Formation and Realisation of Migration Intentions Across the Adult Life Course
Evidence from Norway

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1 Introduction

In order to enhance our ability to predict future migration patterns, it is highly relevant to further improve our understanding how migration intentions are formed and to what degree they are predictive of future migration moves. This paper makes use of rich data from Norway, allowing us to study determinants of the formation of migration intentions and the realisation of migration moves in different stages of the adult life course. The paper provides first an overview how the occurrence of migration intentions and their relevance for understanding subsequent realised migration moves is changing across the adult life course. In this analysis we cover ages from 18 to 79 and thus virtually the whole adult life course. The main focus of the paper are migration intentions and migration behaviour in three specific life stages, namely young adulthood, family phase and the phase characterised by stepping out of the labour market and into retirement. In each life phases other intentions, such as leaving parental home, union formation and childbearing plans or job changes, might influence the formation of migration intentions. We investigate if intentions in other life spheres are correlated with the formation of migration intentions and if they have an independent impact on migration behaviour. Based on our preliminary results we conclude that migration intentions are relevant for explaining migration moves, but the predictive power of migration intentions varies across the life course. In addition indicate results from our preliminary multivariate models that intentions in other life domains are associated with the formulation of migration intentions in all three life phases, but play only a minor role when looking on subsequent moves.

2 Background and Motivation

In our study we understand migration intentions predominantly as an instrumental intention (see Sell and DeJong 1978; De Jong and Fawcett 1981), which implies that most migration intentions are formed in order to realise other goals in the private and work domain. Following this perspective, migration intentions are formed as individuals perceive that specific life goals might be easier to realize at a different place. Migration thereby offers the possibility to improve the *geographies of opportunities.* As such life goals as well as residential preferences typically change over the life course, analysis separating between specific life phases can offer deeper insight into the formation of migration intentions and the actual subsequent migration behaviour. Earlier research has shown that separate analysis for different life phases is a fruitful approach when investigating migration intentions and migration behaviour (Kley 2011). In line with this, results from research on moving motivations indicate changes over the life course. Among young adults, the entry into the labour market is an important motivation, while some years later motives connected to the housing itself and aspects of family life, as for example the choice of a school for the own children, become more important (Sørli, Aure and Langset 2012). The definition of the life phases depends on the contextual framework in which the persons act, including normative and legal age norms.

Beside intentions and goals in other life domains, earlier research has pointed out the influence of other factors on the formulation of migration intentions and migration behaviour. The relevance of age and other live course events for migration moves is for example pointed out by Kan (1999) or Mulder (1993). Family ties, including both the partner and children, or fertility intentions and childbearing are possible push and pull factors for migration (Bielby and Bielby 1992; Kulu and Milewski 2007; Kulu 2008). As moving lead to changes in the housing situation and in most cases the neighbourhood, different papers focus on these aspects when studying migration intentions or behaviour (for example Clark and Ledwith 2006; Huinink and Kley 2008; Landale and Guest 1985). To our knowledge, there is a dearth of research looking at the interplay between intentions in other life domains and migration intentions or respectively realised migration moves. One expectation is a study based on a panel study with inhabitants from two cities in Germany, analysing the formulation of migration intentions to another city and actual migration behaviour (Kley 2011). She included the anticipation of other life-course events, i.e. individuals expect that an event will take place. Events from four life domains were taken into account: childbearing, union changes (living together and marriage), starting or finishing an education, abandoning or beginning a job. Respondents were asked if they expected that event within the next six months. In addition, measures for so called perception of opportunity differentials were included. This means persons were asked if opportunities for the partnership, career, family life and other own interests are perceived as better elsewhere than at the current place of residence. Depending of the life phase of interest, these factors were relevant for the formation of migration intentions (e.g. considering and planning to leave the city) and to some extend for the subsequent migration behaviour (depending on whether the migration intention itself was included in the model). These findings support the theoretical assumption that migration intentions are closely connected to plans in other life domains and that migration intentions are an important predictor for actual migration behaviour. The data material imposes some restrictions to the analyses: only inhabitants form two German cities are included, the anticipated life plans cover a rather short period (next six months), the migration behaviour is defined as moves to a different city and they have to take place within one year.

In this paper, we aim to contribute to existing knowledge about the formation and realisation of migration intentions across the life course by analysing data from the Norwegian Generations and Gender Survey (GGS) that has been linked with information from the Norwegian population register. The GGS is very well suited for our analysis of formation and realisation of migration intentions at different stages of the life course, as it is covering virtually the whole adult age range (18-79 years). In addition, the survey allows to look into the link between migration intentions and other private and career goals as it contains many questions on plans over the next three years in different life domains.

