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A household projection model for Belgium based on individual household membership rates[1]

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[1] The methodology and results presented in this paper are part of a work in progress. The projection is expected to be published in early 2014.

1. Introduction

Since many years, Statistics Belgium (Directorate General Statistics and Economic Information - DGSEI) and the Belgian Federal Planning Bureau (FPB) have annually produced official population projections for Belgium at the NUTS3 level used by official Belgian institutions and in several short-, medium-, and long-term projection models (such as economic projections, income poverty, long-term healthcare expenditures, energy, transport) and for specific projects or demands. Aside from these official population projections, interest for household projections is growing. Indeed, understanding the population in this dimension is very useful for numerous aspects of social life (expansion of single-parent households - often mothers - or of isolated households with old persons who are at higher risk of poverty problems or short of support) and of economic life (impact on consumption, taxation, housing, mobility, etc). To do so, a household projection model for Belgium, calibrated on the Belgian population projection at the NUTS 3 level, is under development. The objective of this paper is to describe the model and to present the provisional results.

The methodology proposed in this paper is part of the so-called *static* household models, as opposed to *dynamic* household models. While the latter study the transition probabilities from one state (ie. one position in a household) to another by analysing flows, the former focus on the stocks and rates of each state in the studied population. The states which are considered in the present model are individual households positions based on the LIPRO typology. This typology allows taking into account the living arrangements of each individual in the population and establishes a univocal relationship between each position within a household and the type of households to witch an individual belongs.

The paper is structured as follows. Next section presents the methodology and the hypotheses required for making the household projection up to 2060. The third section describes the provisional results of the projection. Section four includes a sensitivity analysis regarding the projection of individuals in collective households. The last section is devoted to a discussion about the results and the methodology in general.

2. Methodology

2.1. General overview

The household projection starts from the population projection by age and gender at the NUTS3 level. With each group of individuals (by age, gender and NUTS3 level), an individual household membership rate is associated. Individual household membership rates are defined according to the LIPRO typology (Imhoff and Keilman, 1991). Individual household positions and the corresponding household types are described in Table 1.

Table 1 Description of household positions and household types

Household positions			Household types	
1	SING	Single (one-person household)	SING	One-person household
2	MAR0	Married without child(ren)	MAR0	Married couple without children, but possibly with NFRA
3	MAR+	Married with children	MAR+	Married couple with child(ren), and possibly with NFRA
4	CMAR+	Child in family with married parents	MAR+	Married couple with child(ren), and possibly with NFRA
5	UNM0	Cohabiting, no children present	UNM0	Couple living in a consensual union without children, but possibly with NFRA
6	UNM+	Cohabiting, with at least one child	UNM+	Couple living in a consensual union with child(ren), but possibly with NFRA
7	CUNM+	Child in family with cohabiting parents	UNM+	Couple living in a consensual union with child(ren), but possibly with NFRA
8	H1PA	Head of one-parent family	1PA	One-parent family, possibly with NFRA (but not a partner)
9	C1PA	Child in one-parent family	1PA	One-parent family, possibly with NFRA
10	NFRA	Non family-related adult		Belongs to MAR0, MAR+, UNM0, UNM+ or 1PA
11	OTHR	Other (multi-family households, adults living together…)	OTHR	Multi-family households, adults living together…
12	COLL	Member of a collective household	COLL	Collective households

The number of individuals with a household position *p*, at time *t*, gender *s*, age *y* and living in region *i* ($I\_HHPOS^{p}_{t,s,y,i}$) is obtained by multiplying the population at time *t*, gender *s*, age *y* and living in region *i* ($POP_{t,s,y,i}$) by the corresponding individual household membership rate for position *p* ($T\_HHPOS^{p}_{t,s,y,i}$), namely:

$$I\_HHPOS^{p}_{t,s,y,i} = POP_{t,s,y,i} \times T\_HHPOS^{p}_{t,s,y,i}$$

The number of households per type of households is deduced from the number of individuals per position into the households. By definition, the number of one-person households corresponds to the number of singles. The number of married couples or of couples living in a consensual union with or without children are obtained by dividing the number of married or of cohabiting individuals by two. The number of one-parent families equals the number of heads of one-parent families. Finally, the number of households of type "other" is obtained by dividing the number of individuals of type "other" by an average number of individuals in such households (see section 2.3.2).

For the household projection, the population by age, gender, and region a time *t* is coming from the last Belgian population projection up to 2060 (DGSEI and Belgian FPB 2013). Individual household membership rates, on the other hand, are endogenous variables. They are not presumed to be constant in the projection. The projection method for the household membership rates is described in next section.

The household projection focuses on private households (based on individuals in position 1 to 11). Indeed, making a hypothesis on the average number of individuals in a collective household is not trivial. Consequently, the household projection must be based on the total population out of individuals in a collective household. To do so, a projection of individuals in collective households still must be realised. It is the topic of section 2.3.1. The selected hypothesis for the projection of individuals living in

collective households has an impact on the total number of projected individuals in private households and thus on the total number of private households. Sensitivity analyses have been realized. The main results are presented in Section 4.

