the low response rate in Brussels is thus primarily caused by the difficulties encountered by interviewers in the field to contact the sampled individuals, rather that the cooperation rate being exceptionally low in Brussels.

Table 11: Cooperation rate by NUTS1 region, sex and age-group

	Flanders	*Brussels*	*Wallonia*	*Belgium*
Men 18-44	47.29%	48.39%	48.38%	47.80%
Women 18-44	54.61%	45.39%	51.03%	52.22%
Men 45-79	49.27%	45.74%	48.34%	48.63%
Women 45-79	46.36%	43.62%	44.32%	45.32%
Total	49.27%	45.75%	47.83%	48.38%

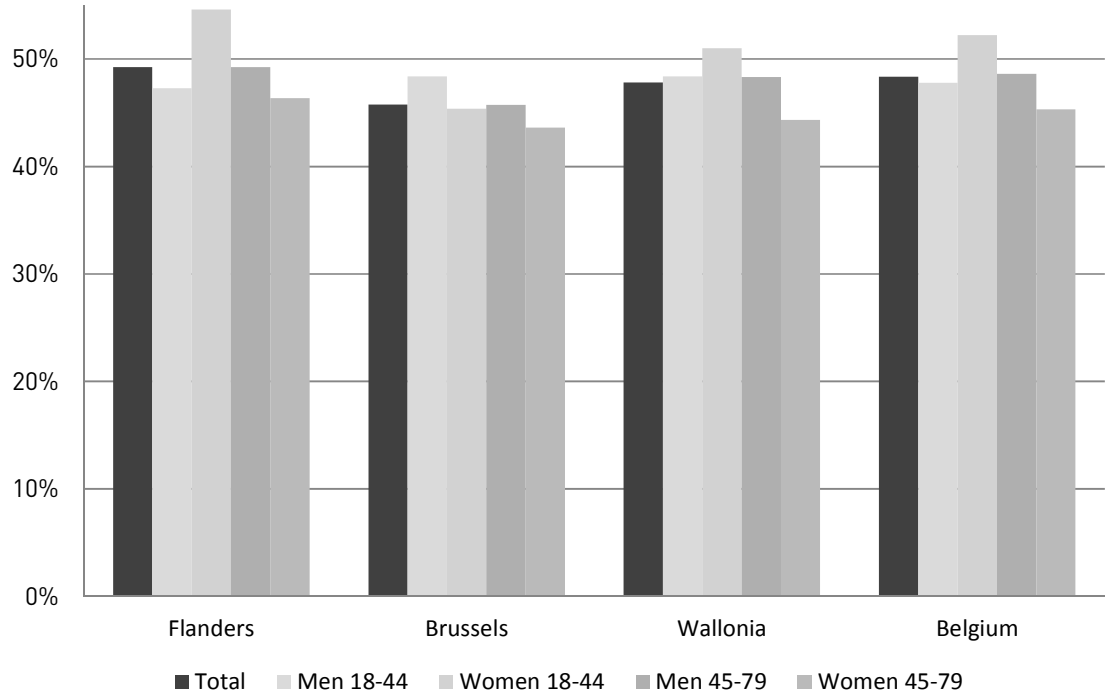
Source : GGS Belgium, Wave 1 – Calculations by authors

The breakdown of the coopearation rate by age and sex indicates that differences between age-groups are relatively small, ranging up to an 8.2 percentage point difference among women in Flanders. For men, differences in cooperation rates between age-groups are generally smaller. In all three the regions, the lowest cooperation rate is found among the older women. Conversely, the highest cooperation rates are situated among the younger women in the case of Flanders and Wallonia, whereas younger men have the highest cooperation rate in Brussels. The differences between the NUTS1-regions were found to be

[8] Chi^2=827.224; df=4; p=0.000

significant[9], as well as the differences between age-groups (controlling for sex). Within the regions, the age differences was no longer significant in Brussels.

Figure 9: Cooperation rate by NUTS1 region, sex and age-group



Source : GGS Belgium, Wave 1 – Calculations by authors

4.3.3 Refusal Rate by NUTS1 region, sex and age-group

For GGS Wave 1 Belgium the overall refusal rate is 36.36 per cent. Broken down by NUTS1-regions, the highest refusal rates are found in Flanders (38.92 per cent), followed by Wallonia (37.45 per cent) and Brussels (26.01 per cent).

Table 12: Refusal rate by NUTS1 region, sex and age-group

	Flanders	*Brussels*	*Wallonia*	*Belgium*
Men 18-44	38.49%	23.18%	35.59%	35.21%
Women 18-44	34.07%	23.59%	34.10%	32.45%
Men 45-79	39.66%	28.26%	38.52%	38.01%
Women 45-79	42.88%	30.19%	41.07%	40.69%
Total	38.92%	26.01%	37.45%	36.68%

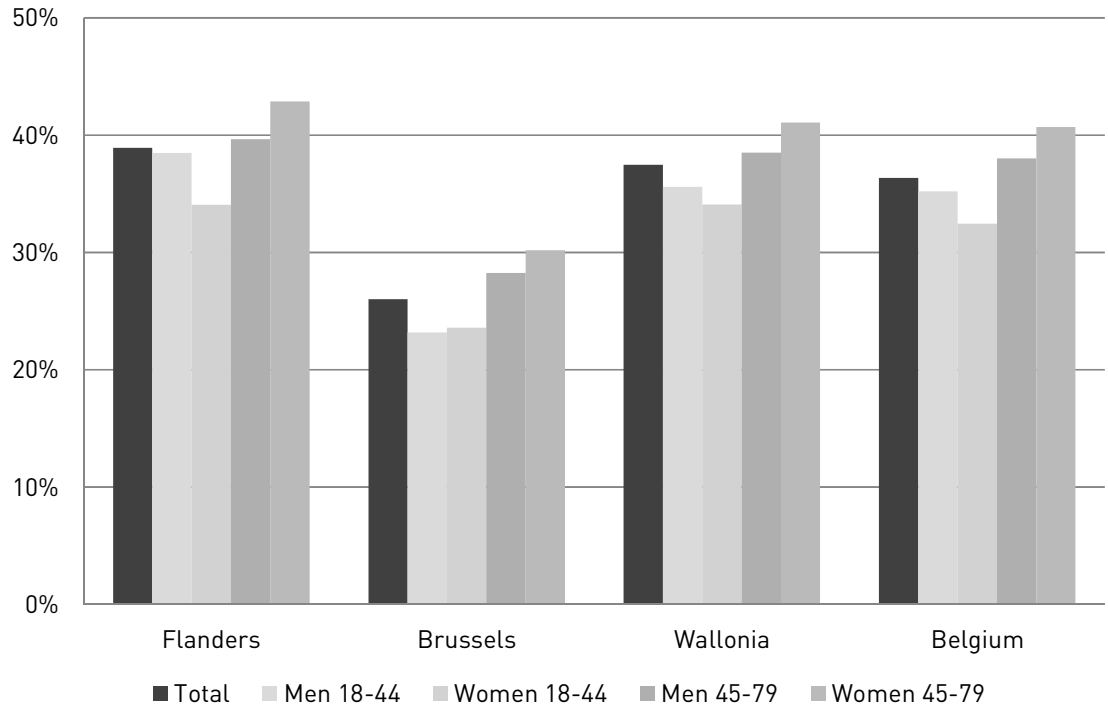
Source : GGS Belgium, Wave 1 – Calculations by authors

For Flanders and Wallonia, the refusal rate is the lowest among younger women, followed by the groups of younger men, suggesting that younger respondents are less suspicious towards interviewers and surveys than the older age group. The highest refusal rate is situated in the group of the older women. Their refusal rate is higher than that of older men.

[9] Chi^2=23.029; df=4; p=0.000

As a result, the gender differential is different in the oldest age group compared to the younger age-group: in the older age group the women refuse more frequently, whereas in the younger age group men are more likely to refuse participation in the interview. Controlled for sex, differences between the regions and the two age categroies are significant[10]. In Brussels, the differences between men and women in the same age group are smaller than in the other regions, women refuse more than men, older people refuse more than the younger age-group.

Figure 10: Refusal rate by NUTS1 region, sex and age-group



Source : GGS Belgium, Wave 1 – Calculations by authors

[10] Chi^2=200.084; df=4; p=0.000

4.3.4 Response Rate by NUTS1 region, sex and age-group

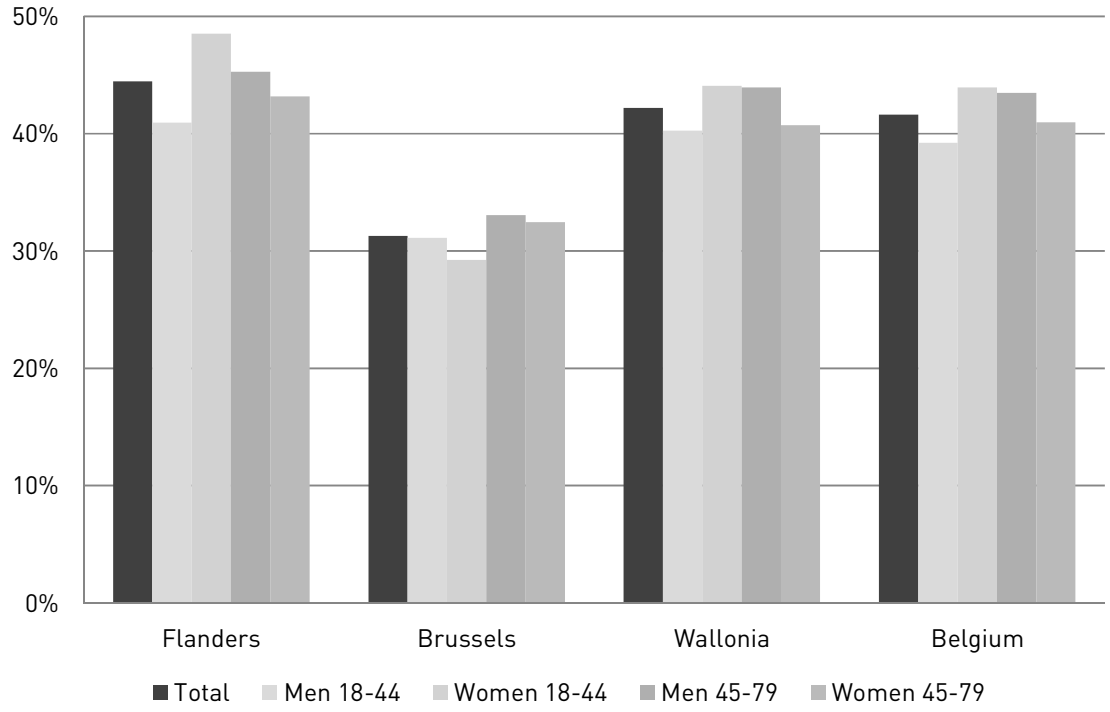
For GGS Wave 1 Belgium the overall response rate levels off at 41.61 per cent. Broken down by NUTS1-regions, the highest response rate is found in Flanders (44.47 per cent), whereas lower response rates are found in Wallonia (42.21 per cent) and particularly Brussels (31.28 per cent).