3 Data, methods and analytical approach

We use data from the Norwegian Generations and Gender Survey (GGS), enriched with individual level data form administrative registers. The Norwegian GGS is a representative survey of the Norwegian adult population (18 to 79 years) carried out in 2007/08. The original dataset includes 15.1555 respondents and the response rate for the telephone interviews was 60% (Lappegård & Veenstra, 2010). Based on a unique individual ID-numbers of all residents in Norway, it is possible to link the survey data to administrative registers to derive additional information on the surveyed individuals for the period after the initial data collection. Respondents in the Norwegian GGS and the responsible data protection office approved this linkage for specified administrative register data and for a specific time window (including data up to the end of 2011). The data that we could obtain from the population register for the period from the interview until the end of 2011 also include information on the exact place of residence which allows us to investigate the realisation of migration intentions.

Already during the initial data collection, various data from administrative registers were used to shorten the interview time. For example, the respondents were asked to confirm the registered address from the population register. If this address was not correct, respondents named instead only the correct municipality. In addition, all respondents were asked since when they live at the current address. In the available survey data it is not visible if the municipality was corrected by the respondent or not. To ensure that address data linked after the interview really capture the actual address of the respondent at the time of the interview, only those cases are included in the sample where the municipality and moving date from the survey are in accordance with the data from the population register.[1] With this approach, the address at the time of the interview could be identified for 78% of the respondents in the population register (n=11.421). Among respondents that were age less than 30 years, the proportion of identified addresses is lowest (65%), among those aged 30 to 39 years it is highest (88%) and then increases again for the older respondents (with up to 67% for group of 75-79 year old respondents). For all cases with validated address information, we use registered addresses up to the end of 2011 to capture migration behaviour, which is in our case the first move after the interview. This includes all internal migrations in Norway as well as emigrations out of Norway. As the dependent variable in our logistic regression models is a dummy variable for migration intentions and actual migration behaviour, we excluded respondents that died before the end of 2011 (n=255) from the analysis.

In order to obtain information on migration intentions, the GGS contains the question "*Do you intend to move within the next three years*". This question has been asked to all respondents and

[1] This means that cases where respondents did not report their correct address to the public authorities or at a different time, are not included in the here analyzed sample. For example, a respondent interviewed in June 2007 was originally registered with an address in Trondheim, but answered that she actually lived in Bergen since January 2007. As register data used during the data collection were extracted up to one year before the interview, recent migrations were not available during the telephone interview. If in this case Bergen could not be identified as the residential municipality and with a moving date within 2007, the respondent was not included in the analysis.

could be answered with "*yes*" or "*no*".[2] Thus, the GGS allows us to capture existing migration plans of the respondents at the time of the interview. Through a combination of this intention variable and the migration histories after the interview, we can analyse the interplay between migration intentions and actual migration behaviour. In the result section we first provide a descriptive overview on how migration plans and their link to realised migration moves is changing over age. This is followed by the main part of our analysis, in which we focus on three specific stages in the life course that are characterised by particular life events. To these three stages, which we describe in detail in the following paragraphs, we refer to as *young adulthood*, *family phase*, and *end of working life*.

Our first life phase *young adulthood* covers young adults who are in the transition between the parental home and their first own housing, experiencing (first) union formations and the entrance into the labour market, but have not started to have children. Thus, we include in this group all respondents aged 18 to 24 years that do not have a child at the time of the interview (n=742). Compared to other studies such as the one by Kley (2011) on Germany, we set a rather low upper age limit with 24 years for this life phase. This is because young adults in Norway move comparatively early out of the parental home – the median age is below 19.5 years for men and about 19 years for women (Dommermuth 2009). In addition, the majority of young adults in Norway has formed a co-residential union before they have filled 25 years (Dommermuth and Wiik 2014). We include intentions from three life domains in the models for the young adults: *(i) partnership*: we look into whether young adults with a non-residential partner intend to life together with their partner within the next three years; *(ii) fertility intention*: we control whether young adults intend to have a first child within the next three years; *(iii) main activity*: we measure whether young adults who are under education plan to finish their education within the next three years.

For our second stage, the *family phase*, we selected respondents who not live any longer in the parental household and are aged between 18 to 44 years (n=4617). Above this upper age limit, only few persons reported fertility intentions in the survey. Children and family plans are important characteristics of this life phase, but also the partnership constellation and career aspects are very relevant. Therefore we control for the following intentions from other life domains in this life phase: *(i) partnership*: among those living in a cohabitation, we investigate whether they intend to marry their partner within the next two years, intend to marry in the longer run or whether they have no marriage intention at all. For those with a non-residential partner we investigate whether they intend to life with their partner within the next three years; *(ii) fertility intentions*: we include controls whether respondents want a(nother) child now, intend to have a(nother) child within the next three years, have a general fertility intention, or no fertility intention at all. In addition, we also add information on whether the respondent is expecting a child at

[2] The possibility of answering '*Don't know*' was not given as a choice to the respondents in the telephone interview. In total, five of the 15.155 respondents insisted to answer with 'don't know', while 277 did not want to answer to the question at all. This cases are not included in the analyses.

the time of the interview (pregnant or partner of respondent is pregnant); *(iii) main activity*: we control whether respondents that are either temporary or permanent employed and self-employed, intend a change in their employment situation within the next three years or not. This change includes both shifting the current employment, starting up a new business or the intention to stop working within the next three years.