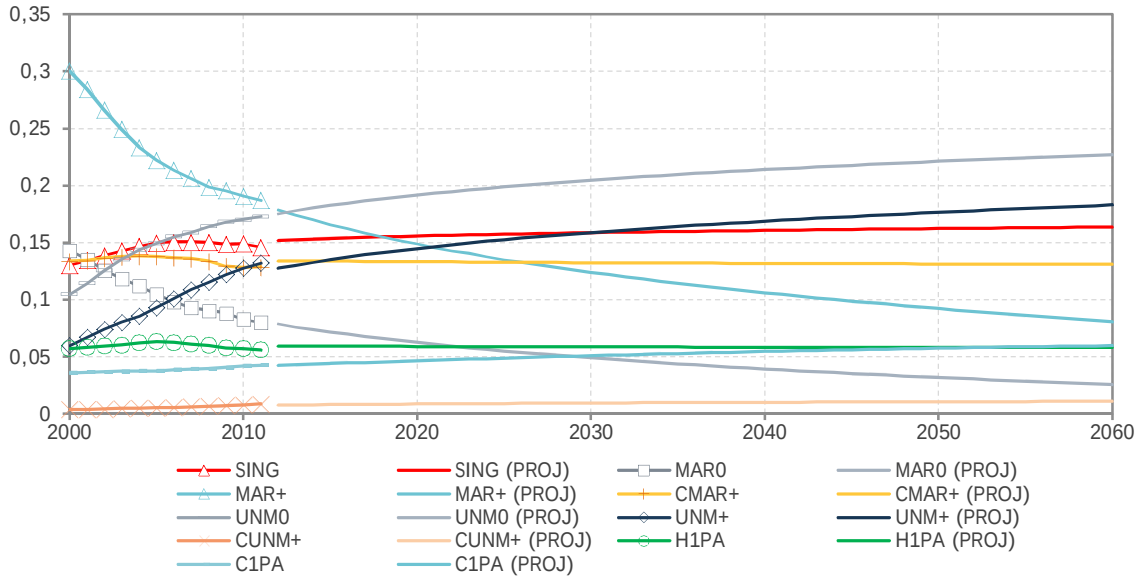
2.2. Method for projecting household membership rates

The projection of household membership rates by age, gender and region assumes that the current trend will continue in the future. The estimation of the trend is based on historical data for Belgium at the NUTS3 level. The historical data, including the (LIPPRO) position within the household, are available from the Belgian National Register for the period 1991-2011. In order to take into account only recent trends, the estimation period is restricted to 2000-2011. Furthermore, we implicitly assume that in the long term, historical upward or downward trends (if observed) will not continue at the same pace and reach a saturation level. This is technically realised by using a logarithmic or a logistic trend. The choice between these two types of trends is based on the coefficient of determination (R^2) of the regression: the regression with the highest R^2 is selected. The assumption of a deterministic long-term trend (logarithmic or logistic) seems reasonable because evolutions in living arrangements depend on long-term processes such as cultural changes.

In some specific situations, mainly for groups of individuals with few observations, the value of the R^2 is very low. In such a case, the membership rate is defined by the average over the period 2000-2011. This average is maintained constant during the whole projection period. Note that in some cases, being able to choose between the logistic and the logarithmic function also allows assuring a better fit between the last observation and the first projected year. Remember that the projection of the rates is made by age and gender at the NUTS 3 level. Consequently, the number of regressions to be estimated is quite numerous. An automatic process, making the best choice between the logistic trends, the logarithmic trend or the average mean has been implemented in Python and IODE by the IT unit of the Federal Planning Bureau. A correction mechanism is also implemented such that the sum of the rates per position equals 1.

To illustrate the projected membership rates, the projection of household membership rates for Belgian women (without distinction at the NUTS 3 level) aged 25 to 29 is presented in Graph 1. Data up to 2011 are observations and data from 2012 onward are projections. The impact of the logistic or logarithmic trends is reflected by the lower slopes in the long term.

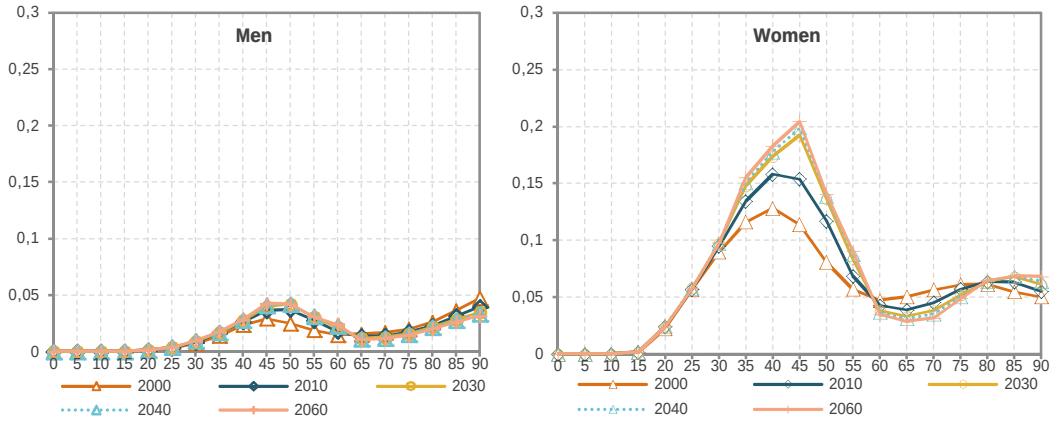
Graph 1 **Household membership rates for Belgian women aged 25 to 29 (2000-2011: observations; 2012-2060: projection)**



Source: 2000-2011: NR-DGSEI and FPB calculations: 2012-2060: FPB

The necessity of a gender approach in the determination of the future household membership rates is illustrated in Graph 2. These graphs show, by age and gender for Belgium, the past and future evolution of the rates of heads of a one-parent family. These rates are appreciably higher for women than for men and the growth rates between 2010 and 2060 are also higher for women. This figure shows also the importance of making a distinction between age groups in the estimation.