Table 13: Response rate by NUTS1 region, sex and age-group

	Flanders	*Brussels*	*Wallonia*	*Belgium*
Men 18-44	40.96%	31.14%	40.25%	39.23%
Women 18-44	48.53%	29.22%	44.07%	43.93%
Men 45-79	45.28%	33.05%	43.94%	43.47%
Women 45-79	43.18%	32.47%	40.72%	40.97%
Total	44.47%	31.28%	42.21%	41.90%

Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 11: Response Rate by NUTS1 region, sex and age-group



Source : GGS Belgium, Wave 1 – Calculations by authors

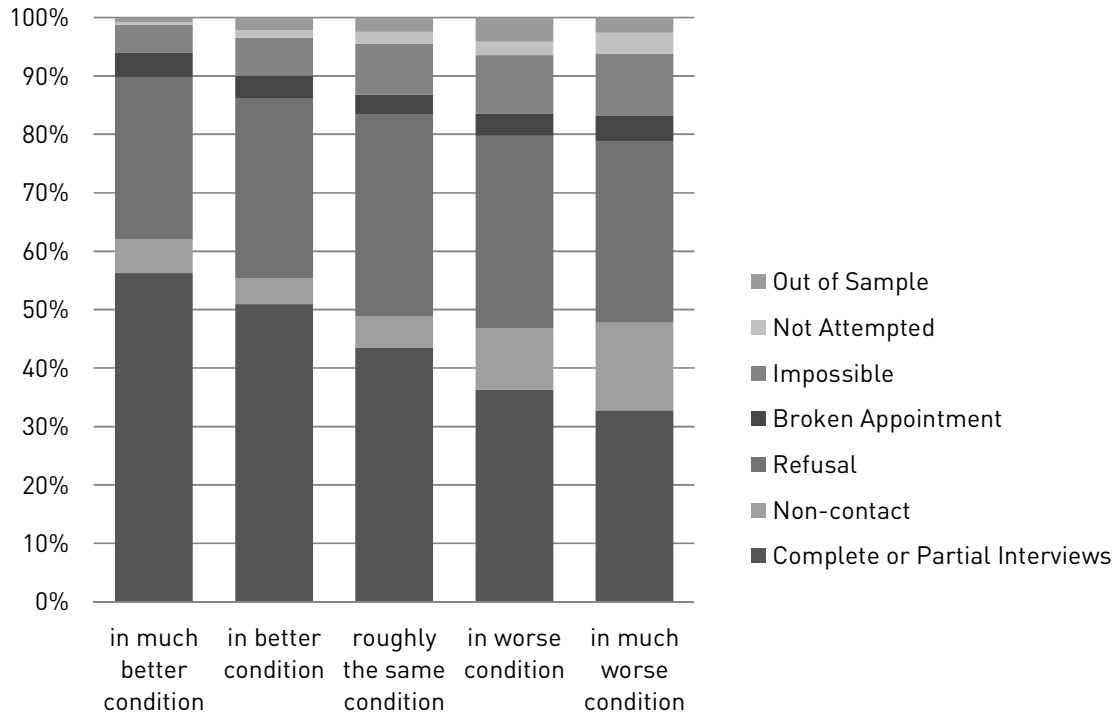
Broken down by strata in terms of age and sex, the results in Figure 11 show that younger women have a higher response rate in comparison with all the other groups. This is the case both at the national level for Belgium and for Flanders and Wallonia taken separately. Only in Brussels the response rate is lower among younger women. For Flanders and Wallonia, the lowest response rate is situated among the youger men, followed by the older women. The older men have a higher response rate than the younger men and older women. This pattern

emerges in all NUTS1-regions. Additional analyses indicate that regional differentials in the response rate remain significant[11], even when controlling for the differences in the age- and sex-structure across regions.

4.4 Housing conditions and neighbourhood effects

As mentioned before, the GGS contact form also contains relevant information on the housing conditions and neighbourhood characteristics of sampled individuals. This information additionally allows us to study the effect of housing conditions and neighbourhood characteristics on the ditribution of final disposition codes and the response rate, as differences in response can be caused by differences between target respondents and their social environment. (Stoop et al, 2008)

Figure 12: Distribution of final disposition codes by the general condition of the respondent's house, Belgium, N=15839



Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 12 shows the distribution of the final disposition codes by housing conditions, based on the interviewers' assessment of the housing quality of the sampled individual relative to the general housing quality in the neighbourhood. The analysis is based on the subset of contact forms where the interviewer actually collected information on housing and neighbourhood characteristics (N=15839). We observe a lower percentage of 'completed interviews' if the house of the respondent is in 'a much worse condition' compared to the

[11] $Chi^2=148.59$; df=4; p=0.000

other houses in the neighbourhood (32.7 per cent versus 56.2 per cent). Also the percentage of 'refusals' (> 31 per cent) and 'non-contacts' (10 to 15 per cent) is higher for houses in a poorer condition than the average housing quality in the neighbourhood. The percentage of the 'refusals' is lower for houses that are in 'much worse condition', as a result of the higher percentage of non-contacts. Respondents who live in houses in 'a good condition' are more likely to take part at the interview and refuse less frequently. The percentage of 'not attempted' (0.5 per cent) and 'out of sample' (0.8 per cent) is the lowest in the group of individuals having the better than average housing quality.

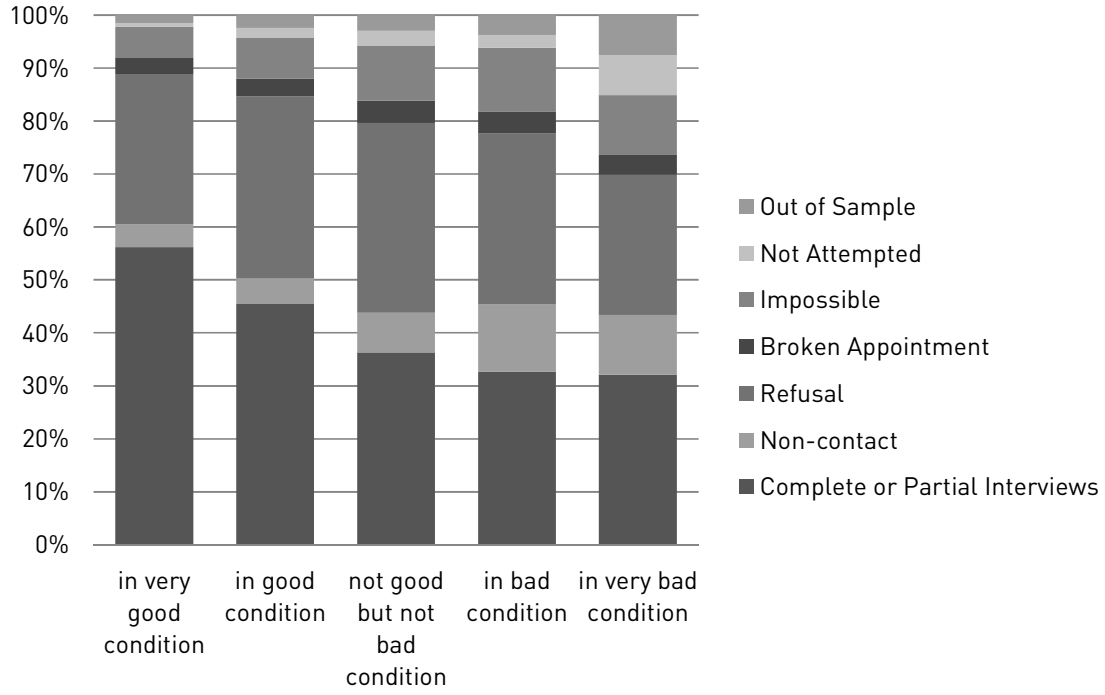
The results in table 14 take into account the assessment of housing quality, regardless of the housing quality in the neighbourhood. The response rate is significantly lower when the general housing conditions of the respondents decrease (Model Chi-square = 271.03; $p < .001$). Additional analyses indicate that the effect of housing conditions is not significantly different by age, sex or region.