Finally we have a closer look at respondents aged between 51 to 70 years, which we label as the *end of working life phase* (*n*=3557). In Norway, the labour force participation is comparatively high both for both men and women. Thus, retirement plans, the actual retirement process or being relatively newly retired are important aspects of this life phase for almost all respondents. In our models we include controls whether employed individuals plan to retire within the next three years, have a longer term retirement intention or have not thought about the age when they want to retire. While old age pension usually starts with 67 years in Norway, most employees have the possibility to choose early retirement from age 62 years or even earlier in specific professions (NOSOSCO 2008). Including respondents from 51 years and upwards allows us to investigate how retirement intentions and actual retirement behaviour might influence the formulation of migration intentions and the actual migration behaviour.

For each of our three life phases we run five logistic regression models. The first two models focus on the formation of migration intentions. Our dependent variable in these models is whether an individual articulated a migration intention in the survey. Model 1 includes all variables apart from intentions in other life domains, while we add controls for these intentions in Model 2[3]. This allows us to explore how the introduction of these plans in other life domains, which we believe to be strongly linked to the formation of a migration intention, changes the model outcomes. In the other three models, we investigate the realisation of migration moves, with the dependent variable being whether an individual has moved in the time period between the initial data collection of the Norwegian GGS and the end of 2011. Again, we include in Model 3 all variables apart from intentions in other life domains, which are then added in Model 4. Model 5 differs from the other four models as we restrict the analysis of realised migration moves in this model on individuals who reported a positive migration intention in the survey. In this model we use the same variables as in Model 3.

In all three life phases we control for the housing situation (including ownership of the dwelling, satisfaction with the housing, satisfaction with the neighbourhood, centrality of the municipality) and other individual background characteristics. The latter include education, income, age, sex, health status, perception of economic situation, general life satisfaction. In the models for the family phase and the retirement phase also controls for children and animals in the household are included.

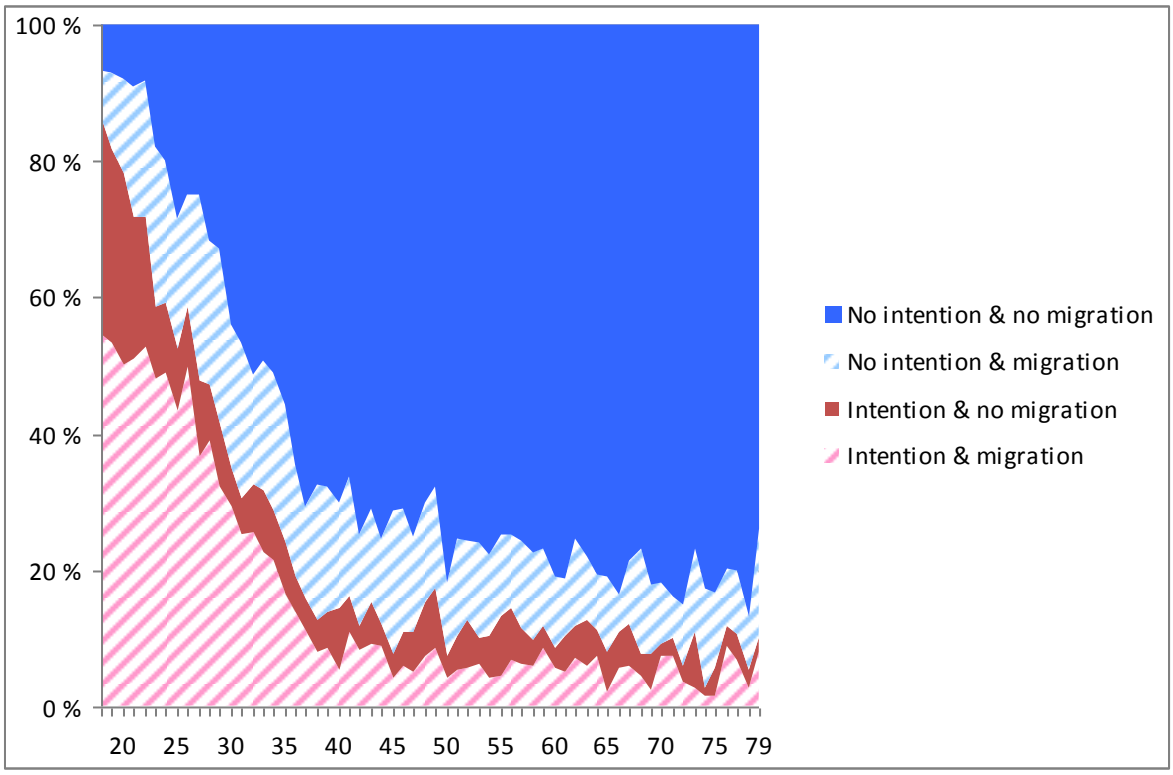
[3] In the tables, the additional intention variables are written in *cursive* font.

