Extended Abstract for the European Population Conference 2010:

Which Men Realise Their Fertility Intentions?

Fertility Planning and Subsequent Behaviour Amongst Norwegian Men

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Previous research and theoretical framework

Reseach on fertility intentions may aim to understand the mechanisms behind the observed fertility rate, as well as to predict future fertility rates. The usefulness of fertility intentions for predicting future fertility rates has been widely discussed (see e.g. Toulemon and Testa 2005, Morgan 2001, Quesnell-Vallée and Morgan 2003, Schoen et al 1999). Originally, mainly women's fertility intentions were explored (Goldschneider and Kaufmann 1996, Greene and Biddlecom 2000). However, more recent studies often include couples or both male and female respondents (see e.g. Thomson 1997, Thomson and Hoem 1998, Schoen et al 1999). As they find an effect on the fertility intentions of men on their fertility behaviour, these studies encourage further reseach in male fertility planning.

Noack and Østby (2002) find that realistic fertility expectations correlates with young age, expecting only one more child and being cohabitating or married amongst Norwegian women. From studies of Norwegian registry data (Skrede 2004, Lappegård et al 2009) we know that low income and education is correlated with low fertility amongst men.

This is the first study to explore if the fertility intentions of Norwegian men do affect their fertility behaviour. First, we investigate which sociodemographic traits that correlate with having a fertility intention. Thereafter, we investigate who of the men are most likely to fulfil such an intention. The possibility that fertility planning is a mechanism contributing to the social gradient in fertility amongst men is thus explored.

In this paper we will use Becker's theory of comparative advantage (1991) to explain the effects of income on men's fertility plans and behaviour. The Theory of Planned Behaviour is used to explain the connection between fertility intention and behaviour (Ajzen 1991). Regarding the effect of education, various explanations are discussed, including the theory of the second demographic transition and individualisation theory.

Data

The study is based on a random sample of Norwegian men, respondents in the Norwegian New Families Survey 2003 (Fremtidsplaner Familie og Samliv 2003) (Wiecek 2003). Based on survey questions, the group that plan for a child within the next four years is identified. From Norwegian register data yearly updated information on income and education, plus dates of childbirth, are linked to the data set. This excludes the problem of non-response, common in longitudinal studies.

Method

The likelihood of wanting a child within maximum 4 years is estimated versus all other fertility plans, using binomic logistic regression. Thereafter, survival analysis is applied to estimate the likelihood of having a child per month amongst those who plan for a child. In these models, the units are person months. The observations are censored after the first birth in the observation period. Information on income and education are allowed to vary with time, and are lagged with one year to ensure right direction of causality. Results are reported in logits.

Preliminary results

The estimates in table 1 show that the demographic variables, are by far the most important predictors of the likelihood of planning for a(nother) child. The likelihood of planning a child decreases after the age of 35. Childless men and men with one child under 3 years are most likely to plan for a child. This correspond to the observed pattern that most Norwegian men have children (around 80%), and that most men who have one child also have a second. The estimates show that few men plan for more than 2 or 3 children, which reflects the 2-3 childs norm described by Lyngstad and Noack (2000). Single men have significantly lower odds for planning for a child, while there is no significant difference between married and cohabitating men. As close to every second Norwegian child is born of cohabitating parents, this is not surprising.

Table 1: Likelihood of wanting a child within 4 years (all men)	**B**	**SE (b)**
Intercept	-0.2012	0.3323
Age (ref=30-34)		
23-29	-0.1344	0.1386
35-39	-1.3111***	0.1628
40-47	-2.5185***	0.2064
Parity (ref=no children)		
One child (under 3 years)	0.3235	0.2000
One child (over 3 years)	-0.8221***	0.2040
Two children	-2.1202***	0.1898
Three children	-2.3258***	0.2606
Maritial status (ref=Married)		
Cohabitating	-0.1106	0.1501
Alone	-1.6821***	0.1715
Highest completed education (ref=Primary)		
Secondary	-0.0695	0.1771
Post Secondary	0.4403*	0.1832
In education	0.0836	0.2149
Log income (/10000)	0.3144***	0.0779
***p<0.001, **p<0.01, *p<0.05, N=2715, -2LL=2155, LR=912		

Higher education has a positive effect of on the likelihood of planning for a child. This fits with the pattern that high education is correlated with higher fertility among men (Kravdal and Rindfuss 2008). Logged income has a positive effect on the likelihood of wanting a child.

This is in line with Beckers (1991) theory, where income has a positive effect on fertility, decreasing with higher incomes.

Table 2: Likelihood per month of having a child (Men who plan for a child)	**B**	**SE(b)**
Intercept	-4.5744***	0.3805
Short term-fertility intention (ref=no)	2.4082**	0.6876
Age in survey (ref=30-34)		
23-29	0.0564	0.1098
35-39	-0.1295	0.1563
40-47	-0.4450	0.2693
Parity (ref=no children)		
One child (under 3 years)	0.4279**	0.1273
One child (over 3 years)	-0.0730	0.1890
Two children	-0.3980*	0.1795
Three children	-0.9938**	0.3352
Martial status in survey (ref=Married)		
Cohabitating	-0.0359	0.1135
Alone	-1.3009***	0.1776
Highest completed education (ref=Primary)		
Secondary	-0.1482	0.1548
Post Secondary	0.0630	0.1606
In education	0.0854	0.2146
Log income (/10000)	0.2550**	0.0978
Log income (/10000)*Short-term fertility intention	-0.4450*	0.1948
Duration (years)	-0.0721*	0.0302
***p<0.001, **p<0.01, *p<0.05, N=26 088, -2LL=4403, LR=279		

The model in table 2 includes only the subsample of men who plan for a child within 4 years. Having such a plan increases the likelihood of having a child (results not shown), and the likelihood of birth in this group is thus higher than the average likelihood in the sample[1]. Men with high income and education, age under 35 and one or no children are overrepresented in this subsample.