Table 14: Response rate by NUTS1 region, sex, age-group and the general condition of the respondent's house

	in very good condition	*in good condition*	*not good but not bad condition*	*in bad condition*	*in very bad condition*	*Total*
Flanders						
Men 18-44	191	458	171	16	0	836
	58.77%	42.37%	36.38%	23.19%	0.00%	42.92%
Women 18-44	198	581	183	26	3	991
	57.89%	51.46%	43.26%	46.43%	37.50%	50.61%
Men 45-79	219	601	171	17	2	1010
	61.34%	46.84%	38.69%	36.96%	40.00%	47.35%
Women 45-79	199	584	204	13	1	1001
	58.70%	44.82%	39.69%	29.55%	50.00%	45.46%
Total	807	2224	729	72	6	3838
	59.21%	46.37%	39.43%	33.49%	33.33%	46.57%
Brussels						
Men 18-44	32	81	49	7	2	171
	60.38%	38.21%	35.51%	36.84%	40.00%	40.05%
Women 18-44	12	104	57	7	2	182
	27.91%	42.45%	37.25%	33.33%	100.00%	39.22%
Men 45-79	32	79	20	1	1	133
	59.26%	44.13%	22.99%	16.67%	33.33%	40.43%
Women 45-79	32	92	33	5	1	163
	50.79%	39.83%	33.00%	38.46%	50.00%	39.85%
Total	108	356	159	20	6	649
	50.70%	41.06%	33.26%	33.90%	50.00%	39.84%
Wallonia						
Men 18-44	104	335	133	14	2	588
	52.26%	48.91%	35.00%	27.45%	28.57%	44.48%
Women 18-44	138	362	146	17	1	664
	58.47%	48.59%	39.67%	36.96%	25.00%	47.46%
Men 45-79	144	360	118	11	2	635
	57.83%	50.92%	34.60%	39.29%	40.00%	47.74%
Women 45-79	165	377	134	15	0	691
	53.05%	45.81%	35.17%	34.88%	0.00%	44.27%
Total	551	1434	531	57	5	2578
	55.38%	48.45%	36.12%	33.93%	26.32%	45.94%
Belgium						
Men 18-44	327	874	353	37	4	1595
	57.14%	43.16%	35.63%	29.16%	22.86%	42.48%
Women 18-44	348	1047	386	50	6	1837
	48.09%	47.50%	40.06%	38.91%	54.17%	45.77%
Men 45-79	395	1040	309	29	5	1778
	59.48%	47.30%	32.09%	30.97%	37.78%	45.17%
Women 45-79	396	1053	371	33	2	1855
	54.18%	43.48%	35.95%	34.30%	33.33%	43.19%
Total	1466	4014	1419	149	17	7065
	57.02%	46.55%	37.37%	33.71%	34.69%	45.63%

Source : GGS Belgium, Wave 1 – Calculations by authors

Figure 13: Distribution of final disposition codes by the condition of the houses in the environment, Belgium, N=15839



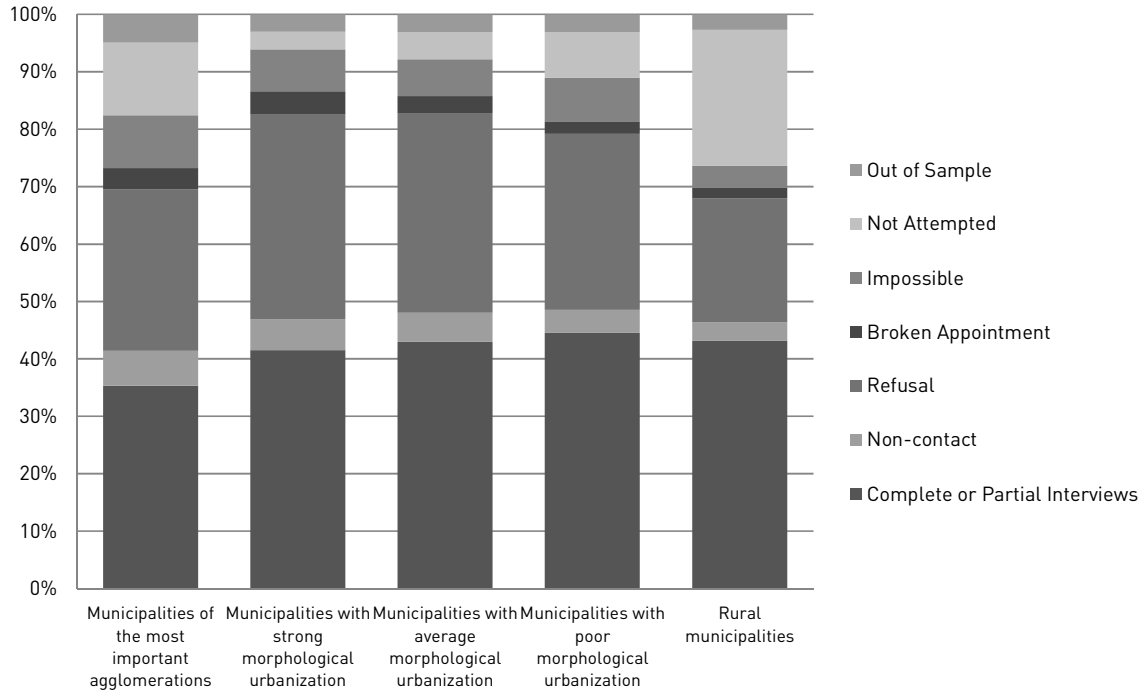
Source : GGS Belgium, Wave 1 – Calculations by authors

Whereas table 14 gives information about the housing characteristics, Fout! Verwijzingsbron niet gevonden. focusses more on the effect of the neighbourhood characteristics but shows essentially similar trends. The better the condition of the neigbourhood, the higher the percentage of 'completed or partial interviews' (56.2 per cent) and the lower the percentage of 'non-contact' (4.2 per cent) and 'refusals' (28.4 per cent). The percentage of 'impossible' (11.3 per cent), 'not attempted' (7.5 per cent) and 'out of sample' (7.5 per cent) is the highest in the neigbourhoods where the houses are 'in a very bad condition'. In summary, the results provide clear evidence of the effect of housing and neighbourhood characteristics on response in GGS Wave 1 Belgium, suggesting that sampled individuals of lower socio-economic status are likely to be underrepresented in the survey. The results from the validation of GGS-based estimates of demographic against time-series drawn from vital registration suggest, however, that the impact of non-random non-response of the validity of demographic indicators is limited. (see Neels et al. 2011b).

Table 15: Response rate by NUTS1 region, sex, age-group and the condition of the houses in the environment

	in much better condition	*in better condition*	*roughly the same condition*	*in worse condition*	*in much worse condition*	*Total*
Flanders						
Men 18-44	47	159	578	45	7	836
	55.95%	53.90%	41.52%	28.66%	35.00%	42.92%
Women 18-44	59	187	682	57	6	991
	67.05%	54.84%	48.82%	47.50%	50.00%	50.61%
Men 45-79	42	157	759	48	4	1010
	55.26%	51.82%	47.47%	33.57%	33.33%	47.35%
Women 45-79	32	177	739	51	2	1001
	45.71%	54.13%	44.36%	39.23%	22.22%	45.46%
Total	180	680	2758	201	19	3838
	56.60%	53.71%	45.56%	36.55%	35.85%	46.57%
Brussels						
Men 18-44	5	16	138	11	1	171
	71.43%	37.21%	40.12%	35.48%	50.00%	40.05%
Women 18-44	2	18	148	14	0	182
	28.57%	36.73%	39.26%	50.00%	0.00%	39.22%
Men 45-79	3	16	106	7	1	133
	37.50%	43.24%	40.61%	33.33%	50.00%	40.43%
Women 45-79	2	13	142	6	0	163
	40.00%	36.11%	39.89%	50.00%	0.00%	39.85%
Total	12	63	534	38	2	649
	44.44%	38.18%	39.91%	41.30%	28.57%	39.84%
Wallonia						
Men 18-44	35	121	392	36	4	588
	61.40%	55.25%	42.38%	34.29%	25.00%	44.48%
Women 18-44	50	142	422	45	5	664
	60.98%	51.82%	45.23%	44.12%	62.50%	47.46%
Men 45-79	39	121	432	39	4	635
	59.09%	49.39%	47.21%	42.39%	33.33%	47.74%
Women 45-79	45	133	480	30	3	691
	51.72%	51.75%	43.13%	33.33%	21.43%	44.27%
Total	169	517	1726	150	16	2578
	57.88%	51.96%	44.42%	38.56%	32.00%	45.94%
Belgium						
Men 18-44	87	296	1108	92	12	1595
	62.93%	48.79%	41.34%	32.81%	36.67%	42.48%
Women 18-44	111	347	1252	116	11	1837
	52.20%	47.80%	44.44%	47.21%	37.50%	45.77%
Men 45-79	84	294	1297	94	9	1778
	50.62%	48.15%	45.10%	36.43%	38.89%	45.17%
Women 45-79	79	323	1361	87	5	1855
	45.81%	47.33%	42.46%	40.85%	14.55%	43.19%
Total	361	1260	5018	389	37	7065
	56.67%	51.94%	44.49%	37.73%	33.64%	45.63%

Figure 14: Distribution of final disposition codes by the degree of urbanization, Belgium, N=17836



Source : GGS Belgium, Wave 1 – Calculations by authors

Finally, figure 14 presents the breakdown of final disposition codes in GGS Wave 1 Belgium by the degree of urbanization[12] calculated for each municipality where the respondent was selected. The results suggest limited variation in the distribution of final disposition codes by degree of urbanization. Respondents who live in the most important agglomerations have a lower percentage of 'completed or partial interviews' (35.33 per cent) and higher percentages of 'non-contact' (6.05 per cent), 'impossible' (9.19 per cent) and 'out of sample' (4.94 per cent), but the differences are limited. Surprisingly, the percentage of sampled individuals who are 'not attempted' (23.72 per cent) is higher in the rural municipalities. A plausible explanation could be that the interviewers prefer to visit respondents in a more densely build area, where more respondents can be contacted in a single day. In the other municipalities, with strong, average and poor morphological urbanization, the distribution of the final disposition codes is more or less equal. Additional analyses indicate that the response rate is significantly higher in more rural municipalities (Model Chi-square = 83.22; $p < .001$). This relation is not significantly different by age and/or sex of sampled individuals.

[12] Van Hecke E., J.-M. Halleux, Decroly J.-M. et Mérenne-Schoumaker B. (2009), Woonkernen en Stadsgewesten in een Verstedelijkt België/ Noyaux d'habitat et Régions urbaines dans une Belgique urbanisée, SOCIAAL-ECONOMISCHE ENQUÊTE 2001 MONOGRAFIEËN 9/ ENQUÊTE SOCIO-ECONOMIQUE 2001 MONOGRAPHIES 9 , FOD Economie, K.M.O., Middenstand en Energie, Algemene Directie Statistiek en Economische Informatie/ SPF Economie, P.M.E., Classes moyennes et Energie Direction générale Statistique et Information économique (http://economie.fgov.be - http://statbel.fgov.be).

For Brussels there is no variation in urbanization, Brussels is a municipality of the most important agglomeration.

