Marriage migration and the economic trajectories of first- and second-generation immigrants in Norway

Ferdinand A Mohn
Institute for Social Research, Norway; Statistics Norway, Norway

Abstract
Although marriage migration is an important route for immigration to Western Europe, little is known about how it is associated with the labour market trajectories of the minority populations involved. Using longitudinal population registry data on residents from a non-Western migrant background in Norway, this study compares the employment and earnings of those who 'marry back home', with those who find a spouse among Norwegian residents with the same national origin background. Following individuals up to 10 years before and after their first marriage (279,527 observations between 1993 and 2010), distributed fixed effects estimations suggest that the labour market trajectory is weaker in the years after marriage for those who have married marriage migrants, albeit the differences are small for men. For women from the first generation, marrying a marriage migrant is associated with lower employment and earnings, progressively declining with time. For women from the second generation, this relative decrease only holds for the labour earnings of employed women. Supplementary analyses indicate that the falling labour market trajectories of women marrying marriage migrants are related to lower educational attainment, higher fertility and stronger associations between motherhood and the labour market.

Introduction

Marriage migration has become an important type of movement to Western Europe from the developing world (Çelikaksoy et al., 2006) to the extent that receiving countries impose restrictions such as income

Corresponding Author:
Ferdinand A Mohn, Institute for Social Research, PO Box 3233 Elisenberg, Oslo 0208, Norway.
Email: f.a.mohn@samfunnsforskning.no

and age requirements (Nielsen et al., 2007). Although the issue looms high on the European immigration policy agenda, there are few studies about how marriage migration is related to integration outcomes (Alba and Foner, 2015; Charsley, 2012). This article presents evidence that Norwegian residents of immigrant background who marry someone from their country of origin experience weakening labour market assimilation during the years after marriage, and particularly so when men migrate to marry women residing in Norway.

Social scientists have long perceived intermarriage between immigrants and native groups as a sign of integration (Gordon, 1964; Kalmijn, 1998). Conversely, when immigrants or children of immigrants marry a person residing in their country of origin, this is often considered a symptom of group isolation (Charsley, 2012) that deters integration (Alba and Foner, 2015: 36) and exacerbates gender inequalities in the immigrant population (González-Ferrer, 2006). The literature about why intermarried immigrants assimilate faster than endogamous immigrants (Furtado and Trejo, 2012) generally conflates marriage-forming migration and national origin endogamy between two residents. Thus, in addition to increasing our understanding of how marriage migration is related to economic integration, contrasting it with endogamy between two residents from an immigrant background can indicate whether their conflation distorts appraisals of the 'assimilation premiums' associated with endogamous vs exogamous marriages (Kulu and González-Ferrer, 2014). The marriages analysed here are, thus, all endogamous, that is, they are marriages between spouses from the same national origin group.

Family-forming marriage migration involves a marriage migrant and an anchor spouse, who resides in the destination country. This article is about the anchor spouses. I study the employment and earnings trajectories of immigrants and children of immigrants who marry a marriage migrant, and compare them to those who marry someone of the same national origin group already residing in Norway. I seek to answer the following research questions: do marriage migrant anchors experience negative changes in employment or earnings after marriage, when compared with those who marry someone already residing in Norway? Is there evidence that women's economic assimilation changes more than that of men after wedding a marriage migrant? Finally, what is the role of their educational attainment and children in these processes?

To answer these questions, I analyse longitudinal population data from Norwegian administrative registers, and assess year-on-year employment and earnings before and after the marriage. I find that male immigrants who wed a marriage migrant wife experience slightly lower post-marital employment than those who marry someone already residing in Norway, whereas the employment and earnings of women who marry marriage migrant husbands are severely reduced after marriage. In addition, the educational attainment of these 'anchor wives' is halted, they have more children after marriage and they experience more severe motherhood penalties with regard to employment and earnings.

Sources of difference for marriage migration anchors

Why should we expect the labour market careers of Norwegian residents with a minority migrant background to differ according to whether their spouse is a marriage migrant? Although many studies investigate wage and employment gains for intermarrying immigrants (Furtado and Trejo, 2012), less is known about the assimilation of 'anchors' of transnational marriages. This section indicates reasons to expect different trajectories, and specifies some ensuing hypotheses. Some of these reasons stipulate a causal relationship between marriage migration and later labour market outcomes; others suggest that the decision to marry a marriage migrant is linked to circumstances and traits that help explain a pre-marital economic situation as well as later developments in work participation or earnings.

Might marriage migration burden the anchor?

There is political fear that marriage migration hinders integration through promoting isolation of immigrant group communities (González-Ferrer, 2006). The newly arrived spouse may prefer being with

others of the same background because of cultural barriers, thereby increasing chances of social segregation for the whole family (Çelikaksoy, 2007). If segregation is unfavourable for labour market assimilation, it could be a mechanism through which marriage migration negatively affects the careers of anchor spouses. They could also be negatively affected because they are the most integrated of the spouses, and may have to assist the migrant spouse and, potentially, their children in relation to welfare, immigration and dealing with health authorities. Thus, my first hypothesis is that *marriage migration anchors experience lower post-marital employment and weaker earnings trajectories than those who make endogamous marriages with co-residents from an immigrant background*. It should be noted that if marriage migration contributes to cultural and social isolation at the same time as burdening the anchor spouse with the responsibilities that come with being the integrated spouse, we would expect the differences between marriage migrant couples and others to be more salient in the culturally and linguistically more distant regional subgroups.

Marriage migration can also influence the anchor spouse's participation in the labour market because of financial constraints in the newly formed family. According to the family investment theory, a spouse who is newly married to a marriage migrant takes on the complementary role of 'borrower', who typically opts for low-investment employment, so that the 'investor' may improve his skills and career (Baker and Benjamin, 1997). In the case of marriage migration, the anchor may become a borrower to allow the migrant spouse to invest in learning the language and culture of the host country (Çelikaksoy, 2007). The Norwegian state requires immigrants to participate in an induction programme, and the grant of funds provided to the programme participants is insufficient as household income (Mathisen, 2008). Thus, because the migrant is legally required to take part in the induction programme, the anchor may have to interrupt his/her studies to seek employment that does not require high qualifications, or opt for a job that pays less but is easier to get (Nielsen et al., 2007). Although the man typically becomes the investor in couples migrating together, both male and female marriage migration anchors face family investment concerns. Overall, this theory suggests that their career progression could be hampered on account of taking the borrower role. Thus, my second hypothesis is that *marriage migration anchors have high levels of employment around the time of marriage but lower earnings growth after marriage compared with those who make endogamous marriages with co-residents from an immigrant background*.