The estimates show that a short time fertility intention (planning for a child within one year) has a strong effect on the likelihood of having a child. Age gives no significant effects. Men who were single at the time of the interview were considerably less realistic in their intention to enter fatherhood. We also see that plans of a first or second child have more predictive power than plans of higher order births.

While education is not significant in this model, income still has a positive effect. Income, as opposed to education, may change unexpectedly, and such changes are likely to influence whether one decides to go through with a plan to have a child. There is a significant negative interaction effect between logged income and short-time fertility intentions. Men with high income are more likely to have short-time fertility intentions (results not shown), so this may

[1] In the whole sample, 27% of the men had a child within the observation period. Amongst the men who planned for a child within 4 years, 73% had a child, while only 4% of the men who did not want a child at the time of the interview had one. 29% of the men who maybe wanted a child, or who wanted a child, but without a four-year perspective, had a child.

be a moderation of the strong positive effect of income through the analysis. It may also be influenced by the stronger position on the marriage market of men with high income. This is in line the finding of Lappegård et al (2009) that the likelihood of multipartner fertility increases with increasing income.

Discussion

These findings indicate that both demographic and socioeconomic variables influence the fertility planning and behaviour of Norwegian men. Not planning for a child and not having a planned child are both correlated with lack of partner and low income. The positive effect of education on fertility found in register studies is here found to be mediated by fertility intentions. This indicates that causal- or selection effects connected to planning may cause this positive correlation. Regarding income, the positive correlation fits with the pattern found in register data studies. On the micro level, various mechanisms may mediate this. This include Becker's model of specialisation, where the father's income is crucial for financing the mother's caregiving time. The observed pattern also fits within a dual carer/dual earner-model, given that it is similar for men and women.

Litterature

Ajzen, I. (1991): "The Theory of Planned Behaviour", *Organizational Behaviour and Human Decision Processes,* 50 (pp.179-211)

Becker, G.(1993): *A treatise on the Family. Enlarged Edition.* Cambridge, MA: Harvard University Press

Bernhardt, E. and Goldscheider, F. (2006): "Gender Equality, Parenthood Attitudes and First Births in Sweden", *Vienna Yearbook of Population Research 2006,* (pp. 19-39), Vienna

Goldsheider, F. and Kaufman, G.(1996): "Fertility and Commitment. Bringing the Men Back In, *Population and Development Review* 26 Supplement: Fertility in the United States: New Patterns, New Theories (pp.87-99)

Greene, M. and Biddlecom, A. (2000): "Absent and Problematic Men: Demographic Accounts of Male Reproductive Roles", *Population and Development Review,* 26:1 (pp.81-115)

Kravdal, Ø. and Rindfuss, R. (2008): "The Changing Relationship Between Education and Fertility: A Study of Women and Men Born 1940 to 1964", *American Sociological Review,* 73 (pp.854-873)

Lappegård, T., Rønsen, M. and Skrede, K. (2009): "Socioeconomic differentials in multi-partner fertility among fathers", Paper for the XXVI IUSSP Population Confernce, Marrakech, Marroco

Lyngstad, T. H. og T. Noack (2000): "Norske fruktbarhetsidealer 1977-1999:Idealene består", *Samfunnsspeilet* 3

Lyngstad , T. and Noack, T. (2005): "Vil de velge bort familien? En studie av unge nordmenns fruktbarhets- og ekteskapsintensjoner", *Tidsskrift for velferdsforskning*, 8:3 (pp.120-134)

Morgan, S.P. (2001): "Should Fertility Intentions Inform Fertility Forecasts?" in *The Direction of Fertility in the United States,* (pp.153-161). Alexandria, Virginia

Noack, T. and Østby, L. (2002) "Ch. 7: Free to Choose – but unable to stick to it? Norwegian fertility expectations and subsequent behaviour in the following 20 years", in *Dynamics of Fertility and Partnership in Europe, Vol. II,* UN, New York/Geneva

Shoen, R., Astone, N., Kim, Y., Nathanson, C., Fields, J. (1999): "Do Fertility Intentions Affect Fertility Behaviour?", *Journal of Marriage and the Familiy*, 61:3 (pp.790-799)

Skrede, K. (2004): "Færre menn blir fedre", *Økonomiske analyser* 6 (pp.57-68), SSB, Oslo/Kongsvinger, Norway

Thomson, E. and Hoem, J. (1998): "Couple Childbearing Plans and Births in Sweden", *Demography* 35:3 (pp. 315-322*)*

Thomson, E. (1997): "Couple Childbearing Desires, Intentions and Births", *Demography* 34:3 (pp.343-354)

Toulemon, L. and Testa, M. (2005): Fertility Intentions and Actual Fertility: A Complex Relationship. *Population & Societies No. 415*

Quesnel-Vallée, A. and Morgan, S.P. (2003): "Missing the Target? Correspondence of Fertility Intention and Behavioir in the U.S.", *Population Research and Policy Review* 22:5-6 (pp. 497-525)

Wiecek, C. (2003): *Undersøkelse om fremtidsplaner, familie og samliv – Dokumentasjonsrapport,* SSB: Oslo