Table 16: Response rate by NUTS1 region, sex, age group and the degree of Urbanization

	Municipalities of the most important agglomerations	*Municipalities with strong morphological urbanization*	*Municipalities with average morphological urbanization*	*Municipalities with poor morphological urbanization*	*Rural municipalities*	*Total*
Flanders						
Men 18-44	209	237	363	31	6	846
	39.43%	39.50%	41.72%	42.47%	31.58%	40.44%
Women 18-44	258	283	407	42	10	1000
	45.66%	47.32%	49.94%	55.26%	40.00%	48.10%
Men 45-79	241	288	438	40	7	1014
	44.38%	44.04%	46.45%	45.98%	28.00%	45.03%
Women 45-79	234	313	409	36	9	1001
	40.77%	45.10%	43.10%	40.45%	36.00%	42.94%
Total	942	1121	1617	149	32	3861
	42.59%	44.03%	45.21%	45.85%	34.04%	44.11%
Brussels						
Men 18-44	180	0	0	0	0	180
	29.85%	0.00%	0.00%	0.00%	0.00%	29.85%
Women 18-44	187	0	0	0	0	187
	28.42%	0.00%	0.00%	0.00%	0.00%	28.42%
Men 45-79	145	0	0	0	0	145
	32.29%	0.00%	0.00%	0.00%	0.00%	32.29%
Women 45-79	171	0	0	0	0	171
	31.38%	0.00%	0.00%	0.00%	0.00%	31.38%
Total	683	0	0	0	0	683
	30.29%	0.00%	0.00%	0.00%	0.00%	30.29%
Wallonia						
Men 18-44	131	134	96	202	33	596
	36.09%	37.12%	40.00%	43.44%	50.00%	39.87%
Women 18-44	147	141	115	241	28	672
	41.88%	38.21%	42.91%	48.49%	50.00%	43.61%
Men 45-79	121	183	93	224	36	657
	36.89%	45.64%	39.57%	46.96%	48.65%	43.37%
Women 45-79	148	183	107	233	31	702
	39.15%	39.70%	36.64%	43.80%	43.66%	40.48%
Total	547	641	411	900	128	2627
	38.52%	40.26%	39.71%	45.66%	47.941%	41.80%
Belgium						
Men 18-44	520	371	459	233	39	1622
	35.12%	25.54%	27.24%	28.64%	27.19%	36.72%
Women 18-44	592	424	522	283	38	1859
	38.65%	28.51%	30.95%	34.58%	30.00%	40.04%
Men 45-79	507	471	531	264	43	1816
	37.86%	29.89%	28.67%	30.98%	25.55%	40.23%
Women 45-79	553	496	516	269	40	1874
	37.10%	28.27%	26.58%	28.08%	26.55%	38.27%
Total	2172	1762	2028	1049	160	7171
	36.89%	42.58%	43.97%	45.69%	44.32%	41.47%

Source : GGS Belgium, Wave 1 – Calculations by authors

5 Summary

This paper documents the contact form implemented in GGS Wave 1 Belgium, the classification of outcome codes and the calculation of standardised response indicators in line with the guidelines issued by the UNECE Population Activity Unit. The main results can be summarized as follows:

- For GGS Wave 1 Belgium, the distribution of final disposition codes indicates that 40.2 per cent of the sampled individuals resulted into a complete or partial interview, 31.9 per cent of the contacted addresses refused to participate at the interview. Flanders and Wallonia follow a comparable distribution. Brussels is the exception, with a higher percentage of not attempted addresses which resulted in both lower response and a lower number of refusals. The percentages of the other final disposition codes are lower than 7 per cent except for the group of impossible interviews, with 7.7 per cent for Belgium.
- The information in the contact forms allowed us to take a better look at the reasons why an interview was impossible to conduct. The most important reason for an impossible interview is 'physically or mentally unable'. This reason is given the most frequently by the oldest age group. The sampled individual being 'away throughout the fieldwork period' is the second most important reason. This reason is more frequent in the younger age group. Other reasons are 'language barrier' and 'other non-response'. In Flanders and Wallonia 'physically or mentally unable' is the most important reason for an impossible interview. In Brussels we see a different distribution for the reasons, the most important reason why the interview is said to be impossible to conduct is because the sampled individuals are 'away throughout the fieldwork period', followed by the 'language barrier' as the second important reason.
- The contact form also provides additional insight in the reasons to refuse participation in GGS Wave 1 Belgium. One of the most important reasons to refuse is the duration of the interview, followed by the reason that the respondents always refuse at interviews. The fact that GGS is a face-to-face interview, does not seem to be an important reason to refuse the interview: in Belgium, only 3.3 per cent of the respondents refuse for this reason. The distribution of the reasons to refuse is the same for all regions, except for Brussels where other reasons than listed on the contact form (25.34 per cent) are more important than the topic of the survey (16.96 per cent).
- The contact rate is for Belgium 86.60 per cent. The highest contact rate is situated in Flanders (90.26 per cent), followed by Wallonia with 88.24 per cent and Brussels with 68.37 per cent. The lower contact rate in Brussels is caused by the high percentage of sampled individuals that were not contacted during the fieldwork period (or where the contact attempts have not been registered);
- For the respondents who were contacted, the cooperation rate is 48.38 per cent for Belgium. Differences between the regions in cooperation rate are smaller than differences in the contact rate. This is interesting for Brussels because, based on the contact rate, we can see that respondents in Brussels are harder to contact, but when

they are contacted, the cooperation rate (45.75 per cent) is similar to the result observed in Flanders and Wallonia;

- A third standardised response indicator is the refusal rate: 36.68 per cent of the sampled individuals eligible to participate in the survey refused to take the interview. The highest refusal rate is situated in Flanders (38.92 per cent), the lowest in Brussels (26.01 per cent) and the refusal rate of Wallonia is situated in between (37.45 per cent). The refusal rate is in all regions the highest for the older women, younger women have the lowest refusal rate. Again, the lower refusal rate in Brussels is caused by the higher proportion of sampled individuals where contact was not attempted throughout the fieldwork period.
- Finally, we have the response rate. For Belgium we see an overall response rate of 41.61 per cent. The highest response rate is for Flanders (44.47 per cent), the lowest for Brussels (31.28 per cent), Wallonia has a response rate of 42.21 per cent. The lower response rate in Brussels is related to the contact rate being substantially lower. In Flanders and Wallonia, younger women have the highest response rate, in Brussels this is the case among older men.
- The contact form of GGS Wave 1 Belgium provides additional information on housing conditions and neighbourhood characteristics. The analysis considered i) the quality of housing of sampled individuals, and ii) the housing quality of sampled individuals relative to the average housing quality in the neighbourhood. In general, the response rate is higher when the housing or neighbourhood conditions are better.
- The analyses of the response rate in terms of the degree of urbanization indicates that the response rate is higher in rural municipalities. Municipalities with the most important agglomerations have the lowest response rate.
- For both the housing or neighbourhood conditions and the degree of urbanization, the relation with the response rate was found to be comparable across regions.

6 References

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Appendix A: GGS Wave 1 Belgium Contact Form

Dutch version

Variabelen voor de organisatie :

Nummer van de enquêteur/trice Steekproefcode Nummer van de respondent(e) (11 posities) Issue Regio (Vlaams Gewest, Brussels Hoofdstedelijk Gewest, Waals Gewest) Gemeente/stad Commentaar	NUMENQ SSECH NUMFA ISSUE DEP NCOM COMMENTAIRE

Gegevens over de contactnames

0.1 Naam van de respondent(e) **0.2 Telefoonnummer(s) van de respondent(e)**	NOM TELEPHONE (ARRAY 1-5)

Geschiedenis van de contactnames 1 t.e.m. 10 (DATEJCON tot TYPAUTMAIS)

0.3 Datum van contactname? **Dag:** 1 tot en met 31 **Maand:** 1 tot en met 12 **Jaar:** 2007 tot en met 2008	DATEJCON (Array 1-10) DATEMCON (Array 1-10) DATEACON (Array 1-10)
0.4 Dag van contactname? Maandag Dinsdag Woensdag Donderdag Vrijdag Zaterdag Zondag	JOURCON (Array 1-10)
0.5 Uur van contactname? **Uur:** … **Minuten:** …	HEURECON (Array 1-10) MINCON (Array 1-10)
0.6 Wijze van contactname? Huisbezoek Telefonisch contact Informatie via GGPS-eenheid Huisbezoek, maar enkel via intercom Andere wijze ***Als TYPCON = 5*** **0.7 Verduidelijk:** …	TYPCON (Array 1-10) AUTTYPCON (Array 1-10)

Als TYPCON = 1, 4 of 5	
0.8 Hebt u het adres van de respondent(e) kunnen vinden?	REPERLOG
Ja, het adres bestaat nog altijd	(Array 1-10)
Ja, maar de woning is gesloopt, bestaat niet meer	
Ja, maar de woning is nog niet gebouwd, nog niet klaar om in te wonen	
Ja, maar het is niet residentieel (commercieel, industrieel, school,…)	
Ja, maar het is een collectief huishouden (rusthuis, instelling,…)	
Ja, maar het is onbewoond	
Neen, het is onbekend, onmogelijk te vinden	
Andere situatie	
Als REPERLOG = 8	
0.9 Verduidelijk: …	AUTREPERLOG
	(Array 1-10)
0.10 Bent u er in geslaagd om iemand te contacteren?	RESESSAIS
1. Ja, contact met de respondent(e)	(Array 1-10)
2. Ja, maar contact met iemand anders dan de respondent(e)	
3. Ja, maar niet zeker of het de respondent(e) was of niet	
4. Neen, helemaal geen contact	
Als RESESSAIS = 1, 2 of 3 (contact)	
0.11 Wat is het resultaat van dit contact?	RESCONTA
De respondent(e) heeft deelgenomen aan de enquête	(Array 1-10)
Het interview was onmogelijk uit te voeren	
De respondent(e) heeft geweigerd deel te nemen aan de enquête (openlijk of niet)	
Er werd een afspraak gemaakt	
Als RESCONTA = 2 (interview onmogelijk) :	
0.12 Waarom was een interview onmogelijk?	IMPOSSIB
De respondent(e) is nog geen 18 jaar of is ouder dan 80 jaar	(Array 1-10)
De respondent(e) is ziek, gehandicapt, heeft geheugenproblemen,…	
De respondent(e) begrijpt geen Nederlands/Frans/Duits/Engels	
De respondent(e) was niet beschikbaar gedurende de periode van het veldwerk	
De respondent(e) is overleden	
De respondent(e) is verhuisd naar het buitenland	
De respondent(e) is verhuisd binnen België	
De respondent(e) leeft in een collectief huishouden	
Andere reden	
Als IMPOSSIB = 3	
0.13 Welke taal spreekt de respondent(e)?	IMPOSLANG
Verduidelijk: …	(Array 1-10)
Weet niet (code 7) toelaten	
Als IMPOSSIB = 7	
0.14 Wat is het nieuw adres van de respondent(e)?	ARRAY 1-10:
Straat: …	NADRESRUE
Nummer: …	NADRESNUM
Bus: …	BNADRESBOI
Postcode: …	NADRESCOP
Gemeente: …	NADRESCOM
Weet niet (code 7) toelaten	
Als IMPOSSIB = 8	
0.15 Is de respondent(e) verhuisd naar een collectief huishouden?	MENCOL
Ja	(Array 1-10)
Neen	
Weet niet (code 7) toelaten	
Als IMPOSSIB = 9 :	AUTIMPOS
0.16 Verduidelijk: …	(Array 1-10)