Gender role reinforcement or female empowerment?

Another way that marriage migration may influence the assimilation of the anchor into the labour market is by triggering gendered processes that aid male careers and hinder those of females. Although the origins of minority migrants cover a wide array of gender norms and systems, traditional notions of the gendered division of labour are widespread in the larger groups among whom endogamy and marriage migration are common (Lucassen and Laarman, 2009). For these groups, particularly the countries in south and west Asia (discussed later) that send the most migrants, concerns about marriage migration sometimes relate the practice to arranged marriage (Shaw, 2006) and marriage between relatives (Lievens, 1999; Shaw, 2014), both of which are associated with traditional gender norms.

Marriage migration could exacerbate gender inequalities if marriage migrants more often follow traditional gender norms than those who have spent considerable time within European societies (Röder and Mühlau, 2014), as suggested by the weakening force of source country gender roles in relation to couples' division of labour over time (Frank and Hou, 2015). Even if there is heterogeneity in the contents and practice of gender relations across the origin countries covered here, Norway (with the other Nordic countries) has unusually strong gender equality standards in global comparisons. The norm is a dual breadwinner/state carer model (Pfau-Effinger, 2012), in which women and men are expected to work, and child care is understood as the responsibility of the welfare state rather than that of the family. The possible role of source country norms about gender complementarity will, nevertheless, vary, and if this is an important factor, we might expect differences between marriage migration couples and others to be larger for certain regional origin groups in which these norms are strong and predominant.

Moreover, female marriage migrants may be more prone to specialize in domestic work because they migrate to fill a position in a family structure (González-Ferrer, 2011). Previous studies suggest that couples in which one member is a female marriage migrant display a stronger gendered division between homemaking and breadwinning tasks (Huschek et al., 2011). In addition, female marriage migrants have higher fertility than those who did not migrate for marriage (Kulu and González-Ferrer, 2014; Wolf, 2016). Although women's own gender role attitudes are important in accounting for their economic activity, husbands' traditional views on women's employment after childbirth predict lower work participation for the wife regardless of her own gender role attitudes (Khoudja and Fleischmann, 2015).

Some studies have focused on possible advantages of anchor spouses, stemming from their relatively stronger attachment to, experience of and integration in the host country compared with the migrant spouse (Beck-Gernsheim, 2007). For couples in which the husbands are anchors, this might reinforce gendered task division in the household. However, marriage migrant husbands might find themselves in an unusually weak position, resulting in their anchor wives being empowered in work–family negotiations (Charsley, 2005; Nadim, 2014). In one study, the second-generation wives of male marriage migrants were more likely to be involved in breadwinning (Huschek et al., 2011).

In sum, it seems likely that the situation of marriage migration anchors depends on their gender. Because female marriage migrants often migrate to fill the position of mother and homemaker in a family structure, we might expect *an increase in employment and earnings for the male anchors compared with those who make endogamous marriages with co-residents from an immigrant background* (my third hypothesis). However, in the case of female anchors, the gender traditionalism of migrant source countries and the potential relative power of anchor spouses suggest competing hypotheses. Building on the latter perspective, my fourth hypothesis is that *female anchors experience higher post-marital employment and earnings trajectories compared with those who make endogamous marriages with co-residents from an immigrant background.* However, based on the literature on gender traditionalism and the gradual weakening of source country gender roles over time, my competing fifth hypothesis is that *marriage migration is associated with a relative decrease in employment and earnings of female anchors compared with those who make endogamous marriages with co-residents from an immigrant background.*

The ambiguous role of education and children

The relationship between marriage migration and the labour market attachment of the anchor is probably linked to other characteristics of those who choose to wed a marriage migrant. The existing cross-sectional studies that seek to estimate the relationship between marriage migration and the labour market performance of anchor spouses (Brekke and Rogstad, 2011; Çelikaksoy, 2007; Dale and Ahmed, 2011) made adjustments for the number of children and the anchor's educational attainment, under the assumption that those with similar education levels and in similar family situations serve as better comparisons to understand what the marriage migration itself contributes to labour market integration. However, if women in marriage migrant families have more children and achieve less education *after* marriage, these events could be on the causal pathway between spouse selection and labour market situation, and adjusting for them would eliminate relevant variation. There are theoretical and empirical grounds to be wary of these control variables, ultimately motivating analyses that check their impact on labour market outcomes and their timing in relation to marriage.

Lievens (1999) suggested that marriage migration might serve modern goals for female anchors, for example, achieving independence from in-laws. Although some successive studies found that female anchors are younger, have lower qualifications (Dale and Ahmed, 2011; Nielsen et al., 2007) and are more likely to live in extended households (González-Ferrer, 2006), others found that older women with higher levels of education more often marry a marriage migrant (Carol et al., 2014; González-Ferrer, 2006). This raises the question of whether the possible bargaining power of being an anchor might be a by-product of having higher education.

Often, educational attainment ends prior to family formation. Nevertheless, spouses can also affect each other's educational attainment (Dribe and Nystedt, 2015). This may be particularly important in the case of marriage migration. Nielsen et al. (2007) show that marriage negatively affects the educational attainment of marriage migration anchors. The authors suggest that this might be a mechanism through which marriage migration diverts family investments away from the anchor spouse.

For people from a non-Western immigrant background, marriage is more often the pathway into family life than childbirth (Holland and Wiik, 2014). The reason marriage migrant wives migrate is linked to an expectation that they will fill a specific role in the newly formed family (González-Ferrer, 2011). The same may be true of male marriage migrants. Because parenthood is known to trigger a deeper gender division of labour (Craig and Mullan, 2010), and because the presence of children is likely to increase the need for family investments and aggravate the household's time burdens (Fox et al., 2013), childbearing might be a mechanism through which marriage migration causes adverse labour market consequences, particularly for female anchors. Note that, as in the case of educational attainment, the concern here is whether marriage migration anchors have more children, and whether the influence of childbirth is stronger within marriage migration households. These might both be endogenous reasons for why marriage migrant anchors experience different labour market trajectories. Thus, my sixth hypothesis is that *female anchors display higher post-marital fertility and lower educational attainment after marriage compared with those who make endogamous marriages with co-residents from an immigrant background, and adjustment for these factors will downplay relevant differences in later labour market outcomes.*

Empirical strategy

One of this study's advantages is the detailed life history data available in longitudinal population registers, making it easier to clarify temporal and statistical relationships between marriage and other events under weaker assumptions than is possible with the cross-sectional designs used in previous research. The models used in this article are variants of the within estimator, which exclusively considers the variability within each individual over time in its estimator (Petersen, 2004). Estimates presented in Table 2 and Figure 3 are based on the conventional within-individual estimator in which marriage is represented by a binary shift from single (0) to married (1).