4 Preliminary results

4.1 Descriptive results for the whole adult life span

Figure 1 describes the distribution of migration intentions and actual migration behaviour for the adult age span from 18 to 79 years. As expected, the proportion with a positive migration intention is highest among the younger Norwegians (lower two areas in Figure 1). Over 80% of the respondents aged less than 20 years express in the interview that they want to move within the next three years. The proportion with a positive migration intention decreases almost continuously up to the age of 40 years. The exact proportion with a positive migration intention varies to some extend between the age 40 to 79 years, but in average about 10% want to move within three years after the interview.

Figure 1. Migration intentions in 2007/08 and actual migration behaviour by the end of 2011



Source: Norwegian GGS and administrative register data, own calculations

Looking at actual migration behaviour by identifying all respondents that registered at least one move between the GGS-survey and the end of 2011, the proportion is highest among respondents that were between 21 to 23 years at the time of the interview (over 70%). The share of people reporting migration intentions is even higher among respondents below 20, but in the latter group a substantial share (app. 30% of all respondents) was not able to realize their migration intention within our study period. Also in the older age groups above 35 years, migration intentions are of relevance for assessing the risk of a migration moves.

4.2 Young adults

Our analyses of *young adults* include 742 respondents of the Norwegian GGS. In total, 75% of the survey respondents in this life phase expressed a migration intention. Among the young adults, 53% did intent to move and actually were registered at a different address by the end of 2011. About 22% had a migration intention, but did not move, while 16% moved to a different place, even though they did not intend to migrate. The resisting 9% did not intend to migrate and still lived in the same household at the end of the observed period. From a goal attainment perspective this means that 71% of those with a migration intention did realize their goal through a move, while only 36% of those who did not want to migrate acted in line with their negative intention and still lived at the same address at the end of the observed period.

Results from the first two models indicate, that young adults that live together with a partner are significantly less likely to formulate a migration intention compared to young adults without a partner (see Table 1 in the Appendix). However, those with a non-residential partner have a significantly higher likelihood to express a migration intention compared to the reference group (no partner). The results from the second model, where we control for other intentions, indicate that only those with a non-residential partner and intending to live together with this partner within the next three years are actually more likely to state a migration intention than those without a partner.

The housing situation seems to have a high influence on the formulation of migration intentions. Compared to young adults who live with their parents in an owned dwelling, those living with parents in a rented dwelling are significantly more likely to intend to migrate. Those not living with their parents have a lower likelihood to hold a migration intention, independent whether the dwelling is rented or owned. Living in a central municipality and being dissatisfied with the actual dwelling is associated with a higher likelihood for having a migration intention. All these associations are significant in both the first and the second model. Those in the highest income quartile have a lower likelihood to hold a migration intention, but this association is only significant in the first model in which we did not control for other intentions.

Fertility intentions, satisfaction with the neighbourhood, main activity, highest level of education, age, sex, health status, and satisfaction with the own economic situation or life in general are not significantly associated with holding a migration intention. With two expectations, these variables have also no significant influence on actual migration behaviour (see Model 3 and 4 in Table 1 in the Appendix). According to our results, young women are more likely to migrate than men, as well as young adults that were under education and intended to finish this schooling within the next three years.

In contrast to the migration intentions, the union status and union formation intentions at the interview are not significantly associated with actual migration behaviour in the following years. While those renting their own dwelling were less likely to hold a migration intention compared

to young adults that lived with their parents in an owned dwelling, the former are actually more likely to move to a different dwelling in the subsequent years. Being unsatisfied with the dwelling is positively associated with stating a migration intentions and subsequent migration behaviour. The fourth model also underlines that migration intentions are a good predictor for subsequent migration behaviour, as holding a positive migration intention increases the likelihood to actually move to a different address in the subsequent years. Other control variables from the initial survey are not significantly associated with subsequent migration behaviour.

In the fifth model we include only young adults that intended to migrate within the next three years. Here, those living with a partner are more likely to realize this intention than those without a partner. In addition our results indicate that women are more likely to realize their intentions than men. Having a high income, living in a rented dwelling without parents, in a central municipality or being unsatisfied with the current dwelling at the time of the interview are all positively associated with the realization of a positive migration intention. Somewhat surprisingly, being dissatisfied with the neighbourhood is negatively associated with the realization of a migration intention. This might reflect limited resources of persons living in such neighbourhoods.

4.3 Family phase

The sub-sample of respondents in the *family phase* includes 4617 respondents. About a fourth of them (n=1242) expressed a migration intention. In total 21% did hold a migration intention and actually did move in the subsequent years, while 6% still were registered at the same address even though they intended to migrate. About 19% had no migration intention, but still moved to a different address in the observed period, while 54% had no intention and did not move. This means that about 77% of those with a migration intention did actually realize their intention. Among those without a migration intention, 74% lived still in the same household and thereby acted in line with their formulation intention not to move within the next three years.