Als RESCONTA = 3 (weigering) :	
0.17 Waarom heeft de respondent(e) volgens u geweigerd? *Meerdere antwoorden mogelijk* Dit hield verband met de duur van de enquête (heeft geen tijd,…) Dit hield verband met de behandelende onderwerpen in de vragenlijst (te persoonlijk, geen interesse,…) Dit was te wijten aan de enquête-methode (mondelinge bevraging,…) Dit geldt voor alle enquêtes Andere reden	REFUS (Array 1-5) (Array 1-10)
Als REFUS = 5 : **0.18 Verduidelijk:** …	AUTREFUS (Array 1-10)
Als RESCONTA = 3 (refus)	
0.19 Is er volgens u een kans dat de respondent(e) in de toekomst toch nog zou meewerken? Neen, zeker niet Neen, waarschijnlijk niet Ja, waarschijnlijk wel Ja, zeker wel Weet niet (code 7) toelaten	CONVREFUS (Array 1-10)
Als REPERLOG = 1	
0.20 Beschrijf het type woning van de respondent(e): Eengezinswoning: open bebouwing of vrijstaande woning Eengezinswoning: halfopen bebouwing Eengezinswoning: gesloten bebouwing of rijwoning Gebouw met 2 wooneenheden Gebouw met 3 tot 9 wooneenheden Gebouw met 10 wooneenheden of meer Kamer of studio Rusthuis of rust- en verzorgingstehuis (RVT) Boerderij Serviceflat Ander type	TYPLOG
Als TYPLOG = 11 : **0.21 Verduidelijk:** …	TYPLOGAUT
Als TYPLOG = 4 tot en met 11 : **0.22 Op welke verdieping woont de respondent(e)?** Verdieping: 0 tot en met 50	ETAGE
Als REPERLOG = 1	
0.23 Beschrijf de omgeving van de woning: Een landelijke of bosrijke omgeving met hoogstens enkele huizen of andere gebouwen in het blikveld Een niet al te grote dorpskom met gemengd uiterlijke, een verkaveling met overwegend villa's in een groen kader Een woongebied met overwegend eengezinswoningen met voortuinen Een verstedelijkt woongebied met dichte bebouwing van overwegend eensgezinswoningen zonder voortuinen Een verstedelijkt woongebied met dichte bebouwing van overwegend meergezinswoningen of appartementen Een verstedelijkt gebied met meer winkels en/of horeca dan woningen Een verstedelijkt gebied met meer kantoren, groothandelszaken, bedrijven of andere gebouwen dan huizen Andere omgeving	TYPENVIRON
Als TYPENVIRON = 8 : **0.24 Verduidelijk:** …	TYPENVAUT
Als REPERLOG = 1	

0.25 In welke staat bevinden zich de woningen en gebouwen in deze woonomgeving in het algemeen? In zeer goede staat In goede staat Geen goede maar ook geen slechte staat In slechte staat In zeer slechte staat	TYPETAMAIS
Als REPERLOG = 1 **0.26 In welke staat bevindt zich de woning of het gebouw van de respondent(e) in vergelijking met de andere woningen en gebouwen in deze woonomgeving?** In veel betere staat In betere staat Ongeveer in dezelfde staat In slechtere staat In veel slechtere staat	TYPAUTMAIS

- **French version**

Variables de gestion :

Numéro de l'enquêteur(trice) Code échantillon Numéro de l'enquêté(e) (11 positions) (année / numéro group / numéro individuel, par exemple 2006-26001-02) Issue Région de résidence (Flandre/Bruxelles/Wallonie) Nom de la commune Commentaire	NUMENQ SSECH NUMFA ISSUE DEP NCOM COMMENTAIRE

Données sur les contacts

0.1 Nom de l'enquêté(e) **0.2 Numéro(s) de téléphone de l'enquêté(e)**	NOM TELEPHONE (ARRAY 1-5)

Histoire des contacts de 1 à 10 (DATEJCON à TYPAUTMAIS)

0.3 Date du contact ? **Jour: 1 à 31** **Mois: 1 à 12** **Année: 2009 -2010**	DATEJCON (Array 1-10) DATEMCON (Array 1-10) DATEACON (Array 1-10)
0.4 Jour du contact ? **1. Lundi** **2. Mardi** **3. Mercredi** **4. Jeudi** **5. Vendredi** **6. Samedi** **7. Dimanche**	JOURCON (Array 1-10)
0.5 Heure du contact ? **Heure: …** **Minutes: …**	HEURECON (Array 1-10) MINCON (Array 1-10)
0.6 Type du contact ? **1. Contact à domicile** **2. Contact par téléphone** **3. Information de l'unité GGPS** **4. Contact à domicile, mais seulement par interphone** **5. Autre** ***Si TYPCON = 5 :*** **0.7 Précisez: …**	TYPCON (Array 1-10) AUTTYPCON (Array 1-10)

Si TYPCON = 1, 4 ou 5 :	
0.8 Avez-vous réussi à identifier l'adresse de l'enquêté(e) ?	REPERLOG
1. Oui, elle existe toujours	(Array 1-10)
2. Oui, mais elle a été détruite, condamnée	
3. Oui, mais elle est en construction	
4. Oui, mais elle est non résidentielle (commerciale, industrielle, école,…)	
5. Oui, mais c'est un ménage collectif (maison de repos, institution,…)	
6. Oui, mais elle est inoccupée	
7. Non, elle est inconnue, impossible à identifier	
8. Autre	
Si REPERLOG = 8 :	
0.9 Précisez: …	AUTREPERLOG (Array 1-10)
0.10 Avez-vous réussi à contacter quelqu'un ?	RESESSAIS
1. Oui, contact avec l'enquêté(e)	(Array 1-10)
2. Oui, mais contact avec quelqu'un d'autre que l'enquêté(e)	
3. Oui, mais pas sûr si c'était l'enquêté(e) ou non	
4. Non, contact avec personne	
Si RESESSAIS = 1, 2 ou 3 (contact) :	
0.11 Quelle a été l'issue de ce contact ?	RESCONTA
1. L'entretien a été réalisé	(Array 1-10)
2. L'entretien a été impossible à réaliser	
3. L'enquête a été refusée (ouvertement ou non)	
4. Un rendez-vous a été convenu	
Si RESCONTA = 2 (enquête impossible) :	
0.12 Pourquoi l'entretien a-t-il été impossible à réaliser ?	IMPOSSIB
1. L'enquêté(e) a moins 18 ans ou l'enquêté(e) a 80 ans ou plus	(Array 1-10)
2. L'enquêté(e) est malade, handicapé(e), problèmes de mémoire,…	
3. L'enquêté(e) ne comprend pas le franç./néerl./allemand/anglais	
4. L'enquêté(e) n'était pas disponible pendant la collecte des données	
5. L'enquêté(e) est décédé(e)	
6. L'enquêté(e) a émigré vers l'étranger	
7. L'enquêté(e) a déménagé en Belgique	
8. L'enquêté(e) vit dans un ménage collectif	
9. Autre raison	
Si IMPOSSIB = 3 :	
0.13 Quelle est la langue de l'enquêté(e) ?	IMPOSLANG
Précisez: …	(Array 1-10)
Autoriser Ne sait pas (code 7)	
Si IMPOSSIB = 7 :	
0.14 Quelle est la nouvelle adresse de l'enquêté(e) ?	ARRAY 1-10:
Rue: … (Mettre en clair)	NADRESRUE
Numéro: …	NADRESNUM
Boîte: …	BNADRESBOI
Code Postale: …	NADRESCOP
Commune: …	NADRESCOM
Autoriser Ne sait pas (code 7)	
Si IMPOSSIB = 8 :	
0.15 Est-ce que l'enquêté(e) a déménagé dans un ménage collectif ?	MENCOL
1. Oui	(Array 1-10)
2. Non	
Autoriser Ne sait pas (code 7)	
Si IMPOSSIB = 9 :	
0.16 Précisez: …	AUTIMPOS (Array 1-10)
Si RESCONTA = 3 (refus) :	