The main weakness of this method is that it fails to account for unobserved factors that change over time. Generally, marriage often occurs when people transition into adulthood. Whereas the age timing varies (Rindfuss, 1991), it is commonly marked by maturation in different areas of life simultaneously, among them family formation and better labour market attachment (Dougherty, 2006). For migrants, a variety of post-migration events are likely to affect spouse selection and labour market success (e.g. befriending members of their national origin minority group or forming relationships with individuals from the majority group, participating in education or employment arenas with others from the same national origin group). For child migrants and members of the second generation, maturation and increasing independence from parental influence may decrease the likelihood of marrying a marriage migrant and increase chances of success in the Norwegian labour market. In addition, marriage migration is not an unanticipated shock (Nielsen et al., 2007). It involves costs in planning and execution that might entail remittances to in-laws in the sending country (Nadim, 2014), and requires the anchor to demonstrate an income sufficient to support the marriage migrant (UDI, 2010). Thus, I expect anchors to boost their employment prior to the marriage, an effect which may or may not persist after the direct incentives are gone (Bratsberg and Raaum, 2010).

Dougherty's (2006) distributed fixed effects model is well suited for depicting the dynamics of pre- and post-marriage assimilation. Instead of using a binary variable to measure the marriage event, I insert a set of indicators representing leads and lags of the marriage year for each marriage type: *s* refers to the maximum years to/since marriage, and each coefficient *p* gives the average difference in earnings or

employment for individuals who have been married/are going to be marrying in a specific lag/lead (say, year of marriage -4) vs the reference group of observations at the time of marriage

$$Y_{it} = \sum \beta_j X_{jit} + \sum_{p=-s}^{s} \lambda_p E_{it}^p + \sum_{p=-s}^{s} \delta_p M_{it}^p + \alpha_i + \varepsilon_{it}$$

where Y_{it} is a measure of employment or earnings, the X_{jit} are the intercept and observed variables controlled for in the model, E_{it} and M_{it} measure endogamy between residents and marriage migration, α is a factor picking up time-invariant individual characteristics, ε_{it} represents the idiosyncratic error term and *jit* are indexes of observed correlates (*j*), individuals (*i*) and time (*t*).

This model allows the development after marriage to be instant, gradual or delayed, as well as enabling us to examine labour market trajectories before marriage. However, there is no randomization or quasi-experimental situation that warrants causal claims.

Estimating distributed fixed effects entails conditioning on the marital event, which makes the strategy anticipatory in the sense that the results strictly pertain to those who marry, as is the case with any individual-level fixed effect estimation. However, the technique's extension of conventional fixed effects modelling is motivated by concerns similar to the critique of anticipatory reasoning in demographic research (Hoem 2013; Hoem and Kreyenfeld, 2006). For example, Hoem (2013) points out that pre-migration fertility rates among those who eventually migrate are likely to be artificially low because anticipating migration will decrease fertility, and Dougherty's (2006) original incentive for characterizing the marriage premium as 'distributed' was to monitor the pre-marital changes for signs of anticipation and maturation. Although the approach is limited by not being able to extend estimates to those who do not experience the 'index event' (Hoem, 2013), it makes it possible to describe whether and when changes occur, and compare these across the spouse categories. The methodology has been used in several studies about pre- and post-event changes (e.g. Dribe and Nystedt, 2015; Elwert and Tegunimataka, 2016).

Description of data and variables

I use population-wide longitudinal data based on the comprehensive tax-based income register in Norway, linked with corresponding registers such as the National Database of Education and the Central Population Register (CPR). The data hold information on the entire population of foreign-born residents, as well as residents with two foreign-born parents, and their spouses. The 18-year panel (1993–2010) includes yearly information on changes in marital status, births, education (level and type) and income (from wages, capital, self-employment, transfers, etc.), as well as time-constant variables such as country of origin, time of immigration and date of birth.

A marriage migration is identified when a person who has been in Norway for at least two years marries someone who either migrates during the same year as the marriage, or within the next two years. Individuals married abroad who emigrated before or with their spouse are omitted. The ensuing strategic sample is steered by the objective of concentrating on the minority segment of the population with an immigrant background of non-Western origin, and which displays high rates of endogamy and marriage migration. Therefore, I exclude individuals from the Nordic countries, Western Europe, the USA, Canada, New Zealand and Australia, who have high rates of intermarriage and low rates of marriage migration. To further enhance between-person homogeneity, I exclusively select those who enter national origin endogamous (within-group) marriages. The aim is to create more parallel comparisons between marriage migrant anchors and those who marry co-residents of Norway.

All identified marriages represent formal changes in marital status. This might present a problem because those who marry marriage migrants are less likely (per definition) to have been in such a relationship. However, there is no available register data on non-marital cohabitation for the period studied, except when the cohabiting couple is registered as having a common child. Whether a

comparison of marriage migration without children with non-marital cohabitation with children as family cycle events would yield more valid assessments is unclear, particularly in a context in which I make a point of comparing estimates with and without the adjustment for children in the household. Fortunately, pre-marital cohabitation is much less common within the minority groups I study than in the majority populations of Scandinavia (Wiik, 2012). Recent estimates put the rate at about 4% even among the Norwegian-born second generation of non-Western origin (Wiik, 2012). The issue would be of greater concern were I to include intermarriages in the comparison, as pre-marital cohabitation is more common among people of immigrant background who end up formally marrying natives (Elwert and Tegunimataka, 2016).

The sample is further reduced to those registered with a first transition from single to married between 1993 and 2010, requiring at least one year of earnings before and after the year of marriage. Individuals are no younger than 17 when entering the panel, and no older than 54 when leaving it. In all models, I monitor when marriages end in divorce or bereavement. There might be problems associated with non-random attrition if one type of union dissolves more often and earlier than the other (Eeckhaut et al., 2011). A robustness check adopted from Dribe and Nystedt (2015) involves re-estimating the main models without those who divorce. Results do not alter the main results presented below. Table 1 summarizes key characteristics of the analytical sample.