Graph 2 **Rates of heads of a one-parent family for Belgian men and Belgian women (2000-2011: observations; 2012-2060: projection)**

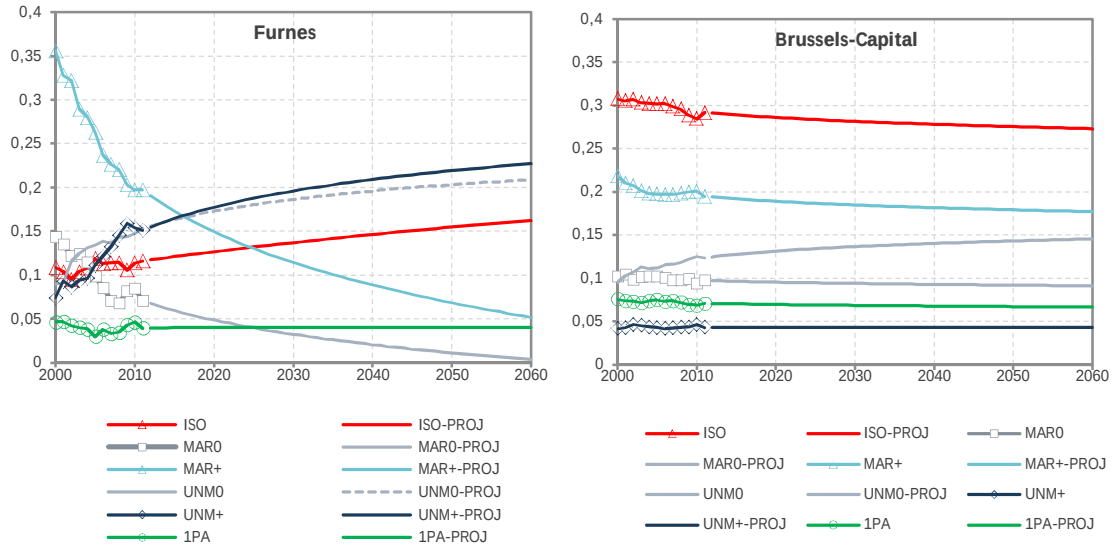


Source: 2000-2011: NR-DGSEI and FPB calculations; 2012-2060: FPB

Finally, the importance of taking into account local specificities by estimating the rate at the NUTS3 level is illustrated in Graph 3. This figure represents the evolution of the membership rates for women aged 25 to 29 and for two selected districts. On the left-hand side, the data concern the district of Furnes, characterized by a relatively small population (around 60 000 inhabitants in 2012) located along the North Sea, with a relative high share of older people. On the right-hand side, the evolution of those rates concerns the district of Brussels-Capital, with little over 1 million inhabitants and characterized

by an important share of immigrants and young people. The district of Furnes could be characterized by a dominance of a "native" population while the district of Brussels-Capital is a cosmopolitan district. These specificities are part of the explanations for the differences in the levels and evolutions of membership rates. We will illustrate this with an example. From 2000 up to 2011, the rate of married women with children aged 25 to 29 living in the district of Furnes drastically decreased from 0.35 to 0.20. This might be explained by a change in socioeconomic behaviour. The traditional way of living (married with children) is progressively being replaced by other forms of households (cohabitation, one-person families due to the increased number of divorces...). This rate is lower for women aged 25 to 29 living in Brussels-Capital than in the district of Furnes, and decreases more slowly. This can be explained, among others, by the relative higher share (since the year 2000 and in projection) in the total population of immigrant women with more traditional behaviour (married with children) with regard union formation. Note that the rate of individuals living alone (SING) in the district of Brussels-Capital is high compared to the rate in the district of Furnes. This is also explained by specificities of the district of Brussels-Capital and, in particular, the attractiveness of the city for specific groups of individuals (young people at university, job opportunities) and the later age of entering any types of unions for such groups.

Graph 3 **Household membership rates for women aged 25 to 29 (2000-2011. observations; 2012-2060. projection), district of Furnes and district of Brussels-Capital**



Source: 2000-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

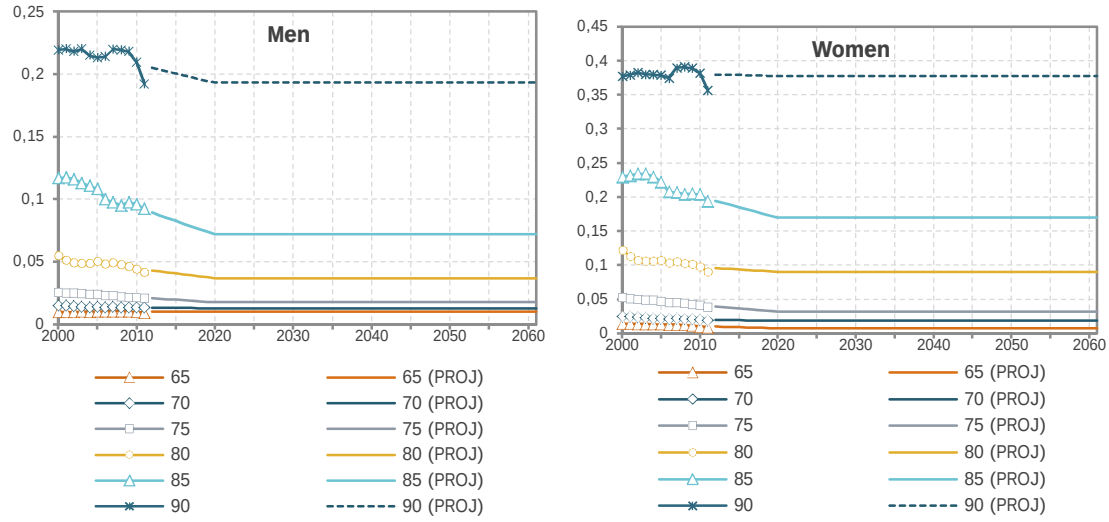
2.3. Specific hypotheses

2.3.1. Individuals in collective households

As concerns the projection of individuals in collective households, the present study presumes a continuation of the observed historical trend in the rate (per age, gender and districts) of individuals in collective households up to 2020 (see Graph 4). From 2021 up to the end of the perspective, this rate is maintained. This assumption is justified by the fact that the population in collective households not only depends on the demand-side but also on the supply-side, including the number of available beds

