

SEX-ROLE SPECIALISATION OR INCOME POOLING? THE EFFECTS OF WOMEN'S WAGES ON FERTILITY IN ITALY AND POLAND

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Short abstract

This paper aims to deepen our understanding of women's fertility and employment behaviours by addressing the role of women's wages and household income in the decision-making about family formation and women's involvement in paid work. We address two competing hypotheses, namely the *sex-role specialisation hypothesis* vs. the *income pooling hypothesis*. For our analysis we implement panel data of the EU-SILC (Community Statistics on Income and Living Conditions) and compare two European countries – Italy and Poland; i.e., a Western and an Eastern European country. We model probability of childbirth using methods of panel data analysis that allow for accounting for selection bias caused by unobserved time-invariant characteristics of women which jointly affect fertility and labour market outcomes of individuals. The paper contributes to the understanding of the impact of women's empowerment on fertility as well as the differentials in fertility and women's employment levels across Europe.

BACKGROUND

This paper aims to deepen our understanding of women's fertility and employment behaviours by addressing the role of women's wages and household income in the decision-making about family formation and women's involvement in paid work.

The most common theoretical approach used for explaining and understanding women's childbearing and employment choices is the micro-economic theory of fertility and women's labour supply, as proposed by Mincer (1963) and Becker (1965). This model was traditionally built upon an assumption of a *sex role specialisation* within a couple, and presupposed that the couple's utility is maximised if a man specialises in income provision and a woman divides her time between home production and market work. As a direct consequence of this assumption, it would appear that women's wages have an ambiguous if not negative effect on childbearing. This negative effect is supposed to be stronger in countries that lack family policies designed to support the successful reconciliation of motherhood and paid work (Rindfuss et al., 2003; Engelhardt et al. 2004; Adsera 2004, 2005; Mills et al., 2005; Del Boca and Wetzels 2007).

Recently, however, the sex-role specialisation assumption of the micro-economic model has come in for criticism, as women have been increasingly present in the labour market all over Europe, minimising their child-related career interruptions (e.g. Oppenheimer 1977, 1997, Cherlin 2000, Stevenson and Wolfers 2007, Raz-Yurovich 2010, 2011). It has been argued that, in modern societies, the organisation of the household has been changing from role specialisation to *income pooling*. This process is particularly advanced in countries where women are largely accepted as income providers (e.g. in countries with relatively long histories of women's labour force participation), as well as in countries where the material aspirations of the couple cannot be satisfied solely from men's earnings (Cherlin 2000). The validity of these arguments was demonstrated by Macunovich (1996) who, using US times series data, showed that the income effect of women's wages on fertility increases with a decline in the couple's ability to satisfy its material aspirations (e.g. during an economic slowdown). Overall, the income pooling implies that the interrelationship between women's fertility and employment behaviours might differ even across countries characterised by similarly strong opportunity costs of childbearing.

The concept of income pooling might also explain why women in postsocialist countries of Central and Eastern Europe insist on participating in the labour force, trying to combine paid work with childbearing and childrearing despite the strong institutional obstacles to work and family reconciliation which emerged there after the collapse of centrally planned economies (Saxonberg and Sirovatka 2006, Glass and Fodor 2007). While in the majority of Western

European countries women's employment still leads to postponement of motherhood, working women in postsocialist countries are not at all less likely to give birth to a child than those who do not work (Kreyenfeld 2004; Kantorova 2004; Robert and Bukodi 2005; Matysiak 2009; Matysiak and Vignoli 2008). It is thus possible that women in Central and Eastern Europe condition family formation on having a job and an income source. Due to the fact that women's labour force participation was strongly encouraged by the state during the state socialism women in this part of Europe might already have been established as income providers and struggle to fulfil their role in the new circumstances despite the difficulties with combining paid work and care. This effect might be additionally reinforced by women's aspirations to achieve Western living standards. These aspirations may have been increasing along with EU integration, but may have been difficult to satisfy with one salary only.