I define employment at the cut-off point of the social security base figure ('basic amount'), equal to 72,881 kr or US$12,900 in 2009. Annual labour earnings are defined as the sum of income from wages and self-employment above this social security base figure. Results might reflect hours worked, wages or both, and should be interpreted as such thereafter. In the models presented in Figures 3 and 4, I use measures of children and education with different levels of detail. Figure 3 uses dummies for higher education and multiparity as outcomes. The latter is meant to capture rapid expansion of the family, coded 1 if three or more children are born within five years after marriage. In the adjusted models in Figure 4, I operationalize education as four levels of attainment: (a) lower secondary education or below this; (b) high school graduate; (c) some college (lower tertiary education); and (d) higher tertiary education (MA or higher).

Results

Table 2 displays conventional individual-level fixed effects coefficients. Within each panel, the first two rows show average within-individual changes for marriage migration anchors and those who marry a co-resident within their national origin group. The third row refers to the *relative* association of marriage migration in relation to the outcome variables. For simplicity, I will refer to marriage between residents as non-migration endogamy.

Estimates for marriage migration are systematically more negative than estimates for non-migration endogamy. Marriage migration decreases the probability of employment of anchor spouses according to 6–10 percentage points. The relative difference is largest for female immigrants, for whom non-migration endogamy is associated with a 3 percentage point average higher probability of employment.

The second panel on labour earnings reinforces the impression of marriage migration being associated with penalties, but this is mainly due to net marital earnings premiums for those who marry another Norwegian resident of the same national origin. Employed women of both generations experience relative earnings penalties if they marry a marriage migrant. The penalty is of a larger magnitude for the descendants. These results suggest that there are labour market penalties for marriage migration anchors, and that the relative difference between the marriage types is larger for women than for men across both outcomes and generations.

Distributed fixed effects models

Figure 1 shows plots of coefficients from four distributed fixed effects models, in which each node should be interpreted as a percentage point difference in probability of being employed compared with the year of

Table 1. Sample characteristics by spouse selection, gender and generation.

	Immigrants				Descendants			
	Men		Women		Men		Women	
	Non-migration	Anchor	Non-migration	Anchor	Non-migration	Anchor	Non-migration	Anchor
Eastern Europe	51.98	48.02	76.26	23.74	31.88	68.12	41.94	58.06
South & Central America	48.87	51.13	62.71	37.29	21.12	78.88	22.22	77.78
Africa	42.28	57.72	67.34	32.66	60.66	39.34	58.26	41.74
Central & West Asia	28.87	71.13	46.29	53.71	40.88	59.12	42.35	57.65
South & East Asia	44.22	55.78	74.81	25.19	53.47	46.53	69.05	30.95
Age at migration	19.71	20.27	18.59	15.74				
Age at marriage	31.38	30.03	27.71	26.35	27.03	25.69	24.85	23.47
Year of birth (mode)	1970	1971	1974	1976	1978	1977	1979	1979
Compulsory education before marriage	29.79	38.59	28.13	46.45	41.17	51.88	36.26	51.95
Secondary education	33.23	31.74	26.89	27.98	33.98	32.57	36.71	33.94
Low-level tertiary education	15.28	12.42	15.57	12.17	15.27	9.21	18.02	9.39
High-level tertiary education	7.24	5.08	4.73	2.07	7.78	2.09	5.56	1.69
Unknown education	14.46	12.18	24.67	11.34	1.8	4.25	3.45	3.03
Earnings before marriage	1418	1292	831	855	1306	1152	933	843
Employment before marriage	0.66	0.64	0.49	0.52	0.64	0.63	0.59	0.55
Earnings after marriage	2605	2303	1462	1369	2978	2580	1573	1301
Employment after marriage	0.85	0.78	0.68	0.65	0.87	0.84	.69	0.64
N (Person-Years)	*49,180*	*104,069*	*38,095*	*29,208*	*8,577*	*17,968*	*10,086*	*18,684*
N (Individuals)	*4,115*	*8,571*	*3,567*	*2,737*	*672*	*1,447*	*900*	*1,746*
N (Average Years Observed)	*12.8*	*12.1*	*10.4*	*10.7*	*12.8*	*12.4*	*11.2*	*10.7*

Source: author's calculations based on administrative registry data from Statistics Norway.
Marital sorting rates within regional groups were computed using the person-year after first marriage. Central and West Asia includes Turkey. Mean values of time-varying variables were obtained by computing the means of all variables separately by year, and then computing the mean of annual averages, for pre-marriage and post-marriage periods. Earnings refer to annual labour earnings in 100 kr, CPI-adjusted to 1998 prices. Descendants include both native children of immigrants and children migrating with their parents before school age (under seven years of age). Therefore, immigrants include all who migrated at seven years of age or older, but at least two years before marrying.

marriage within each model. Baseline levels of employment are much higher among men (especially for immigrants), and results are comparable only within each gender and generation. (A full report of parameter estimates with standard errors clustered on individuals is available from the author on request.)

The tendency in all four plots is for employment to peak just before or around the year of marriage, followed by either a steady downward trend or a negligible change. For men, there are few differences between those who marry a marriage migrant and those who marry endogamously in Norway. Male immigrant marriage migrant anchors reduce their year-on-year employment slightly faster during the second and third years after marriage in particular, creating a small but gradually narrowing gap.

The changes in employment propensity are more dramatic for female immigrants and descendants who are marriage migration anchors. During the first four years after marriage, female anchors reduce their employment by about 20 percentage points, but those entering non-migration endogamy unions do not change their employment significantly. Whereas the latter group's employment is slightly lowered during the fifth and sixth years, the employment of anchor spouses drops by about 50 percentage points

Table 2. Fixed effects estimations of marriage on employment and earnings, immigrants and their children in Norway, 1993-2010.

| | Immigrants | | | | Descendants | | | |
| | Men | | Women | | Men | | Women | |
	β	SE	β	SE	β	SE	β	SE
Employment								
Non-migration	−.01*	.01	.03***	.01	−.07***	.01	−.02	.01
Anchor	−.07***	.00	−.06***	.01	−.10***	.01	−.06***	.01
Difference	−.06**		−.09***		−.03		−.04	
Adjusted R^2	.119		.133		.208		.102	
Observations	*155,583*		*68,257*		*26,695*		*28,992*	
Labor earnings								
Non-migration	.06**	.01	.04***	.01	.07**	.02	.10***	.02
Anchor	.02**	.01	−.02***	.01	.01	.02	−.04*	.02
Difference	−.04*		−.06**		−.06*		−.14**	
Adjusted R^2	.452		.430		.560		.438	
Observations	*113,793*		*41,013*		*19,598*		*18,148*	

Source: author's calculations based on administrative registry data from Statistics Norway.
SE: standard error.
*$p < .05$, **$p < .01$, ***$p < .001$. Standard errors clustered on individuals. All models include controls for age and age squared, duration of residence (4 categories) and county of residence (20 categories). Full model results available upon request. Earnings models exclude observations in relation to those without employment in the present year. Observations refer to person-years.