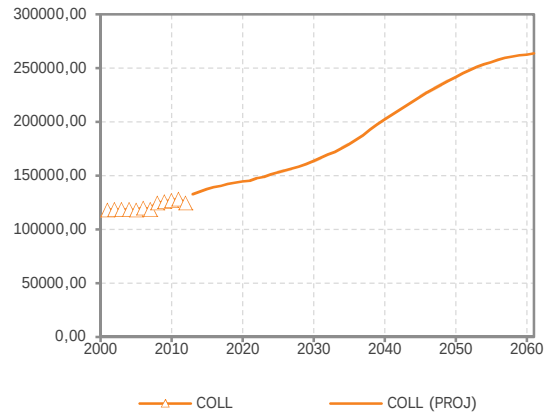
in rest homes. During the last ten years, there was a certain political tendency to restrict the number of beds in rest homes and to encourage people to stay longer at home at older ages, with the support of informal caregivers and the development of social services. The rate of individuals in collective households is, consequently, characterised by a downward trend over this period. Whether such politics will be maintained in the long run is uncertain. On the demand-side, one important determinant is certainly the evolution of the population per age and gender, but as concerns population in rest homes, elements such a life expectancy in good health or medical progress are also important demand-side determinants. As a result, the choice of maintaining the trend in the short term (up to 2020) with a constant evolution in the long run (up to 2060) avoids making assumption on a set of determinants with great uncertainty for the future.

Graph 4 **Evolution of the rates of individuals older than 65 living in a collective households by age and gender (2000-2011: observations; 2012-2060: projection), Belgium**



Source: 2000-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Graph 5 **Projection of the number of individuals in collective households - reference scenario**



Source: 2000-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

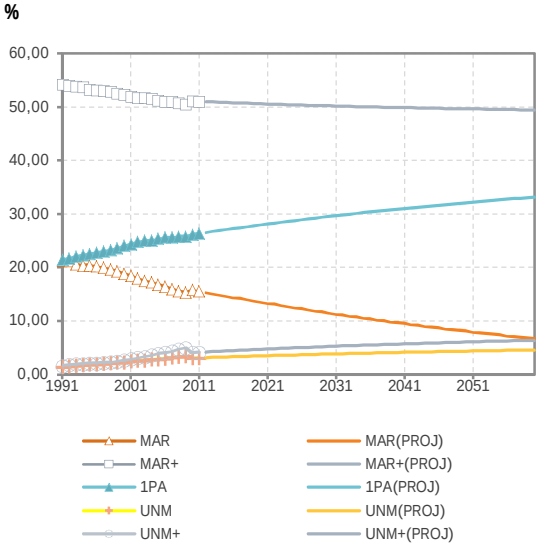
Population ageing (mainly due to increasing life expectancy, stagnating births and decreasing immigration), combined with a constant rate in the long run of individuals in collective households, leads to a substantial increase of individuals in collective households (see Graph 5). This could be considered as unsustainable from a social, political or economic point of view. This approach has, however, the advantage of highlighting the scale of the challenge for the future. Whether politicians decide to supply a sufficient number of places in collective households or to implement other politics (such as more informal care or home care) is

beyond the scope of this paper. In the latter case (more informal care or home care), the number of individuals in collective households would, consequently, be lower in the future.

2.3.2. Individuas in a position "Non Family Related Adults" or "other"

The projection of the number of "Non Family Related Adults" (NFRA) individuals is realized by using projected membership rates. This approach does however not allow determining which household types those individuals belong to. In order to determine the average size of the households, those individuals have to be redistributed in the household types. They can be attributed to married couples with or without children, to couples in a consensual union with or without children and to one-parent families.

Graph 6 **Share of the NFRA in the types of households (2000-2009: observations; 2010-2060: projection)**



Source: 1991-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Based on historical data (from 1991 to 2011), the share of NFRA individuals living in households with a married couple (with or without children) is decreasing while the share of the NFRA individuals living in households with a couple in a consensual union (with or without children) or in one-parent families is increasing. The distribution of the NFRA over the different household types is based on those shares, assuming a continuation of the historical trend with a saturation level in the long run (see Graph 6).

For the individuals in a position "other", the projection is also realized by using the projected membership rates. To calculate the number of households of type "Other", an assumption has to be made on the average number of individuals in such a household. Historical data (from 1991) show that the average size of the households of type "Other" remains constant at the level of 2.1. This average is assumed to be constant in the projection.

3. Results

This section presents the main results from the household projection 2012-2060, namely the projection of the number of individuals per position in the household, the projection of the number of households per type of household and the average size of the households. These results, though available, are not presented at the NUTS3 level. In the present paper, they are aggregated for the whole country and for the three Belgian Regions (Brussels-Capital Region, Flemish Region and Walloon Region).

3.1. Household positions

The projection of the number of individuals in Belgium by household position is presented in Table 2. While most of the positions face an increasing trend up to 2060, the numbers of married individuals with children and of children within a married couple decrease by 30% and 24% respectively over the period 2011-2060. This evolution is mainly explained by the downward projection of the rate of married couples with children and of children in a married couple.

While the rate of married couples without children is also projected to follow a downward trend, for all ages and both genders, the number of married individuals without children increases by 14% in 2060 compared to 2011. This increase is explained by the high proportion in the near future years of individuals aged 65 to 75 (the baby boom cohorts) and the high (but still decreasing) rate (around 0.4) of married couples without children for those ages. This effect related to the post-war baby boom disappears progressively in the long run (beyond 2030), which is reflected by a stable evolution of the number of married individuals without children between 2030 and 2060.