Again, we first take a closer look at the models where the formulation of the migration intention is the dependent variable (Model 1 and 2 in Table 2 in the Appendix). Results from these models indicate that married respondents are significantly less likely to hold a positive migration intention than respondents without a partner. Including different measures for union intentions (Model 2 in Table 2) show, that cohabitants that do not intend to marry are also less likely to intend to migrate than the reference group (no partner). In contrast to this respondents that intend to live together with their girl- or boyfriend are more likely to intend to migrate than respondents without a partner.

Parents with a youngest child between 6 to 14 years are less likely to hold a migration intention than parents with younger children. Short term or very general fertility intentions do not increase the likelihood for holding a migration intention, which is the case when respondents intent to have a child within the next three years or are actually expecting a child when interviewed. All variables related to the current dwelling and settlement characteristics have a significant impact

on migration intentions: living in a rented dwelling, in a central municipality and being unsatisfied with the dwelling as well as the neighbourhood are positively associated with migration intentions.

In the first model, the variables measuring the main activity are not significantly associated with migration intentions. In the second model we separate between employed respondents that intent to change their job (e.g. find a new job, start a new own business or stop working) and those that do not hold such an intention. Here we find that having a job change intention is positively associated with holding a migration intention, while not having such an intention is negatively associated with the dependent variable (compared to respondents under education). This is in line with results from a German study, finding that migration intentions are positively correlated to job search activities and job mobility (Huinink, Vidal and Kley 2014).

Having a relatively high income, bad health, living in a household with economic challenges and not having a pet are also positively associated with holding a positive migration intention. Compared to respondents aged 18-24 years, those aged 25-29 years are more likely to intend to migrate, while respondents between 35 to 44 years are less likely to hold such an intention. Including intentions from other life domains did improve the model for the migration intentions in the family phase, as single items on union intentions, fertility intentions and work intentions are significantly associated with migration intentions.

In the models for migration behaviour (Model 3 and 4), the variables measuring intentions from other life domains are not significantly associated with the dependent variable. As expected, holding a positive migration itself is positively associated with subsequent migration behaviour. In addition are respondents without children at the time of the interview more likely to move, while those with a youngest child between 6 to 14 years are less likely to make a move than those with younger children (up to 5 years). Also respondents that rented their dwelling, were dissatisfied with their dwelling or had difficult to make end meets were more likely to migrate in the subsequent years. Age at the interview has the same impact on migration behaviour as on migration intentions in the models for the family phase.

Again, the fifth model includes only respondents in the family phase that actually intended to move within the next three years (see Table 2 in the Appendix). As in the similar model for the young adults, the intentions from the other life domains are not significantly associated with subsequent migration behaviour. Only age, renting a dwelling and belonging to the third income quartile increases the likelihood for realizing a stated migration intention.

4.4 End of working life phase

The *end of working life phase* includes 3557 respondents and only 382 (11%) intended to move within the next three years. About 6% of all respondents in that life phase expressed a migration intention and moved to a different place, while 5% intended to migrate but still where registered at the same address at the end of the observed period. Slightly more than 11% did migrate, even

though they had no intention to do so and about 78% did not intend to move and were still lived in the same household by the end of 2011. This means that about 52% with a migration intention realized their goal, while 64% of those without a migration intention did act in line with this wish and did not move to a different address (see Table 3 in the Appendix).

Holding a migration intention is the dependent variable in the first two models (see Model 1 and 2 in Table 3 in the Appendix). While cohabitants are less likely to state a migration intentions compared to the reference group (without a partner), those with a non-residential partner were more likely to hold a migration intention. If children under 18 years live in the same household, respondents were less likely to intend to move within the next three years compared to respondents without children. The variables related to the housing situation have a significant impact on the formulation of migration intentions. Renting the current dwelling, living in a central municipality, being dissatisfied with the dwelling and the neighbourhood are all positively associated with intending to migrate within the next three years. For this life phase we also included an indicator measuring whether the dwelling is perceived as suitable for old age. Results indicate that if respondents think they live in a dwelling which is partly or good suited for old age, they are less likely to intend to move to a different dwelling than respondents that are living in a dwelling that is not suited for old age.

According to the first model for the end of working life phase, being employed increases the likelihood for intending to migrate (compared to retired respondents). In the second model, we control whether the employed individuals have a retirement intention. Results from this model indicate that only those employed that intend to retire within the next three years are actually more likely to hold a migration intention, while employed without retirement plans are less likely to do so (compared to the reference group of the retired). In addition, those in the third income quartile are more likely to intend to move than those with a low income. Having a pet has a strong negative impact on migration intentions.