$\left(100 \times (e^{.40} - 1)\right)$ by the tenth year after marriage. Among women from the second generation, the gaps between anchor spouses and others are much smaller in the period after marriage, because those entering non-migration endogamy unions also reduce their employment. Although the downward trend for anchor spouses is much stronger (doubles between 5 and 10 years at -57 percentage points $\left(100 \times (e^{.45} - 1)\right)$), sample sizes for the second generation are too small to separate the two trends statistically.

The peak of employment for non-migration endogamy lies at the year of marriage for immigrants of both genders, and the trend leading up to this point is compatible with theories about maturation and the transition to adulthood. For all categories of anchor spouses, employment is highest in the year before marriage, and their employment increases more rapidly starting four years prior to marriage, especially for women. Taken together, the steep increase in employment before marriage migration and the drop in employment after marriage migration could be interpreted as evidence of transitory incentives such as the legal income requirement. Although the employment of those entering non-migration endogamy unions also peaks around marriage, there is a more conspicuous peak in employment of anchor spouses just before marriage migration when compared with their preceding and subsequent participation in the labour market.

Figure 2 displays analogous results for the same type of models run on the natural logarithm of annual labour earnings for the employed. Qualitatively, results for men of both generations are similar to those seen for employment, with one important exception: we do not see a jump in earnings above the employment threshold for future anchor spouses. Men's earnings development is similar for anchor spouses and those who marry non-migration spouses, both before and after marriage.
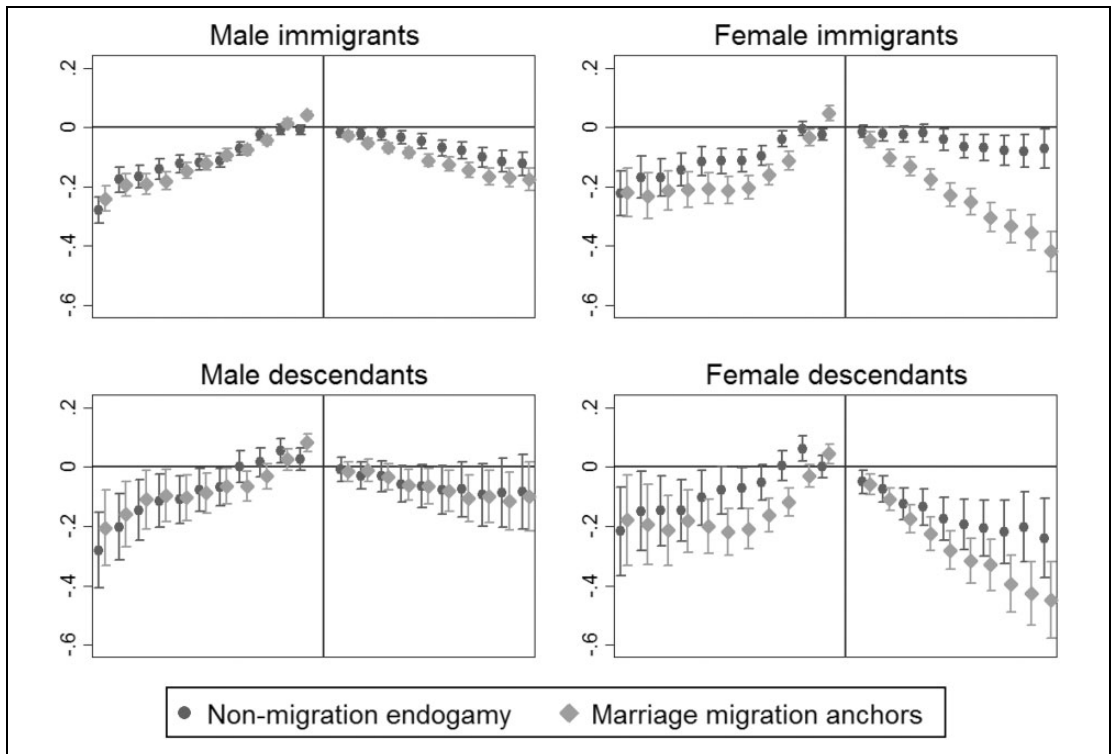
Figure 1. Employment. Distributed fixed effects estimates with 95% confidence intervals, 10 years before and after marriage. Individuals of non-Western origin marrying endogamously in Norway between 1993 and 2010.

Results for women of both generations emphasize the fact that averaging years before and after marriage can be misleading. On the one hand, what appeared to be marital earnings premiums for those who marry non-migration spouses now seems like a clear downward trend in labour earnings for immigrants, and a smaller and statistically insignificant decrease for the second generation. On the other hand, the relative disadvantage of female anchor spouses holds up. Labour earnings plummet during the first six years after marriage for all women whose husbands migrated for the marriage, and continue to do so for those from the immigrant generation. Female earnings development in the pre-marital period is similar for anchor spouses and those who enter non-migration marital unions.

These analyses suggest that male anchors' post-marital relative employment is slightly depressed, whereas female anchors experience severe labour market penalties that increase in the years after marriage. For female anchors from the first generation, marriage migration is associated with an escalating decrease in both employment and earnings. For female anchors from the second generation, this relative penalty is only significant for the labour earnings of employed women.