Table 2 Individuals by household position in Belgium

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011 (%)	Number	Share (%)	Growth rate compared to 2011 (%)
SINGLE	1600594	14.6	2087487	17.3	30.4	2518994	19.8	57.4
MAR0	1919416	17.5	2209196	18.3	15.1	2194571	17.2	14.3
MAR+	2201164	20.1	1880313	15.6	-14.6	1534489	12	-30.3
CHMAR+	2086914	19.1	1944318	16.1	-6.8	1584294	12.4	-24.1
UNM	489966	4.5	610046	5	24.5	730262	5.7	49
UNM+	548706	5	680511	5.6	24	880315	6.9	60.4
CUNM+	461562	4.2	619098	5.1	34.1	815423	6.4	76.7
H1PA	456905	4.2	548782	4.5	20.1	637035	5	39.4
C1PA	710839	6.5	917458	7.6	29.1	1101691	8.6	55
NFR	189069	1.7	222471	1.8	17.7	259756	2	37.4
OTHR	161503	1.5	194015	1.6	20.1	228524	1.8	41.5
COLL	124628	1.1	166615	1.4	33.7	263332	2.1	111.3
Total	10951266	100	12080310	100	10.3	12748686	100	16.4

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Due to the extrapolation of the observed trends (with a saturation effect in the long run) of non-consensual unions and one-person families, the number of individuals (including children) within such households increases substantially between 2011 and 2060, up to 77% for the number of children in families with cohabiting parents.

The contrasting evolutions of the number of individuals according to household positions lead to a change in the share of each household position in the population. Those shares are included in Table 2.

Finally, under the assumptions described in section 2.3.1, population ageing leads to an increase of individuals in collective households by 111% in 2060. The growth acceleration of the number of individuals living in collective households from 2030 onward is due to the baby boom generation attaining the age of 85 and over in 2030, with the highest probability of being in a collective household (see Graph 4).

Looking at the projection at the level of the three Belgian Regions (Table 4 in Annex), some regional differences appear, in particular for the Brussels-Capital Region. More precisely, while the number of married individuals with children and the number of children within married couple decrease in the projection for the whole country, these categories increase in the Brussels-Capital Region. This can mainly be explained by the relative young population and the relatively high share of international immigrants in the Brussels-Capital Region which raises the rate of married couples (traditional union) compared to the two other Regions. Looking at the evolution of the share of each household position, the Brussels-Capital Region also maintains a relatively stable distribution up to 2060 compared to the two other Regions. Such results show the necessity to estimate and project membership rates at a sufficiently disaggregated level in order to catch local specificities. In this study, membership rates are estimated at the NUTS3 level.

3.2. Household types

The number of households by type can be deduced (see section 2.1) from the number of individuals in each household position. The projection of the number of households by type is presented in Table 3. The number of households follows the same evolution as the number of individuals by household positions. All types of households, except married couples with children, increase over the period 2011-2060: between 14% and 60% according to the type. Regional specificities are also reflected in the projection of household types (see Table 7 in Annex).

Table 3 Private-households by household types in Belgium

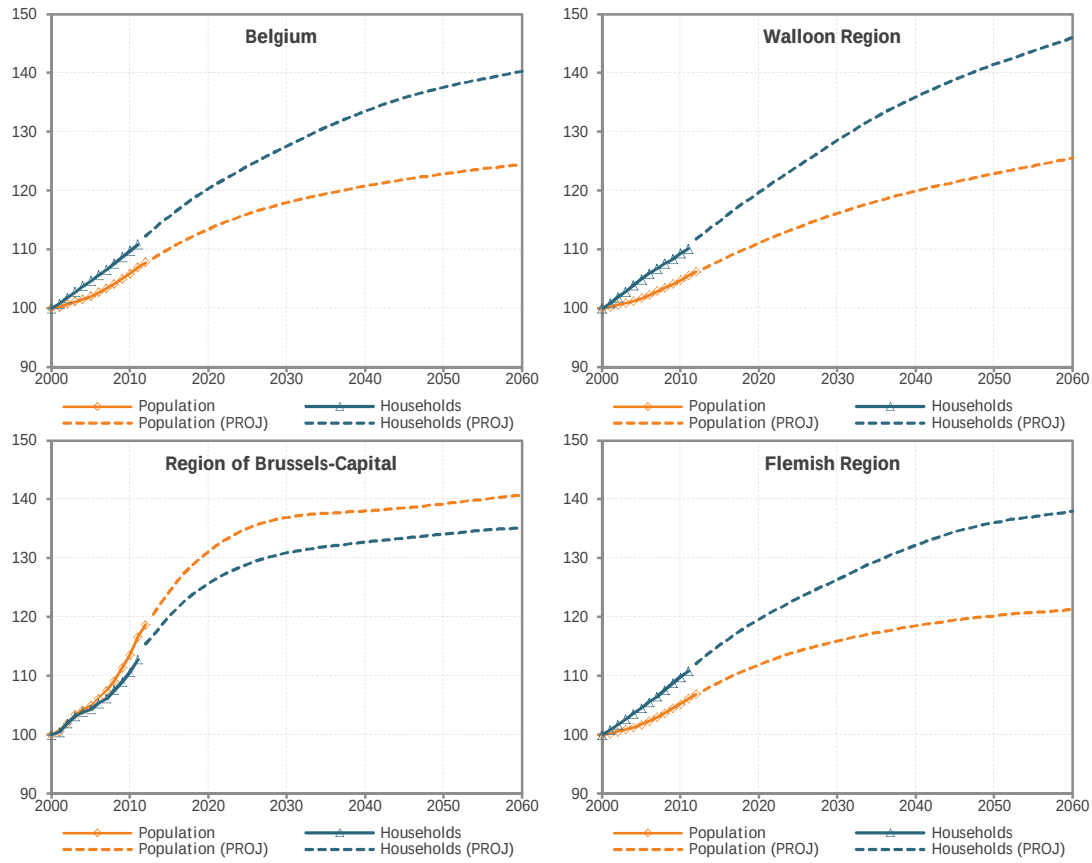
	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011 (%)	Number	Share (%)	Growth rate compared to 2011 (%)
SING	1600594	34	2087487	38.5	30.4	2518994	42.4	57.4
MAR0	959708	20.4	1104598	20.4	15.1	1097286	18.5	14.3
MAR+	1100582	23.3	940157	17.4	-14.6	767245	12.9	-30.3
UNM	244983	5.2	305023	5.6	24.5	365131	6.2	49.0
UNM+	274353	5.8	340256	6.3	24.0	440157	7.4	60.4
1PA	456905	9.7	548782	10.1	20.1	637035	10.7	39.4
OTHR	76906	1.6	92388	1.7	20.1	108821	1.8	41.5
Total	4714031	100	5418690	100	14.9	5934669	100	25.9