The results for the actual migration behaviour (Model 3 and 4 in Table 3), confirm that migration intentions are a strong predictor for subsequent migration behaviour. Items measuring different categories of union status show that married respondents are less likely to migrate, while cohabitants are more likely to move to a different address in the subsequent years compared to persons without a partner. Having children or not does not have a significant influence on migration behaviour. While the variables related to the housing situation all had a significant impact on the formulation of migration intentions, the variables whether the respondents perceived their current dwelling as suited for old age and the satisfaction with the neighbourhood are not significantly associated with migration behaviour. As expected, renting and being unsatisfied with the current dwelling is positively associated with actual migrations in the subsequent years. Older respondents living in a central municipality are less likely to move than those living in less central areas. Being employed, but not having a retirement intention is negatively associated with migration behaviour (compared to respondents that were retired). In terms of income groups, those in the second quartile are less likely to migrate compared to the reference group (first quartile), while

those in the highest quartile are more likely to move in the subsequent years. While having a pet in the household is strongly negative associated to migration intentions (see Model 2), the same variable is positively associated with migration behaviour in this life phase (see Model 4).

The fifth model includes only respondents with a positive migration intention. As only 382 respondents in this life phase did express such an intention, this model includes relatively few cases (197 respondents with a migration intention did migrate in the subsequent years). In this model cohabitants are more likely to realize their intention than respondents without a partner. Also those renting their current dwelling are more likely to realize their intention than those that own their house at the interview. Respondents living in a central municipality or in a household with economic difficulties are less likely to realize their migration intention, while those not satisfied with their life in general are more likely to do as intended (compared to the respective reference groups).

5 Discussions

Our first preliminary descriptive findings indicate that migration intentions are relevant for predicting migration moves. We obtain the expected result that the share of persons intending a migration move is particularly high in young adult ages. However, the share of persons with migration intentions is rapidly decreasing over age and stabilises at rather low levels in the age groups above 40. While 75% of the *young adults* had a migration intention, this was only the case for about a fourth of the respondents in the *family phase* and only 11% of those in the *end of the working life* phase. In the first two life phases the realisation of a migration intention was with over 70% relatively high, while only about half of the respondents belonging to the third life phase (end of the working life) did realize their intention to move within the observed period. The proportion of unintended moves is particularly high among *young adults* (64% in this life phase that did not want to migrate, still lived in another household at the end of the observed period). Such unintended moves were less common among respondents in the *family phase* (26%), but higher again among those at *the end of the working life* (36%). This indicates that the predictive power of both positive and negative migration intentions varies across the life course.

In a second step, we separated between three life phases and used logistic regression models to analyse which variables are associated with the formulation of migration intentions as well as subsequent migration behaviour. All our explanatory variables are based on information from the Norwegian GGS, while the migration behaviour after the interview has been obtained from administrative register records for the respondents up to the end of 2011. The results from our preliminary multivariate models indicate that intentions in other life domains are associated with the formulation of migration intentions in all three life phases. Among young adults, the intention to live together with a partner is positively associated with the intention to migrate within the next three years. Also in the family phase, such union intentions play a significant role. In addition

fertility intentions and intentions to change employment are significantly associated with migration intentions. For the retirement phase, we find that retirement intentions among employed are significantly associated with migration intentions.

Those models in which the actual migration behaviour after the interview constitutes the dependent variable confirm that migration intentions are a strong predictor for migration moves. Intentions in other life domains, however, seem to have less impact on migration behaviour. Among young adults, the intention to finish the education is positively associated with subsequent migration moves and in the retirement phase, not having retirement plans is negatively associated with later migrant behaviour.

Results for most of the other explanatory variables are as expected. As also shown in earlier research (Bilby and Bilby 1992; Kulu 2008), partnership and family status influence the formation of migration intentions and subsequent migration moves. In the family and retirement phase we also included a measure for animals in the household. According to our results, having a pet reduces the likelihood for forming a migration intention, but has no (family phase) or even the opposite effect (retirement phase) on subsequent migration behaviour.

Variables connected to the housing situation (owned or rented, central municipality, satisfaction with dwelling and neighbourhood and if the dwelling is suitable for old age), are according to our preliminary results important predictors for migration intentions and to some degree also for migration behaviour. The impact of other variables (education, income, age, health status, economic situation, life satisfaction) is relatively weak and varies across the different life phases.

In total, the predictive power of our preliminary models is higher in the models for migration intentions and lower in the models for migration behaviour. One reason might be that all explanatory variables so far are based on information at the time of the interview. It is likely that not earlier intentions in other life domains, but actual behaviour in these domains is more relevant for migration moves. In a next step, we investigate to which degree it is possible to include other information form administrative register data after the interview in the models for migration behaviour. This includes changes in civil status, childbirths, highest level of education, income after tax and retirement after the interview and up to the end of 2011.

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Appendix

Table 1. Logistic regression models: Migration intentions and migration behaviour among young adults (beta-estimates).