Subgroup analysis of regional origin clusters

Family-forming marriage migration occurs within all regional origin groups in the minority migrant/non-Western segment of Norway's population who have an immigrant background, but the prevalence varies (see Table 1). Because the distributed fixed effects models are highly data demanding, and the models look exclusively at those who enter a marital union within the period of observation, subgroup
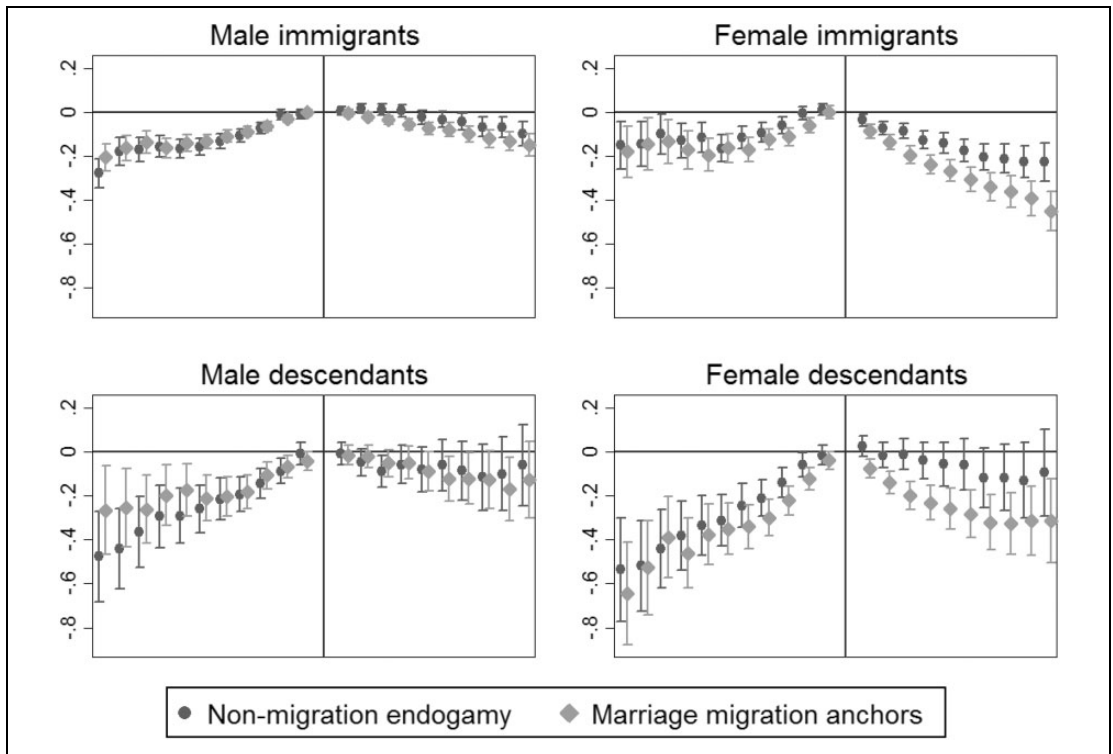
Figure 2. Labour earnings. Distributed fixed effects estimates with 95% confidence intervals, 10 years before and after marriage. Individuals of non-Western origin marrying endogamously in Norway between 1993 and 2010.

analysis is restricted to regional origin categories. Here, I briefly report from a set of analyses that reproduce the models from Figures 1 and 2, run separately for individuals with origins in Africa, Central and West Asia, South and East Asia and Eastern Europe. Plots of all subgroup analyses can be found in the appendix.

Results for individuals from Central and West Asia largely mirror the main the tendency of female anchor spouses to fall gradually more out of employment than their non-migrant comparisons who made an endogamous marriage. The largest countries in this cluster are Turkey and Pakistan, both known for marriage migration practices. The finding also holds for first-generation female immigrants from South and East Asia, which includes India as the clearly largest national origin group. For all men, and for women with an Eastern Europe or African background, the time profile analyses show that the employment differentials between marriage migration anchors and non-migrant people who have made endogamous marriages are consistently small and negligible.

With regard to labour earnings development across the employment threshold, subgroup analyses again show that women who have a Central or West Asian background are mostly responsible for the negative differentials of anchor spouses, but particularly so for the reduced earnings of women from the second generation during the first 3–5 years after marriage. For first-generation women, it is no longer clear whether any of the groups are conspicuously behind the (more) negative average trend for those who marry marriage migrants, whereas the trend is most clearly reproduced among women from Central and West Asia; overlapping confidence intervals for this group seem to indicate that average earnings results for the first-generation women were also compounded by smaller differences in the other groups.
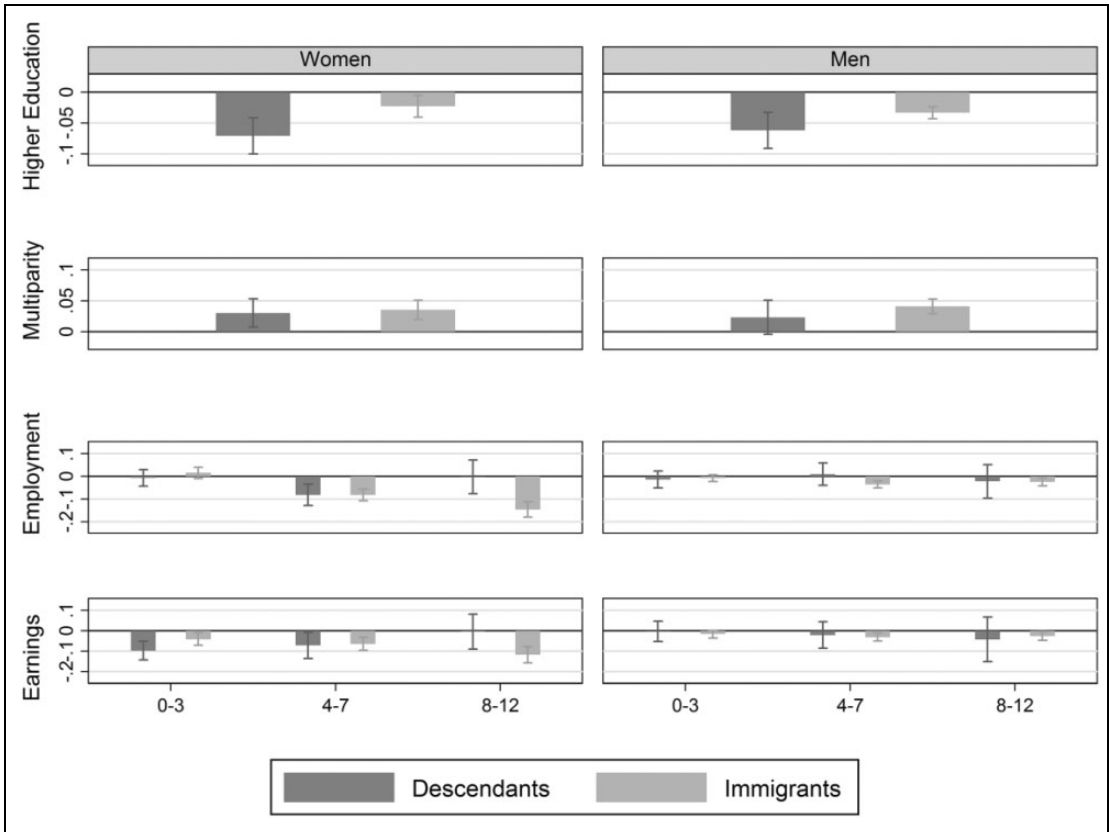
Figure 3. Marriage migration anchors' differentials in educational attainment, multiparity and labour market penalties for parenthood, compared with non-migrant endogamous individuals. Fixed effects estimations.