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

3.3. Total number of households and average size

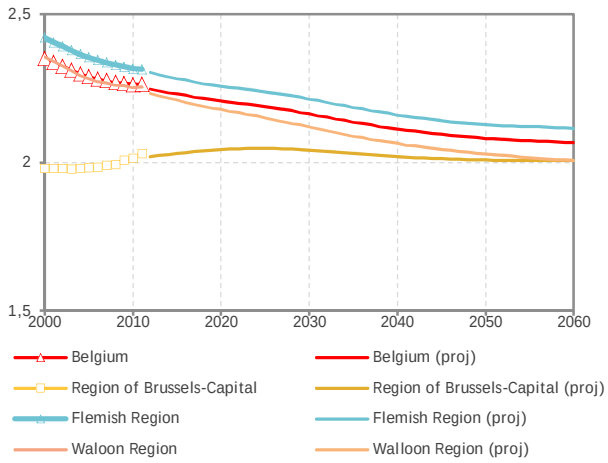
The evolution of the total number of households for Belgium and its three Regions is presented in Graph 7, together with the evolution of their respective populations. For the Flemish and the Walloon Regions, the number of households grows more quickly than the number of individuals. This is explained by the evolution of the distribution of households types, namely proportionally more households by 2060 with less individuals (one-person households in particular).

Graph 7 **Evolution of the population and of the households by 2060 for Belgium and its three Regions**
2000=100



Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Graph 8 **Average size of the households**



Source: 2000-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

The population of the Brussels-Capital Region grows more quickly than the number of households (in particular over the next 15 years). This is reflected by the upward trend of the average size of households up to 2030 (see Graph 8). Thereafter, the average size starts to decrease slowly until 2060. On the other hand, the average size of households in the Flemish and the Walloon Regions decrease over the whole period of pro-

jection.

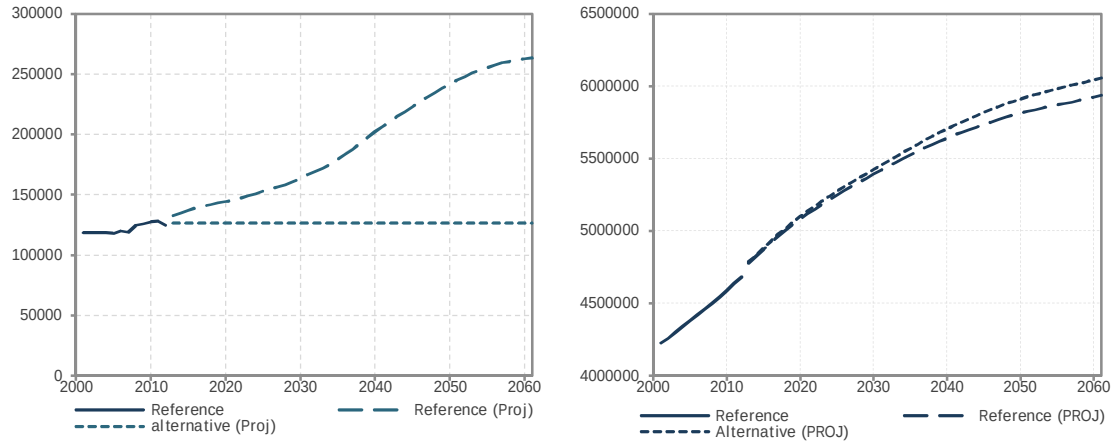
Notice that the projections of the population and of the households in the Brussels-Capital Region are characterized by a substantial increase up to 2030, followed by a more stable evolution up to 2060. This evolution is explained by international immigration, one of the components of the population projection, which increases up to 2030 and remains stable over the period 2030-2060 (for more details, see DGSEI and FPB, 2013).

4. Sensitivity analysis for collective households

The projection of households presented in Section 3 concerns only private households. To obtain the population of private households, a hypothesis has been made concerning the individuals in collective households.

Collective households include individuals living in rest homes, prisons, convents etc. Around 80% of individuals living in collective households are 65 years or older. This population is, therefore, highly correlated with individuals living in rest homes (this is even more true for people older than 85 years). Given the social and economic importance of this specific population, even more in a context of population ageing, the projection of individuals in collective households is a topic on itself (see Van den Bosch et al., 2011 for a specific study on residential care for older persons in Belgium). In the present exercise, it seems of interest to analyse whether the hypothesis on the projection of the number of individuals living in collective households has a significant impact on the projection of private households. In this perspective, an 'extreme' alternative has been tested, namely maintaining the level of individuals in collective households up to 2060 at the average of the period 2007-2011 (see left-hand side of Graph 9 – alternative projection). On the one hand, this alternative seems legitimate in view of the fact that from 2000 to 2011, the level of individuals in collective households remained constant. On the other hand, considering population ageing in the forthcoming years, the opposite would be expected.