	Migration intention		***Migration behaviour***		
	All		All		With migration intention
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	6.59	7.83	-0.70	-0.71	7.44
Positive migration intention (Ref: no)				0.56***	
Partnership status (Ref: no partner)					
Co-residential	-0.45**	-0.59***	0.13	0.16	1.22**
Non-residential	0.69***		-0.13		
Non-residential, intention to live together		0.79***		0.01	-0.29
Non-residential, no intention to live together		0.14		0.19	-0.27
Intends to have a first child within three years (Ref: no)		0.18		0.39	0.11
Parents and house ownership (Ref: with parents, owned)					
With parents, rented	0.52*	0.57*	-0.13	-0.16	-0.04
Not with parents, owned	-0.88***	-0.89***	-0.25	-0.18	-0.04
Not with parents, rented	-0.57***	-0.61***	0.53***	0.57***	0.62**
Central municipality (Ref: no)	0.36*	0.44**	0.32*	0.32*	0.47**
Not satisfied with dwelling (Ref: satisfied)	1.29***	1.31***	1.08***	0.95***	1.02**
Not satisfied with neighbourhood (Ref: satisfied)		0.40	-0.01	-0.07	-0.59**
Main activity (Ref: employed)					
Under education	-0.21		0.21		
Under education, intention to finish in 3 years		0.11		0.29*	0.27
Under education, no intention to finish		-0.54**		0.01	-0.05
Other	0.31	0.42	-0.14	-0.18	-0.22

Highest level of education (Ref: tertiary)					
Primary education	-0.23	-0.25	0.09	0.09	-0.01
Secondary education	0.14	0.15	0.02	0.03	-0.06
Income after tax (Ref: lowest quartile)					
2nd quartile	-0.07	-0.10	0.08	0.07	-0.08
3rd quartile	0.18	0.15	0.02	-0.01	-0.08
4th quartile	-0.67***	-0.67***	0.19	0.26	0.55**
Age in years	-0.58	-0.67-	0.04	0.03	-0.65
Age squared	0.01	0.01	-0.01	-0.01	0.02
Women (Ref: Men)	0.24	0.22	0.35*	0.32*	0.41*
Good health (Ref: bad health/long term illness)	0.31	0.28	0.03	-0.01	-0.13
Not satisfied with own economy (Ref: satisfied)	-0.10	-0.13	0.06	0.07	0.13
Not satisfied with life (Ref: satisfied)	-0.08	-0.03	-0.24	-0.21	-0.02
R^2	0.18	0.19	0.09	0.10	0.15
n / *n* with positive intention or actual migration	742 / 556	742 / 556	742 / 514	742 / 514	556 / 395

*p<0.10, **p<0.05, ***p<0.01

Table 2. Logistic regression models: Migration intentions and migration behaviour in the family phase (beta-estimates).

	Migration intention		***Migration behaviour***		
	All		All		With migration intention
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-2.91***	2.58***	-1.75***	-1.70***	-0.23
Positive migration intention (Ref: no)				1.62***	
Partnership status (Ref: no partner)					
Married	-0.21***	-0.30***	-0.14*	-0.13	0.25
Cohabitation	-0.03		0.04		
Cohabitation, intends to marry next 2 years		0.11		-0.16	-0.07
Cohabitation, intends to marry longer run		-0.17		0.08	-0.05
Cohabitation, no marriage intention		-0.26**		0.04	0.03
Non-residential partner	0.62***		0.43***		
Non-residential, intention to live together		0.71***		0.22	0.20
Non-residential, no intention to live together		0.29		0.22	0.05
Children (Ref: Child 0-5 in household)					
No children	0.28***	0.11	0.36***	0.25***	0.16
Children not living in same household	0.15	0.14	0.18	0.19	0.37
Children, 6-14 years in same household	-0.39***	-0.26**	-0.27***	-0.19**	-0.30
Children, 15+ years in same household	0.22	0.27	0.08	0.06	-0.12
Fertility intentions *(Ref: no fertility intention)*					
Wants a child now		0.06		-0.05	-0.20
Fertility intention for next three years		0.24***		0.09	0.16
General fertility intention		-0.09		0.04	0.02
Expecting a child		0.37***		0.11	0.22
Renting current dwelling (Ref: owned)	1.41***	1.39***	1.22***	0.86***	0.74***
Central municipality (Ref: no)	0.67***	0.67***	0.17**	0.02	-0.17
Not satisfied with dwelling (Ref: satisfied)	1.03***	1.04***	0.56***	0.29***	0.11
Not satisfied with neighbourhood (Ref: satisfied)	1.19***	1.18***	0.49***	0.14	0.00