0.17 Selon vous, pourquoi l'enquêté(e) a-t-il/elle refusé ? ***Plusieurs réponses possibles*** 1. En raison de la durée de l'enquête (n'a pas de temps,…) 2. En raison du sujet de l'enquête (trop personnel, pas intéressant,..) 3. En raison de la procédure d'interview (entretien, face à face,…) 4. C'est le cas pour toutes les enquêtes 5. Autre raison	REFUS (Array 1-5) (Array 1-10)
Si REFUS = 5 : **0.18 Précisez: …**	AUTREFUS (Array 1-10)
Si RESCONTA= 3 (refus) : **0.19 Selon vous, est-il probable que l'enquêté(e) va accepter l'enquête plus tard ?** 1. Non, certainement pas 2. Non, probablement pas 3. Oui, probablement 4. Oui, certainement Autoriser Ne sait pas	CONVREFUS (Array 1-10)
Si REPERLOG = 1 : **0.20 Décrivez le type d'habitation de l'enquêté(e) :** 1. Habitation unifamiliale non-mitoyenne 2. Habitation unifamiliale semi-mitoyenne 3. Habitation unifamiliale mitoyenne des deux côtés 4. Habitation dans un immeuble comprenant moins de 4 logements sans ascenseur 5. Habitation dans un immeuble comprenant moins de 4 logements avec ascenseur 6. Habitation dans un immeuble comprenant 4 logements ou plus sans ascenseur 7. Habitation dans un immeuble comprenant 4 logements ou plus avec ascenseur 8. Séniorie 9. Ferme 10. Lieu de résidence pour personnes âgées 11. Autre	TYPLOG
Si TYPLOG = 11 : **0.21 Précisez:** …	TYPLOGAUT
Si TYPLOG = 4 à 8 et 10 et 11 : **0.22 A quel étage habite l'enquêté(e) ?** **Etage:** 0 à 50	ETAGE
Si REPERLOG = 1 : **0.23 Décrivez l'environnement du logement.** 1. Un quartier rural ou un quartier boisé avec au maximum quelques maisons ou autres bâtiments dans les environs 2. Une agglomération moyenne/centre de village *avec une destination mixte*, un lotissement avec une prépondérance de villas *dans un environnement verdoyant* 3. Un quartier résidentiel avec une prépondérance de logements unifamiliaux avec un jardinet devant 4. Un quartier résidentiel fort urbanisé avec une prépondérance de logements unifamiliaux à front de rue (sans jardinet devant) 5. Un quartier résidentiel fort urbanisé avec une prépondérance de logements plurifamiliaux ou d'appartements 6. Un quartier urbain avec plus de magasins et/ou de commerces que de maisons 7. Un quartier urbain avec plus de bureaux, commerces de gros, entreprises ou autres bâtiments que de maisons 8. Autre environnement	TYPENVIRON

Si TYPENVIRON = 8 : **0.24 Précisez:** …	TYPENVAUT
Si REPERLOG = 1 : **0.25 De façon générale, dans quel état se trouvent les maisons ou les bâtiments du quartier ?** 1. Dans un très bon état 2. Dans un bon état 3. Ni dans un bon état ni dans un mauvais état 4. Dans un mauvais état 5. Dans un très mauvais état	TYPETAMAIS
Si REPERLOG = 1 : **0.26 Dans quel état se trouve la maison ou le bâtiment de l'enquêté(e) par rapport aux autres maisons/bâtiments du quartier ?** 1. Dans un état nettement meilleur 2. Dans un meilleur état 3. A peu près dans le même état 4. Dans un plus mauvais état 5. Dans un état nettement plus mauvais	TYPAUTMAIS

Appendix B: Outcome codes for surveys of individuals (Lynn et al. 2001)

1 Eligible, Interview: Complete Interview

The distinction between a complete and partial interview should be defined and stated explicitly for each survey, in technical reports/appendices alongside the response analysis.

11 Complete interview by selected person
To constitute completion, the end of the questionnaire must have been reached and all sections attempted. Some item non-response may, of course, remain.
12 Complete interview: partly by selected person and partly by proxy
The interview is partly-completed by the selected person and partly by a proxy respondent.
13 Complete interview by proxy
The interview is completed by someone other than the selected person, on their behalf.

2 Eligible, Interview: Partial Interview

The distinction between a partial interview and non-response should always be defined and stated explicitly for each survey. As general guidance, it is suggested that pre-defined key questions/sections should be answered and/or at least half of the relevant questions/sections. If less than this is completed, then see code 44. (See also categories 55 - 56).

21 Partial interview by selected person
22 Partial interview: partly by selected person and partly by proxy
23 Partial interview by proxy

3 Eligible, Non-Interview: Non-contact

31 No contact with anyone at the address
This code is to be used when the sampled address is known to be eligible, but the interviewer is unable to make contact with any resident. (If eligibility is uncertain, see categories 63 and 65.) This includes cases where the interviewer is unable to reach the sampled dwelling, for example if the sampled address is a dwelling in a multidwelling building and the interviewer is unable to enter the building. If any contact is made with a person believed to be a resident, e.g. through an entryphone or in a public area outside the building, see categories 42-43. It is recommended to document in each survey how many times interviewers were advised to attempt contact before the use of the code was allowed and also, for non-contacts, the distribution of number of contact attempts (see section 7 of this paper).
32 Contact made at the address, but not with any member of the sampled dwelling/household
This code is only to be used for multi-dwelling/household addresses.
33 Contact made at sampled dwelling/household, but not with any responsible resident
This code applies both to single-dwelling addresses and to selected dwellings within multi-dwelling addresses. It is to be used in situations where, for example, contact is only made with a child, visitor, workman, au pair, etc. The survey definition of responsible resident should be explicitly documented.
34 Contact made with responsible member of sampled dwelling/household, but not with the selected person

4 Eligible, Non-Interview: Refusal

41 Office refusal
A decision not to participate in the survey is communicated directly to either the survey organisation or the sponsoring organisation. Only refusals made before the initial interviewer contact should be coded as office refusals (otherwise, see category 43.) Also it is to be underlined that the code applies only to refusals; if the reason for not participating is due to, for example, illness or language, see codes 51-54. The refusal could be by the sampled person or by proxy – for example, the son/daughter of an elderly person(s) may insist that their parent(s) should not be contacted. Surveys sometimes operate an "opt-out" procedure in advance of the main field work. This category applies also to households that opt out of the survey at that stage. If an optout procedure is used, it may be desirable/ appropriate to separately identify households who opt out and those that refuse at a later stage (by using subcategories).
42 Sampling unit information refused
Contacted person(s) refuse(s) to give the information needed for the interviewer to identify the respondent.
421 Information refused about number of dwellings/households at address

422 Information refused about persons within household
43 Refusal at introduction / before interview
Refusal that is given to the interviewer before the interview has commenced.
431 Refusal by selected person
432 Refusal by proxy
44 Refusal during the interview
Respondent refuses to continue the interview, and insufficient data has been collected for the interview to count as a useable partial interview (see categories 21-23). (If the respondent completes all or part of the interview but subsequently refuses permission for the data to be used, see categories 561 - 562.)
45 Broken appointment, no re-contact
Contacted person(s) is/are willing to be interviewed later at an agreed time, but interviewer is unable subsequently to re-contact them.

5 Eligible, Non-Interview: Other non-response

51 Ill at home during survey period
Code to be used for sampled persons who are temporarily ill, i.e. who might have been able to complete the interview at a different time. (If (expected to be) permanently ill, see code 53.) Intoxicated persons to be included here.
52 Away/in hospital throughout field period
53 Physically or mentally unable/incompetent
This relates to relatively permanent or stable conditions (see code 51).
54 Language
Selected person is not able to speak adequate English or other languages that the survey uses, and no one to act as an interpreter is available (includes cases where the interviewer is to select one person at each sampled address, but no-one at the address speaks adequate English)
55 Lost interview
Full or partial interview achieved but file/questionnaire corrupted/lost/not transmitted
56 Other non-response
561 Full interview achieved but respondent requested data be deleted
562 Partial interview achieved but respondent requested data be deleted
563 Other non-response (give details)

6 Unknown Eligibility: unknown eligibility, non-interview

These codes are needed in order to be able to take explicit account of the uncertainty that often surrounds the eligibility of a sampled address. For example, it is sometimes difficult to be certain whether an address at which no contact has been made is occupied or vacant. In the past, interviewers have been forced to make an assumption. This leaves researchers and others no means of taking the uncertainty into account when assessing survey outcomes or estimating response rates.

61 Not attempted
611 Not issued to an interviewer
For example, no interviewer was available in the area and/or within the time available, or not issued because the area was deemed unsafe.
612 Issued but not attempted
Included here should be cases where the interview was carried out incorrectly, but this was discovered too late for re-issuing to be possible.
62 Inaccessible
Include remote areas temporarily inaccessible due to weather or other causes.
63 Unable to locate address
Sample addresses for which the description of the sampled unit is errant or inadequate to allow an interviewer to find the address.
64 Unknown whether address contains residential housing
641 Information refused about whether address is residential
642 Unknown whether address is residential due to non-contact
65 Residential address - unknown if eligible person(s).
The interviewer knows that the address is residential but the existence of resident(s) eligible for the survey is unknown. This includes cases where the interviewer is unsure whether any household is resident.
651 Information refused about whether there are eligible resident(s)

652 Unknown whether there are eligible resident(s) due to non-contact
66 No screener completed
Failure to complete a needed screener. (Surveys involving a major screening/sifting operation are likely either to use a number of sub-categories of this code or to record outcomes separately for the screen and main stages of the fieldwork.)
661 Refusal to complete screener
662 Screener not completed due to non- contact
67 Other unknown eligibility (details to be recorded)
68 Moved – unable to attempt contact at new address
Only applies to samples of pre-selected persons.
681 No longer at sample address – current address could not be ascertained
682 No longer at sample address – current address ascertained but could not be attempted
For example, if new address is abroad or otherwise out of the areas in which interviewers are available.

7 Not Eligible: Not Eligible

Codes 71 to 77 only apply to surveys involving a sample of addresses and subsequent selection of an individual at each address. For surveys involving samples of named persons, categories 78 and 79 are the only permitted categories of ineligibles.

71 Not yet built/ under construction
72 Demolished /derelict
73 Vacant /empty
Residential address known not to contain any resident household on the date of the contact attempt.
74 Non-residential address
Address occupied solely by a business, school, government office, other organisation, etc., with no resident persons
75 Address occupied, but no resident(s)
Address is residential and occupied, but is not the main residence of any of the persons staying there (see standard definitions of residency). This is likely to apply to seasonal/vacation/temporary residences. But note that seasonal/vacation/temporary residences that are not occupied at the time of the contact attempt, belong to category 73.
76 Communal establishment/institution
Address is residential and occupied, but does not contain any private household(s), e.g. institutions and barracks (see standard definitions of institutions).
77 Resident household(s), but no person eligible for the survey
Address is residential and occupied by a private household(s), but does not contain any person(s) eligible for the survey. Note the distinction from code 73. This code will only be used when the survey has an eligibility criterion that renders some persons ineligible – e.g. a restricted age range or a requirement for persons to be in paid employment.
78 Out of sample
The address/person is not properly part of the sample. The code is used for example in situations where addresses/persons listed in the sampling frame:
a) turn out to be outside the relevant geographical area
b) other misclassification of the frame.
79 Other ineligible (details to be recorded)

Appendix C: Priority ordering of outcomes

The priority ordering of outcome codes is taken from Lynn et al. (2001). The outcome codes in italics were implemented in GGS Wave 1 Belgium using the contact form in appendix A. Appendix D documents the algorithm used to extract the final disposition code for each sampled individual from the outcomes registered during successive contact attempts.