Against this background, this paper aims at investigating the effects of women's wages on childbearing in two European countries – Italy and Poland; i.e., a Western and an Eastern European country. These countries stand out in Europe for very strong obstacles to work and family reconciliation in terms of childcare provision, lack of part-time jobs, rigid working hours or traditional views on gender roles (for an overview, see De Rose et al. 2008; Kotowska et al. 2008). Nonetheless, they differ in the current and past levels of women's labour force participation and household living standards. A comparative micro-level study conducted by Matysiak and Vignoli (2011) for the two countries revealed clear differences in women's fertility and employment decisions. Namely, it showed that women's employment constitutes a clear barrier to childbearing in Italy where working women are very much likely to postpone the first birth and after entry to work eschew further childbearing. In Poland, in contrast, women were found to try to combine the two activities and the negative effects of their involvement in the labour market on fertility were not established. It remains to be explained, however, whether these differences in behaviours can be explained by economic factors (such as differences in financial necessities) or any other factors come into play (e.g. culturally-rooted differences or differences in the types of jobs and occupations performed by women in the two countries).

This paper aims to deepen the understanding of the differences in women's fertility and employment behaviours in the two countries by addressing the role of women's wages and household income in the decision-making about family formation and women's involvement in paid work. In other words, we will verify whether the sex-role specialisation within a couple is still more common in Italy while the income pooling is more likely to be present in Poland. The paper will contribute to the understanding of the impact of women's empowerment on fertility as well as the differentials in fertility and women's employment levels across Europe. It will also

enrich our understanding of the social developments in postsocialist countries of Central and Eastern Europe.

DATA AND METHOD

For our analysis we implement panel data of the EU-SILC (Community Statistics on Income and Living Conditions). The EU-SILC program is the statistical data reference source for comparative statistics on income for the European Union and is conducted in each member state. It collects detailed longitudinal information on social and economic characteristics of households and their current members. It was launched in Italy and Poland in 2004 and since then it has followed the rotational design proposed by Eurostat (European Commission 2010). Namely, each year a new sample is drawn, and it is followed for 4 years. For our analyses we use data from six subsequent waves, 2004-2009.

Our analyses cover women who entered the survey at the age of 16-35 (i.e. in the childbearing and childrearing age) and follow them consecutively until they give birth or exit the panel. We model the probability of childbirth. Our main explanatory variables are women's wages and the overall household income, including partner's income and any other income sources. We control for a set of observed demographic characteristics (woman's age, her civil status, number and age of children she already has) as well as socio-economic characteristics (educational level, labour market status, including type of the contract and public / private sector of employment). Furthermore, we also account for unobserved characteristics of women which may jointly affect their fertility and employment choices as well as salary level.

Our analytical approach relies on methods of panel data analysis, which allow to remove the selection bias resulting from the unobserved time-invariant characteristics of the respondent that jointly affect her fertility and employment choices as well as salary level, such as orientation at family or orientation at work. Namely, we estimate a fixed-effects logit model for the probability of childbirth, using the conditional logit estimator proposed by Chamberlain (1980).

EXPECTED FINDINGS

We expect women's wages to affect fertility negatively in Italy. The effect of women's wages in Poland is more ambiguous but if negative it is anticipated to be weaker than in Italy. We also suppose partner's income to be an important determinant of fertility behaviours in both countries, mediating the relationship between fertility and women's employment and wages. This mediating effect should be also weaker in Poland, however. Overall, such findings would

suggest that the sex-role specialisation within a couple is still more common in Italy while the income pooling is more likely to be present in Poland. This finding would explain why women's employment does not exert negative impact on fertility as it was found in previous studies.