The role of education level and children

As noted above, there are several reasons to be wary of previous studies' adjustments for education level and the presence of children. In this section, I show that marriage, children and education are deeply intertwined, and these adjustments might distort the differential labour market estimates of interest.

Figure 3 shows that fertility is higher and educational attainment is lower for marriage migration anchors, and that the association between having children and labour market assimilation is more negative for anchor spouses, especially women. All point estimates are from individual-level fixed effects models, and convey the relative difference to those who enter non-migration marital unions. The upper panel (higher education) shows that increases in the probability of attaining higher education are about 6–7 percentage points lower for descendants and 3–4 percentage points lower for immigrants after marrying a marriage migrant. The second panel (multiparity) from the top shows that both male and female anchor spouses have three or more children slightly more often than those in non-migrant unions within a period of five years after marriage (probability increases about .3–.4). Whereas these differences are small, their consequences might be larger. The two lower panels show that changes in employment and earnings associated with children at varying ages in the household (with one exception) are more negative for female anchor spouses of both generations, and slightly more negative for male immigrant anchor spouses with children aged between 4–7 and 8–12. For working women, having young children is related to a reduction in earnings of between 5–10% more if they have married a marriage migrant.
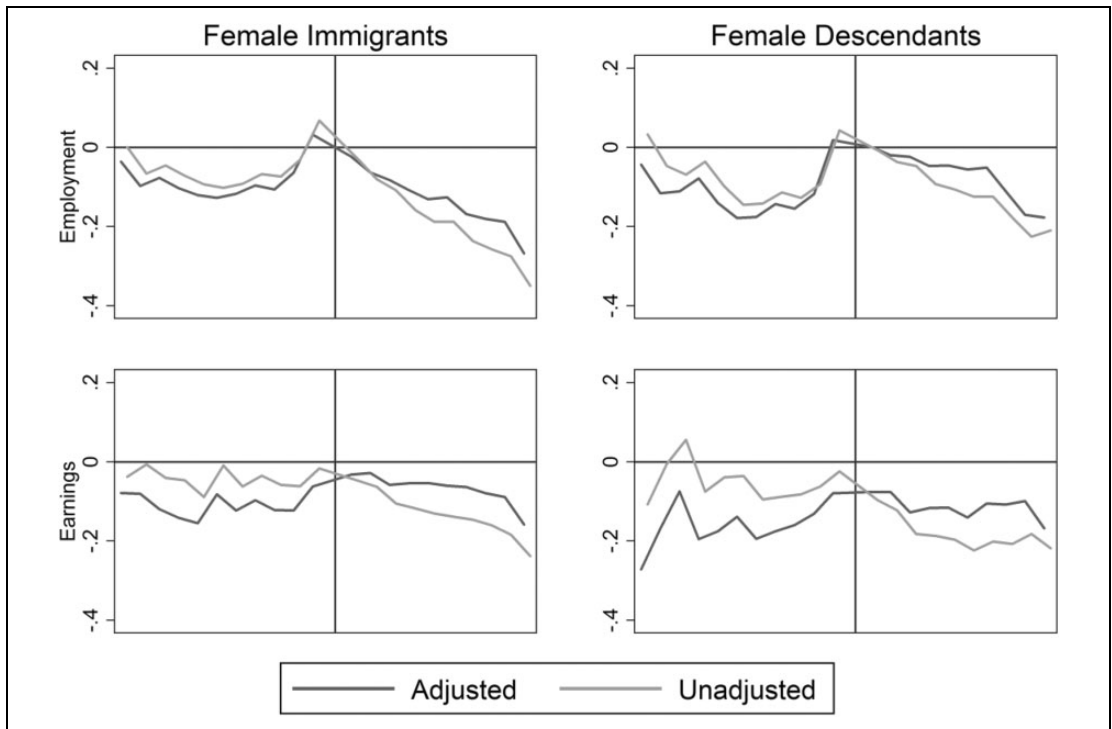
Figure 4. Marriage migration anchors' assimilation gaps in adjusted and unadjusted models, distributed fixed effects estimations for 10 years before and after marriage.

Would controlling for these factors influence the results presented above? In Figure 4, I plot relative marriage migration differentials based on distributed fixed effects models run with and without controls for children and education level, focusing on women (as they display the clearest differences across models). In the adjusted models, the negative gap between anchor spouses and others is larger before marriage and smaller after marriage, in comparison to the models without control for children and education. Results for employment are still qualitatively similar across adjusted and unadjusted models, as we see female immigrant anchors' sudden jump in relative employment just before marriage and their gradually decreasing propensity to be employed after marriage in both cases. In contrast, the earnings models display little overall development in the marriage migration gap from before to after marriage when controlling for children and education. Although the post-marriage gap is not closed entirely, it is no longer statistically significant. In the light of the results reported in Figure 3, it seems that the tendency of female anchor spouses to attain less education and have more children after marriage can account for part of their labour market penalties.

Discussion and conclusions

Public concern about the family behaviour of immigrant populations remains widespread, and in a context of challenges to integration, marriage migration has been likened to the diametric opposite of native intermarriage (Alba and Foner, 2015). In these debates, family behaviour is often implicitly related to economic assimilation and other measures of participation. Against this backdrop, the lack of evidence about the relationship between marriage migration and integration in receiving countries is surprising. This article reports on a longitudinal analysis of the economic trajectories of marriage migration anchor spouses, that is, residents from an immigrant background who wed a marriage migrant from their own country of origin. How do the findings match theories and hypotheses?