Outcome Code		Priority code
Responding		
11	*Complete interview by desired respondent (s)*	*99*
12	Complete interview: partly by desired respondent and partly by proxy	98
13	Complete interview by proxy	97
21	*Partial interview by desired respondent*	*88*
22	Partial interview: partly by desired respondent and partly by proxy	86
23	Partial interview by proxy	74
Lost/Deleted		
55	Interview achieved but file/questionnaire corrupted/lost/not transmitted	72
561	*Full interview achieved but respondent requested data be deleted*	*71*
562	Partial interview achieved but respondent requested data be deleted	70
Deadwood		
76	*Communal establishment/institution*	*66*
78	*Address out of sample*	*64*
74	*Non-residential address*	*62*
75	Address occupied, but no resident household	60
77	Resident household (s), but no-one eligible for survey	58
71	*Not yet built/ under construction*	*56*
72	*Demolished /derelict*	*54*
73	*Vacant /empty*	*52*
79	Other ineligible	50
Refusal		
44	Refusal during the interview	49
431	*Refusal by desired respondent1 / Refusal by selected person [2]*	*47*
432	*Refusal by proxy*	*45*
43	Refusal at introduction / before interview	44
422	Information refused that would allow identification of desired respondent within h'hold	43
421	Information refused about number of dwellings/households at address	41
42	Sampling unit information refused	40
41	*Office refusal*	*38*
45	*Broken appointment, no re-contact*	*36*
Unable to respond		
53	*Physically or mentally unable/incompetent*	*33*
54	*Language*	*32*
52	*Away/in hospital all field period*	*31*
51	Ill at home during survey period	30
563	Other non-response (other)	29
56	*Other non-response*	*28*
Non-contact		
34 2	Contact made with responsible member of sampled dwelling/household, but not with the selected person	25

33 Contact made at the sampled dwelling/ household, but not with a responsible resident . 24
32 Contact made at address, but not with any member of the sampled dwelling/ household 23
31 No contact with anyone at the address 21

Unknown eligibility

682 2 No longer at sample address – current address ascertained but could not be attempted 17
681 2 No longer at sample address – current address could not be ascertained 16
68 2 Moved – unable to attempt contact at new address 15
651 Residential, but unknown whether there is an eligible person/household due to refusal 14
652 Residential, but unknown whether there is an eligible person/h'hold due to non-contact 13
65 Residential, but unknown whether there is an eligible person/household 12
641 Unknown whether address contains residential housing due to refusal of information ... 11
642 Unknown whether address contains residential housing due to non-contact 10
64 Unknown whether address contains residential housing 9
62 Inaccessible 8
63 Unable to locate address 7
66 No screener completed 6
67 Other unknown eligibility 4
612 Issued but not attempted 3
611 Not issued to an interviewer 2
61 Not attempted 1