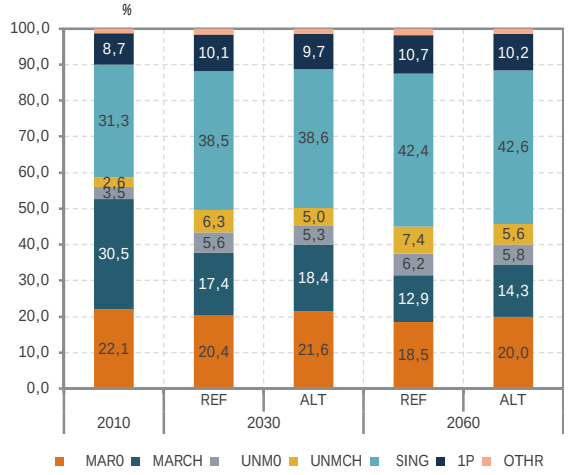
Graph 9 **Projection of the number of individuals in collective households (left-side) and of the number of households in Belgium (right-side) according to alternative hypotheses**



Source: 2000-2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

While the number of individuals in collective households decreases by 43% (around 95 000 individuals) in 2060 in the alternative scenario compared to the reference scenario, the impact on the number of private households is far less important. In the alternative scenario, the number of private households increases by 1.4% (around 85 000 households) in 2060 compared to the reference scenario.

Graph 10 **Impact of the alternative scenario related to households in collective households on the repartition of the households**



The impact on the distribution of household's types is presented in Graph 10. The difference between the two scenarios is even smaller. The alternative scenario leads to a difference between -1.8 and +1.5 percentage point in 2060 compared to the reference scenario. Consequently, the alternative 'extreme' scenario has a negligible impact on the projection of private households.

5. Discussion

This paper presents a static method for household projections based on individual living arrangements (LIPRO typology). As already discussed in numerous articles[2], a static method does not allow analysing the transition from one position to another. This is a weakness of the methodology. However, we are convinced that, by using projected position rates, this weakness is, to a certain extent, outweighed. More precisely, assuming that a stock (the population by position) is the result of a flow (transition from one position to another), the evolution of the stock follows the evolution of the transitions. The evolution of the stock may consequently be interpreted as the summary of the evolution of sociodem-

[2] See, among others, Duin and Harmsen (2009) for an overview of the weaknesses and strengths of static and dynamic approaches.

ographic behaviours. By hypothesis, the continuation of the recent trends of the rate of individuals in a certain household position assumes a continuum of (recent) past sociodemographic evolutions in living arrangements.

Of course, the problem of consistency is still present. Is the projected life expectancy assumed in the population projection consistent with the evolution of the rate of married couples at older age? Is the projected fertility rate, which is a hypothesis in the population projection, consistent with the number of children born from married or cohabiting couples? For such consistencies, a multi-state dynamic approach is certainly recommended. Due to constraints in human resources, it was not possible to develop such methodology. Notice that some consistency rules, in particular an equal number of married women and of married men, have been implemented. The household projection with the present static model shows, however, that the results seem coherent with the components of the population projection (more particularly migration, fertility and mortality). Furthermore, since the projection of the rates of being in a position are made by age and gender at the NUTS3 level, local specificities are also, to a certain extent, integrated.

A main disadvantage of the static approach is that a situation at time *t* is not linked to the situation at time *t-1*. This lack of relationship limits the projected information. For example, for single households it is not possible to determine whether singles are coming from married couples divorced, from children leaving the parental home or from other situations. To summarize, the scope of potential analyses is more limited in a static approach but the approach seems sufficient to project the number of households per household type. Note that the present projection has been compared with regional projections for Belgium (Willems and E. Lodewijckx, 2011 for the Flemish Region and Dal et al., 2012 for the Walloon Region), and the results are convergent. The differences are explained more by the hypotheses (e.g. on the evolution of the population, the population in collective households or the length of the historical data for estimating parameters of the models) than by the methodology in itself (even with a multi-state methodology as in Dal et al., 2012).

To conclude, a projection is always based on a set of hypotheses. The choice of the hypotheses can certainly have a greater impact on the projection results than the method itself. In the analytic approach as implemented in this paper, a continuation of the trends is assumed (with a saturation effect). If a continuation of the (recent) trends is considered as the most likely projection, this projection can be defined as a forecast (see De Beer 2011). For a long-term horizon as considered in this study (2060), it seems difficult to define a scenario which could be considered as the most likely projection, even for long-term processes such as living arrangements. The considered hypothesis in this study has the advantage of making it unnecessary to make arbitrary hypotheses for the future. Maintaining the rates of household positions at a constant level from the beginning of the projection or from a later year would have led to another projection. The results of a projection should, consequently, always be interpreted while keeping in mind the hypotheses behind the model.