Main activity (Ref: under education)					
Permanent employed or self-employed	-0.04		-0.13*		
Permanent, no intention to change job		-0.31***		-0.07	-0.06
Permanent, intention to change job		0.31***		-0.13	-0.23
Temporary employment	0.08		-0.01		
Temporary, no intention to change job		-0.16		-0.09	0.33
Temporary, intention to change job		0.18		0.10	-0.21
Unemployed, early retirement & other	-0.23	-0.23	-0.11	-0.01	0.09
Highest level of education (Ref: tertiary)					
Primary education	0.01	0.01	-0.10	-0.10	-0.21
Secondary education	-0.11*	-0.07	0.00	0.03	0.07
Income after tax (Ref: lowest quartile)					
2nd quartile	-0.05	-0.04	0.01	0.02	0.00
3rd quartile	0.04	0.03	-0.01	-0.02	0.26*
4th quartile	0.16**	0.17**	0.08	0.06	0.20
Age at interview (Ref: 18 – 24 years)					
25-29 years	0.55***	0.38***	0.47***	0.30***	0.33**
30-34 years	0.19**	0.10	0.08	0.04	0.00
35-39 years	-0.39***	-0.25***	-0.34***	-0.21***	-0.34**
40-44 years	-0.60***	-0.35***	-0.74***	-0.57***	-0.58***
Women (Ref: Men)	-0.03	0.01	0.01	0.05	0.12
Good health (Ref: bad health/long term illness)	-0.17*	-0.17*	-0.06	-0.02	0.24
Difficult to make ends meet (Ref: no difficulties)	0.29***	0.27***	0.23***	0.18*	0.11
Not satisfied with life (Ref: satisfied)	0.10	0.09	0.18	0.15	0.08
Household has a pet (Ref: not)	-0.44***	-0.41***	-0.08	0.05	0.00
R^2	0.25	0.27	0.20	0.27	0.08
n / *n* with positive intention or actual migration	4617 / 1242	4617 / 1242	4617 / 1822	4617 / 1822	1242 / 951

*p<0.10, **p<0.05, ***p<0.01

Table 3. Logistic regression models: Migration intentions and migration behaviour and the retirement phase (beta-estimates).

	Migration intention		***Migration behaviour***		
	All		All		With migration intention
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-9.89	7.19	-2.89	0.29	-11.13
Positive migration intention (Ref: no)				1.83***	
Partnership status (Ref: no partner)					
Married	-0.06	-0.05	-0.20**	-0.19**	-0.23
Cohabitation	-0.53***	-0.55***	0.19	0.31**	0.93**
Non-residential partner	0.46***	0.47***	0.18	0.08	-0.02
Children (Ref: no children)					
Children, not living in same household	0.13	0.12	0.10	0.08	0.00
Children, under 18 living in same household	-0.34*	-0.33*	-0.23	-0.16	-0.27
Adult children living in same household	0.13	0.14	-0.01	-0.04	0.46
Renting current dwelling (Ref: owned)	1.20***	1.20***	1.08***	0.83***	1.45***
Current dwelling suitable for old age (Ref: no)					
Yes	-0.57***	-0.57***	-0.24***	-0.11	-0.21
To some extend	-0.27***	-0.27***	-0.10	-0.02	0.03
Central municipality (Ref: no)	0.40***	0.41***	-0.27***	-0.38***	-0.46*
Not satisfied with dwelling (Ref: satisfied)	0.97***	0.98***	0.55***	0.30*	0.45
Not satisfied with neighbourhood (Ref: satisfied)	0.96***	0.96***	0.35**	0.11	-0.38
Main activity (Ref: early retirement & old age pension)					
Employed	-0.08		-0.12		
Employed, no retirement intention		-0.25**		-0.17*	-0.08
Employed, long term retirement intention		-0.13		-0.19	-0.27
Employed, intention to retire within next 3 years		0.34*		0.22	0.02
Other	0.02	-0.02	0.29**	0.30*	0.43

Highest level of education (Ref: tertiary)					
Primary education	-0.11	-0.11	0.01	0.04	0.35
Secondary education	-0.10	-0.10	0.00	0.02	-0.17
Income after tax (Ref: lowest quartile)					
2nd quartile	-0.14	-0.14	-0.24***	-0.22**	-0.07
3rd quartile	0.21	0.21**	0.02	-0.04	0.14
4th quartile	0.17	0.16	0.22**	0.19*	0.23
Age at interview	0.21	0.13	0.02	-0.08	0.32
Age at interview squared	0.00	0.00	0.00	0.00	0.00
Women (Ref: Men)	0.17	0.16	0.08	0.05	0.08
Good health (Ref: bad health/long term illness)	-0.12	-0.10	-0.11	-0.09	-0.16
Difficult to make ends meet (Ref: no difficulties)	0.25	0.24	0.03	-0.02	-0.69**
Not satisfied with life (Ref: satisfied)	0.30*	0.29	0.21	0.12	0.52*
Household has a pet (Ref: not)	-0.39***	-0.38***	0.23**	0.33***	-0.33
R^2	0.11	0.11	0.05	0.10	0.13
n / *n* with positive intention or actual migration	3557 / 382	3557 / 382	3557 / 600	3557 / 600	382 / 197

*p<0.10, **p<0.05, ***p<0.01