1 Household surveys only
2 Individual surveys only

Appendix D: SPSS Syntax for calculation of FDC

```
*            FINAL DISPOSITION CODES (LYNN ET AL, 2001).
*            UNOCCUPIED, DEMOLISHED PREMISES CONSIDERED NOT ELIGIBLE (SEE ESS).
*            CONTACT WITH OTHER PERSON THAN R: CODES 32,33,34 OR REFUSAL, INCAPABILITY, 45.
CACHE.
DEFINE FDP ().
!DO !I = 1 !TO 10.
!LET !TYPCON = !CONCAT('TYPCON_C',!I).
!LET !XTYPCON = !CONCAT('#XTYPCON_C',!I).
!LET !REPERLOG = !CONCAT('REPERLOG_C',!I).
!LET !RESESSAIS = !CONCAT('RESESSAIS_C',!I).
!LET !RESCONTA = !CONCAT('RESCONTA_C',!I).
!LET !IMPOSSIB = !CONCAT('IMPOSSIB_C',!I).
!LET !MENCOL = !CONCAT('MENCOL_C',!I).
!LET !FDP = !CONCAT('FDP_C',!I).
RECODE !TYPCON (MISSING=9)(ELSE=COPY) INTO !XTYPCON.
COMPUTE !FDP = 200.
DO IF ANY(!XTYPCON,1,4,5).
 DO IF ANY(!REPERLOG,1,8).
  DO IF (!RESESSAIS = 1).
   DO IF (!RESCONTA=1).
   COMPUTE !FDP = 45.
   IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
   IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
   ELSE IF (!RESCONTA=2).
    DO IF (!IMPOSSIB = 1).
    COMPUTE !FDP = 78.
    ELSE IF (!IMPOSSIB = 2).
    COMPUTE !FDP = 53.
    ELSE IF (!IMPOSSIB = 3).
    COMPUTE !FDP = 54.
    ELSE IF (!IMPOSSIB = 4).
    COMPUTE !FDP = 52.
    ELSE IF (!IMPOSSIB = 5).
    COMPUTE !FDP = 78.
    ELSE IF (!IMPOSSIB = 6).
    COMPUTE !FDP = 78.
    ELSE IF (!IMPOSSIB = 7).
    COMPUTE !FDP = 68.
     DO IF (!MENCOL = 1).
     COMPUTE !FDP = 78.
     END IF.
    ELSE IF (!IMPOSSIB = 8).
    COMPUTE !FDP = 78.
    ELSE IF (!IMPOSSIB = 9).
    COMPUTE !FDP = 56.
    END IF.
   ELSE IF (!RESCONTA=3).
   COMPUTE !FDP = 431.
   ELSE IF (!RESCONTA=4).
   COMPUTE !FDP = 45.
   END IF.
  ELSE IF ANY(!RESESSAIS,2,3).
   DO IF (!RESCONTA=1).
   COMPUTE !FDP = 45.
   IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
   IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
   ELSE IF (!RESCONTA=2).
    DO IF (!IMPOSSIB = 1).
    COMPUTE !FDP = 78.
    ELSE IF (!IMPOSSIB = 2).
    COMPUTE !FDP = 53.
    ELSE IF (!IMPOSSIB = 3).
    COMPUTE !FDP = 54.
    ELSE IF (!IMPOSSIB = 4).
```

```
      COMPUTE !FDP = 52.
      ELSE IF (!IMPOSSIB = 5).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 6).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 7).
      COMPUTE !FDP = 68.
       DO IF (!MENCOL = 1).
       COMPUTE !FDP = 78.
       END IF.
      ELSE IF (!IMPOSSIB = 8).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 9).
      COMPUTE !FDP = 56.
      END IF.
     ELSE IF (!RESCONTA=3).
     COMPUTE !FDP = 432.
     ELSE IF (!RESCONTA=4).
     COMPUTE !FDP = 45.
     END IF.
    ELSE IF (!RESESSAIS = 4).
    COMPUTE !FDP = 31.
    END IF.
  ELSE IF (!REPERLOG = 2).
  COMPUTE !FDP = 72.
  ELSE IF (!REPERLOG = 3).
  COMPUTE !FDP = 71.
  ELSE IF (!REPERLOG = 4).
  COMPUTE !FDP = 74.
  ELSE IF (!REPERLOG = 5).
  COMPUTE !FDP = 76.
  ELSE IF (!REPERLOG = 6).
  COMPUTE !FDP = 73.
  ELSE IF (!REPERLOG = 7).
  COMPUTE !FDP = 63.
  END IF.
ELSE IF (!XTYPCON=2).
   DO IF (!RESESSAIS = 1).
     DO IF (!RESCONTA=1).
     COMPUTE !FDP = 45.
     IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
     IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
     ELSE IF (!RESCONTA=2).
       DO IF (!IMPOSSIB = 1).
       COMPUTE !FDP = 78.
       ELSE IF (!IMPOSSIB = 2).
       COMPUTE !FDP = 53.
       ELSE IF (!IMPOSSIB = 3).
       COMPUTE !FDP = 54.
       ELSE IF (!IMPOSSIB = 4).
       COMPUTE !FDP = 52.
       ELSE IF (!IMPOSSIB = 5).
       COMPUTE !FDP = 78.
       ELSE IF (!IMPOSSIB = 6).
       COMPUTE !FDP = 78.
       ELSE IF (!IMPOSSIB = 7).
       COMPUTE !FDP = 68.
         DO IF (!MENCOL = 1).
         COMPUTE !FDP = 78.
         END IF.
       ELSE IF (!IMPOSSIB = 8).
       COMPUTE !FDP = 78.
       ELSE IF (!IMPOSSIB = 9).
       COMPUTE !FDP = 56.
       END IF.
     ELSE IF (!RESCONTA=3).
     COMPUTE !FDP = 431.
     ELSE IF (!RESCONTA=4).
```

```
    COMPUTE !FDP = 45.
    END IF.
  ELSE IF ANY(!RESESSAIS,2,3).
    DO IF (!RESCONTA=1).
    COMPUTE !FDP = 45.
    IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
    IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
    ELSE IF (!RESCONTA=2).
      DO IF (!IMPOSSIB = 1).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 2).
      COMPUTE !FDP = 53.
      ELSE IF (!IMPOSSIB = 3).
      COMPUTE !FDP = 54.
      ELSE IF (!IMPOSSIB = 4).
      COMPUTE !FDP = 52.
      ELSE IF (!IMPOSSIB = 5).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 6).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 7).
      COMPUTE !FDP = 68.
        DO IF (!MENCOL = 1).
        COMPUTE !FDP = 78.
        END IF.
      ELSE IF (!IMPOSSIB = 8).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 9).
      COMPUTE !FDP = 56.
      END IF.
    ELSE IF (!RESCONTA=3).
    COMPUTE !FDP = 432.
    ELSE IF (!RESCONTA=4).
    COMPUTE !FDP = 45.
    END IF.
  ELSE IF (!RESESSAIS = 4).
  COMPUTE !FDP = 31.
  END IF.
ELSE IF (!XTYPCON=3).
  DO IF (!RESESSAIS = 1).
    DO IF (!RESCONTA=1).
    COMPUTE !FDP = 45.
    IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
    IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
    ELSE IF (!RESCONTA=2).
      DO IF (!IMPOSSIB = 1).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 2).
      COMPUTE !FDP = 53.
      ELSE IF (!IMPOSSIB = 3).
      COMPUTE !FDP = 54.
      ELSE IF (!IMPOSSIB = 4).
      COMPUTE !FDP = 52.
      ELSE IF (!IMPOSSIB = 5).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 6).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 7).
      COMPUTE !FDP = 68.
        DO IF (!MENCOL = 1).
        COMPUTE !FDP = 78.
        END IF.
      ELSE IF (!IMPOSSIB = 8).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 9).
      COMPUTE !FDP = 56.
      END IF.
    ELSE IF (!RESCONTA=3).
```

```
     COMPUTE !FDP = 431.
     ELSE IF (!RESCONTA=4).
     COMPUTE !FDP = 45.
     END IF.
   ELSE IF ANY(!RESESSAIS,2,3).
     DO IF (!RESCONTA=1).
     COMPUTE !FDP = 45.
     IF (ANY(MA_LNAIS,1,2,7,8)) !FDP = 21.
     IF (ANY(ZZ_RESUL,1,2)) !FDP = 11.
     ELSE IF (!RESCONTA=2).
      DO IF (!IMPOSSIB = 1).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 2).
      COMPUTE !FDP = 53.
      ELSE IF (!IMPOSSIB = 3).
      COMPUTE !FDP = 54.
      ELSE IF (!IMPOSSIB = 4).
      COMPUTE !FDP = 52.
      ELSE IF (!IMPOSSIB = 5).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 6).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 7).
      COMPUTE !FDP = 68.
       DO IF (!MENCOL = 1).
       COMPUTE !FDP = 78.
       END IF.
      ELSE IF (!IMPOSSIB = 8).
      COMPUTE !FDP = 78.
      ELSE IF (!IMPOSSIB = 9).
      COMPUTE !FDP = 56.
      END IF.
     ELSE IF (!RESCONTA=3).
     COMPUTE !FDP = 41.
     ELSE IF (!RESCONTA=4).
     COMPUTE !FDP = 45.
     END IF.
   ELSE IF (!RESESSAIS = 4).
   COMPUTE !FDP = 31.
   END IF.
ELSE IF (!XTYPCON=9).
COMPUTE !FDP = 61.
END IF.
VALUE LABELS !FDP
11 'Complete or partial interview'
21 'Partial interview'
31 'Non-contact'
431 'Refusal by respondent'
432 'Refusal by proxy'
41 'Office refusal'
45 'Broken appointment'
52 'Away throughout field period'
53 'Physically or mentally unable'
54 'Language barrier'
56 'Other non-response'
61 'Not attempted'
63 'Unable to locate address'
68 'Moved: unable to contact at new address'
71 'Not yet built, under construction'
72 'Demolished or derelict'
73 'Vacant, empty'
74 'Non-residential address'
76 'Communal establishment, institution'
78 'Out of sample'
200 'Unclassified'.
!DOEND.
EXECUTE.
!ENDDEFINE.
```

```
FDP.
FREQ VAR = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10.
*           FINAL DISPOSITION CODE BASED ON HIERARCHY (Lynn et al, 2001, 22-23).
*           Alternative see Billiet, 2006 (based on last contact).
COUNT #TEMPVAR = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (61).
COMPUTE NCONTACTS = 10 - #TEMPVAR.
COUNT #CODE11 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (11).
COUNT #CODE21 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (21).
COUNT #CODE76 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (76).
COUNT #CODE78 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (78).
COUNT #CODE74 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (74).
COUNT #CODE71 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (71).
COUNT #CODE72 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (72).
COUNT #CODE73 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (73).
COUNT #CODE431 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (431).
COUNT #CODE432 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (432).
COUNT #CODE41 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (41).
COUNT #CODE45 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (45).
COUNT #CODE53 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (53).
COUNT #CODE54 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (54).
COUNT #CODE52 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (52).
COUNT #CODE56 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (56).
COUNT #CODE31 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (31).
COUNT #CODE68 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (68).
COUNT #CODE63 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (63).
COUNT #CODE61 = FDP_C1 FDP_C2 FDP_C3 FDP_C4 FDP_C5 FDP_C6 FDP_C7 FDP_C8 FDP_C9 FDP_C10 (61).
COMPUTE FINALDP = 200.
DO IF (#CODE11 > 0).
COMPUTE FINALDP = 11.
ELSE IF (#CODE21 > 0).
COMPUTE FINALDP = 21.
ELSE IF (#CODE76 > 0).
COMPUTE FINALDP = 76.
ELSE IF (#CODE78 > 0).
COMPUTE FINALDP = 78.
ELSE IF (#CODE74 > 0).
COMPUTE FINALDP = 74.
ELSE IF (#CODE71 > 0).
COMPUTE FINALDP = 71.
ELSE IF (#CODE72 > 0).
COMPUTE FINALDP = 72.
ELSE IF (#CODE73 > 0).
COMPUTE FINALDP = 73.
ELSE IF (#CODE431 > 0).
COMPUTE FINALDP = 43.
ELSE IF (#CODE432 > 0).
COMPUTE FINALDP = 43.
ELSE IF (#CODE41 > 0).
COMPUTE FINALDP = 41.
ELSE IF (#CODE45 > 0).
COMPUTE FINALDP = 45.
ELSE IF (#CODE53 > 0).
COMPUTE FINALDP = 53.
ELSE IF (#CODE54 > 0).
COMPUTE FINALDP = 54.
ELSE IF (#CODE52 > 0).
COMPUTE FINALDP = 52.
ELSE IF (#CODE56 > 0).
COMPUTE FINALDP = 56.
ELSE IF (#CODE31 > 0).
COMPUTE FINALDP = 31.
ELSE IF (#CODE68 > 0).
COMPUTE FINALDP = 68.
ELSE IF (#CODE63 > 0).
COMPUTE FINALDP = 63.
ELSE IF (#CODE61 > 0).
COMPUTE FINALDP = 61.
END IF.
```

```
VARIABLE LABELS FINALDP 'Final disposition code (Lynn et al, 2001, 22-23)'.
FORMAT FINALDP (F2.0).
VALUE LABELS FINALDP
11 'Complete or partial interview'
21 'Partial interview'
31 'Non-contact'
43 'Refusal by respondent or proxy'
41 'Office refusal'
45 'Broken appointment'
52 'Away throughout field period'
53 'Physically or mentally unable'
54 'Language barrier'
56 'Other non-response'
61 'Not attempted'
63 'Unable to locate address'
68 'Moved: unable to contact at new address'
71 'Not yet built, under construction'
72 'Demolished or derelict'
73 'Vacant, empty'
74 'Non-residential address'
76 'Communal establishment, institution'
78 'Out of sample'
200 'Unclassified'.
EXECUTE.
```

Appendix E: Syntax for calculation of UNECE FDC

```
*           FINAL DISPOSITION CODES UNECE (KVEDER, 2005).
*           RECODE FINALDP INTO CATEGORIES FOR CALCULATION OF RESPONSE RATES.
*           (LYNN ET AL, 2001, 25-29; KVEDER, 2005, 117-118).
*           NOTE: CATEGORIES HAVE DIFFERENT VALUES IN LYNN AND UNECE.
RECODE FINALDP
(11=1)(21=2)(31=4)(43=5)(43=5)(41=5)(45=5)(52=6)(53=6)(54=6)(56=6)(61=8)(63=8)(68=8)(71=8)
(72=3)(73=3)(74=8)(76=3)(78=3) INTO UNECE_FDP.
VARIABLE LABEL UNECE_FDP 'Final disposition codes (KVEDER, 2005)'.
MISSING VALUES UNECE_FDP (7,8).
VALUE LABELS UNECE_FDP
1 'Complete Interviews'
2 'Partial Interviews'
3 'Not eligible'
4 'Non-contact'
5 'Refusal'
6 'Other non-response'
7 'Unknown eligibility, contacted'
8 'Unknown eligibility, non-contact'.
EXECUTE.
FREQ VAR = UNECE_FDP.
*           FINAL DISPOSITION CODES (UNECE) .
MISSING VALUES UNECE_FDP ().
COMPUTE FDP_CI = 0.
COMPUTE FDP_PI = 0.
COMPUTE FDP_NE = 0.
COMPUTE FDP_NC = 0.
COMPUTE FDP_RF = 0.
COMPUTE FDP_ONR = 0.
COMPUTE FDP_UEC = 0.
COMPUTE FDP_UENC = 0.
DO IF (UNECE_FDP = 1).
COMPUTE FDP_CI = 1.
ELSE IF (UNECE_FDP = 2).
COMPUTE FDP_PI = 1.
ELSE IF (UNECE_FDP = 3).
COMPUTE FDP_NE = 1.
ELSE IF (UNECE_FDP = 4).
COMPUTE FDP_NC = 1.
ELSE IF (UNECE_FDP = 5).
COMPUTE FDP_RF = 1.
ELSE IF (UNECE_FDP = 6).
COMPUTE FDP_ONR = 1.
ELSE IF (UNECE_FDP = 7).
COMPUTE FDP_UEC = 1.
ELSE IF (UNECE_FDP = 8).
COMPUTE FDP_UENC = 1.
END IF.
VARIABLE LABELS
FDP_CI 'Complete Interviews' /
FDP_PI 'Partial Interviews' /
FDP_NE 'Not eligible' /
FDP_NC 'Non-contact' /
FDP_RF 'Refusal' /
FDP_ONR 'Other non-response' /
FDP_UEC 'Unknown eligibility, contacted' /
FDP_UENC 'Unknown eligibility, non-contact'.
EXECUTE.
```


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