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Annexe

Individuals per household positions in the three Belgian Regions

Table 4 Individuals by household position in the Walloon Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011(%)	Number	Share (%)	Growth rate compared to 2011(%)
SINGLE	533715	15.1	717187	18.5	34.4	905406	21.6	69.6
MAR0	545296	15.5	608209	15.7	11.5	612568	14.6	12.3
MARCH	658994	18.7	560768	14.5	-14.9	458677	10.9	-30.4
CHMAR	626619	17.8	551787	14.2	-11.9	435987	10.4	-30.4
UNM	150064	4.3	187723	4.8	25.1	224778	5.4	49.8
UNMCH	204948	5.8	251337	6.5	22.6	320549	7.6	56.4
CHUNM	176841	5	226095	5.8	27.9	294029	7	66.3
H1PA	184283	5.2	225914	5.8	22.6	269560	6.4	46.3
C1PA	288932	8.2	365508	9.4	26.5	439781	10.5	52.2
NFR	61481	1.7	69287	1.8	12.7	79433	1.9	29.2
OTHR	51679	1.5	61636	1.6	19.3	72980	1.7	41.2
COLL	42688	1.2	53609	1.4	25.6	79296	1.9	85.8
Total	3525540	100	3879060	100	10	4193044	100	18.9

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Table 5 Individuals by household position in the Flemish Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011(%)	Number	Share (%)	Growth rate compared to 2011(%)
SINGLE	808818	12.8	1078306	15.7	33.3	1327791	18.4	64.2
MAR0	1251214	19.8	1489099	21.6	19	1499958	20.8	19.9
MARCH	1343734	21.3	1091670	15.8	-18.8	847894	11.8	-36.9
CHMAR	1253285	19.9	1162838	16.9	-7.2	935724	13	-25.3
UNM	294356	4.7	361556	5.2	22.8	433539	6	47.3
UNMCH	303696	4.8	376896	5.5	24.1	498792	6.9	64.2
CHUNM	250689	4	346997	5	38.4	470929	6.5	87.9
H1PA	214135	3.4	248294	3.6	16	291127	4	36
C1PA	327304	5.2	425412	6.2	30	527332	7.3	61.1
NFR	104277	1.7	122165	1.8	17.2	141657	2	35.8
OTHR	82094	1.3	93841	1.4	14.3	108094	1.5	31.7
COLL	73036	1.2	90492	1.3	23.9	122665	1.7	68
Total	6306638	100	6887566	100	9.2	7205500	100	14.3

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Table 6 Individuals by household position in the Brussels-Capital Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011(%)	Number	Share (%)	Growth rate compared to 2011(%)
SINGLE	258061	23.1	295580	22.5	14.5	305436	22.6	18.4
MAR0	122906	11	118273	9	-3.8	102933	7.6	-16.3
MARCH	198436	17.7	227748	17.3	14.8	228018	16.9	14.9
CHMAR	207010	18.5	229472	17.5	10.9	211929	15.7	2.4
UNM	45546	4.1	60949	4.6	33.8	72626	5.4	59.5
UNMCH	40062	3.6	52100	4	30	60271	4.5	50.4
CHUNM	34032	3	45956	3.5	35	50217	3.7	47.6
H1PA	58487	5.2	75135	5.7	28.5	78724	5.8	34.6
C1PA	94603	8.5	126417	9.6	33.6	134002	9.9	41.6
NFR	23311	2.1	31113	2.4	33.5	38726	2.9	66.1
OTHR	27730	2.5	38738	2.9	39.7	48062	3.6	73.3
COLL	8904	0.8	12202	0.9	37	19199	1.4	115.6
Total	1119088	100	1313684	100	17.4	1350142	100	20.6

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Households by household type in the three Belgian Regions

Table 7 Private households by household type in the Walloon Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011 (%)	Number	Share (%)	Growth rate compared to 2011 (%)
SING	533715	35.1	717187	40.4	34.4	905406	44.9	69.6
MAR0	272648	17.9	304105	17.1	11.5	306284	15.2	12.3
MAR+	329497	21.6	280384	15.8	-14.9	229339	11.4	-30.4
UNM0	75032	4.9	93862	5.3	25.1	112389	5.6	49.8
UNM+	102474	6.7	125668	7.1	22.6	160275	7.9	56.4
1PA	184283	12.1	225914	12.7	22.6	269560	13.4	46.3
OTHR	24609	1.6	29351	1.7	19.3	34752	1.7	41.2
Total	1522258	100	1776469	100	16.7	2018005	100	32.6

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Table 8 Private households by household type in the Flemish Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011 (%)	Number	Share (%)	Growth rate compared to 2011 (%)
SING	808818	30.4	1078306	35.6	33.3	1327791	40.1	64.2
MAR0	625607	23.5	744550	24.6	19.0	749979	22.7	19.9
MAR+	671867	25.3	545835	18.0	-18.8	423947	12.8	-36.9
UNM0	147178	5.5	180778	6.0	22.8	216770	6.5	47.3
UNM+	151848	5.7	188448	6.2	24.1	249396	7.5	64.2
1PA	214135	8.1	248294	8.2	16.0	291127	8.8	36.0
OTHR	39092	1.5	44686	1.5	14.3	51473	1.6	31.7
Total	2658545	100	3030897	100	14.0	3310482	100	24.5

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB

Table 9 Private households by household type in the Brussels-Capital Region

	2011		2030			2060		
	Number	Share (%)	Number	Share (%)	Growth rate compared to 2011 (%)	Number	Share (%)	Growth rate compared to 2011 (%)
SING	258061	48.4	295580	47.8	14.5	305436	47.8	18.4
MAR0	61453	11.5	59137	9.6	-3.8	51467	8.1	-16.3
MAR+	99218	18.6	113874	18.4	14.8	114009	17.8	14.9
UNM0	22773	4.3	30474	4.9	33.8	36313	5.7	59.5
UNM+	20031	3.8	26050	4.2	30.0	30136	4.7	50.4
1PA	58487	11	75135	12.1	28.5	78724	12.3	34.6
OTHR	13205	2.5	18447	3.0	39.7	22887	3.6	73.3
Total	533228	100	618697	100	16.0	638970	100	19.8

Source: 2011: NR-DGSEI and FPB calculation; 2012-2060: FPB