Changes in employment and earnings after marriage are most negative for female anchor spouses. This finding, confirming my fifth hypothesis, reinforces concerns about the gendered consequences of marriage migration for female anchors. For female anchor spouses from the immigrant generation, employment plummets after marriage. For women from both the first and second generations, labour earnings diminish significantly and substantially faster if the husband is a marriage migrant. Although the gaps are smaller and occasionally insignificant for female descendants, none of the results support the counter-narratives about the empowerment of anchors in work–family bargaining as suggested by my fourth hypothesis. The findings presented here are consistent with Brekke's (2013) results showing that the employment of female immigrants of non-Western origin is severely depressed if their spouse is born in a non-OECD country, and accounts for them by suggesting that female anchors are behind the employment penalties.

Contrary to my third hypothesis of favourable conditions for men in traditional marriages, all male immigrants reduce their labour market activity after marriage. Those with marriage migrant wives experience slightly lower levels of employment after marriage, which combined with the results for female anchors helps partially support the first hypothesis, but differences in labour earnings for men are minor. For male descendants, neither type of marriage seems clearly associated with changes in the labour market situation. According to the second hypothesis about family investments, we should have seen stable levels of employment, but stationary or reduced labour earnings over time for the anchor spouses. Although marriage migration penalties are larger for the earnings of women from the second generation than for their employment, the opposite is true for first-generation immigrants of both genders.

A second set of findings, confirming my sixth hypothesis, suggests caution when controlling for children and education in the assessment of marriage migration anchors' assimilation into the labour market. Fertility is higher and educational attainment lower for those who have married a marriage migrant, and labour market penalties associated with motherhood are stronger for female anchors. In the case of earnings, controlling for these factors downplays and even eradicates the appearance of a relative marriage migration penalty for anchor spouses. This is more than just a methodological point. Less investment in education, larger families, and bigger impact of each child on the labour supply of women who marry marriage migrants might be mechanisms that explain the post-marital labour market gap between female anchors and those who marry Norwegian residents.

Distributed fixed effects models enable a time perspective which suggests that standard models underreport labour market penalties for marriage migration anchors. One reason is that the development in earnings and employment after marriage can be more negative than average estimates suggest. Another reason is that those who are going to be anchors experience a more rapid increase in employment before marriage than others. Thus, the technique also produces a possible effect of subsistence requirements (Bratsberg and Raaum, 2010), which along with informal costs associated with marriage migration (Çelikaksoy, 2007) might cause this pattern. Nevertheless, as we see a post-marital decrease in employment and earnings among anchors, the effect appears transient.

The application of distributed fixed effects models demands much from the data, and even the currently reported subgroup estimations using fairly large regional origin categories are somewhat imprecise. An elaborate analysis of what may be behind these variations must, therefore, be left to future studies. Nevertheless, the results offer an invitation to start the discussion about cross-group differences. First and foremost, a summary evaluation of the group-specific results must concede that support for the hypotheses ranges from strong through moderate to none at all. As noted in the theory section, although some theories point to general mechanisms caused by a situation in which one spouse migrates for the marriage, other theories are decidedly more relevant for a subset of regional origin marriage migrant couples. If marriage contributes to cultural and social isolation, burdens the anchor with responsibilities that come with being the integrated spouse or strengthens gender complementarity, the differences should be more noticeable for couples originating from more distant cultures and more different gender norms than those predominant in Norway. Indeed, the patterns roughly match these

expectations. The overall differences found in the pooled analyses are replicated for those migrants from Central and West Asia, from which areas the largest national origin countries are Turkey and Pakistan, and to a smaller extent (only for the first generation) for those from South and East Asia, which include India as the largest national origin group. Importantly, however, there is neither an attempt at measuring 'cultural factors' in these analyses, nor any efforts to evaluate the broader relationship between marriage migration and 'integration' (a concept that spans several domains) (Charsley et al., 2017).

Although the sum of my supplementary analyses does not support proposals of 'complex' reconfigurations of gender relations in transnational marriages (Charsley et al., 2017), further research should proceed to cast more light on the empirical link between sponsoring a marriage migrant and declining labour attachment that clearly appears to hold for women from regions that are in focus when 'homeland transnational marriage' receives negative attention.

Beyond a more detailed analysis of why the relationships differ across regional population groups, this study's findings suggest several avenues for future research. Following up on anchors' relative increase in employment before marriage, prospective studies might look more specifically at the role of various requirements for anchoring a spouse, both substantively and as a source of variation in spouse selection patterns that can be used to explain the relationship between marriage migration and economic assimilation (as in Nielsen et al., 2007). A further pivotal point for future studies would be to more closely analyse the impact gender differences have on marriage migration practices. Given that women who marry a marriage migrant from their country of origin have more children and less labour market success after marriage, it would be interesting to scrutinize whether marriage migrants and their anchors have different shares of household earnings and display more or less asymmetric labour divisions than other couples. If there is a positive selection pattern of subgroups of marriage migrants, this might, in effect, equalize purchasing power between marriage migrant households and others if the (male) marriage migrant is likely to achieve successful economic assimilation.

In terms of policy, the implications of this article are not straightforward. Because marriage migration practices are likely to have several different causes, for example, parental pressures and preferences or ethnic hierarchies and discrimination in the majority-dominated marriage markets of the receiving country, restricting the practice through policy might be unfeasible, regardless of the negative outcomes for the families involved. In terms of social scientific import, the implications are more tangible. This study reinforces the worry that conflating marriage migration with other forms of endogamy might 'distort the proper interpretation of changing family forms and integration over time and across generations' (Kulu and González-Ferrer, 2014: 427). One example is the growing literature on labour market premiums associated with native intermarriage (e.g. Dribe and Nystedt, 2015). These studies largely neglect the fact that many endogamous immigrants find a spouse in their country of origin. Judged by the evidence presented here, the assimilation gap between intermarried and endogamous immigrants might be partly due to marriage migration anchors.

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Supplementary material

Supplementary material for this article is available online.

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Author biography

Ferdinand A Mohn obtained a PhD from the University of Oslo in 2016. He is currently a senior research fellow at the Institute for Social Research in Oslo and is also employed in the research department at Statistics Norway. His recent research focuses on the family lives of children of immigrants, the consequences of school dropout and public attitudes toward immigrant groups, using large-scale register data and population surveys.