REFERENCES

- Adsera, Alicia. 2004. Changing fertility rates in developed countries. The impact of labor market institutions, *Journal of Population Economics* 17 (1):17-43.
- Adsera, Alicia. 2005. Vanishing children: From high unemployment to low fertility in developed countries, *American Economic Review* 95 (2):189-193.
- Becker, Gary S. 1965. A theory of the allocation of time, *Economic Journal* 75(299): 493-517.
- Chamberlain G. 1980. "Analysis of Covariance with Qualitative Data" *The Review of Economic Studies* 47 (1): 225-238.
- Cherlin, Andrew J. 2000. Toward a new home Socioeconomics of union formation, in: L. J. Waite, C. Bachrach, M. Hindin, E. Thomson, and A. Thornton (eds.), *The ties that bind – Perspectives on marriage and cohabitation*. Hawthorne, NY: Aldine De Gruyter, pp. 126-144.
- Del Boca, Daniela and Cecile Wetzels. 2007. *Social Policies, Labour Markets and Motherhood: A Comparative Analysis of European Countries*. Cambridge: Cambridge University Press
- De Rose, Alessandra, Filomena Racioppi, and Anna Laura Zanatta. 2008. Italy: Delayed adaptation of social institutions to changes in family behaviour, *Demographic Research, Special Collection* 7: 665-704.
- Engelhardt, Henriette, Tomas Kögel, and Alexia Prskawetz. 2004. Fertility and women's employment reconsidered: A macro-level time-series analysis for developed countries, 1960-2000, *Population Studies* 58(1):109-120.
- European Commission (2010)
http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc
- Glass, Christy and Eva Fodor. 2007. From Public to Private Maternalism? Gender and Welfare in Poland and Hungary after 1989, *Social Politics: International Studies in Gender, State & Society* 14 (3):323-350.
- Kantorová, Vladimira. 2004. *Family life transitions of young women in a changing society: first union formation and birth of first child in the Czech Republic, 1970-1997*. PhD Doctoral Dissertation, Charles University.
- Kotowska, Irena E., Janina Józwiak, Anna Matysiak, and Anna Baranowska. 2008. Poland: Fertility decline - a response to profound societal change and transformations in the labour market?, *Demographic Research* 19: 795-854.

- Kreyenfeld, Michaela. 2004. Fertility decisions in the FRG and GDR: an analysis with data from the German Fertility and Family Survey, *Demographic Research* 3: 275–318.
- Macunovich, Diane J. 1996. Relative income and price of time: Exploring their effects on U.S. fertility and female labour force participation, *Population and Development Review* 22: 223–257.
- Matysiak, Anna. 2009. Employment first, then childbearing: Women's strategy in post-socialist Poland, *Population Studies* 63(3): 253-276
- Matysiak, Anna and Daniele Vignoli. 2011. Different women's employment and fertility behaviours in similar institutional settings: Evidence from Italy and Poland. Institute of Statistics and Demography Working Paper No 15/2011, Warsaw
- Matysiak, Anna and Daniele Vignoli. 2008. Fertility and women's employment: a meta-analysis, *European Journal of Population* 24(4): 363–384.
- Mills, Melinda., Hans-Peter Blossfeld, and Erik Klizing. 2005. Becoming an adult in uncertain times: a 14-country comparison of the losers of globalization, in H-P Blossfeld., M. Mills, and K. Kurz (eds.), *Globalization, Uncertainty and Youth in Society*, London and New York: Routledge, pp 423-441.
- Mincer, Jacob. 1963. Market prices, opportunity costs and income effects, in C. F. Christ (ed.) *Measurement in Economics: Studies in Mathematical Economics and Econometrics in Memory of Yehuda Grunfeld*, Stanford: Stanford University Press.
- Oppenheimer, Valerie Kincade. 1977. The sociology of women's economic role in the family, *American Sociological Review* 42: 387-406.
- Oppenheimer, Valerie Kincade. 1997. Women's employment and the gain to marriage: The specialization and trading model, *Annual Review of Sociology* 23: 431-453.
- Raz-Yurovich, Liat. 2010. Men's and women's economic activity and first marriage: Jews in Israel, 1987-1995, *Demographic Research* 22 (29):933-964.
- Raz-Yurovich, Liat. 2011. Economic Determinants of Divorce among Dual-Earner Couples: Jews in Israel, Max Planck Institute for Demographic Research Working Paper 18.
- Rindfuss, Ronald R., Karen Benjamin Guzzo, and S. Philip Morgan. 2003. The Changing Institutional Context of Low Fertility, *Population Research and Policy Review* 22: 411-438.
- Róbert, Péter and Erzsébet Bukodi E. 2005. The effects of the globalization process on the transition to adulthood in Hungary, in Blossfeld, Hans P., Erik Klijzing, Melinda Mills, and Karin Kurz (eds.), *Globalization, Uncertainty and Youth in Society*. London and New York: Routledge, pp. 176–214.
- Saxonberg, Steven and Tomáš Sirovatka. 2006. Failing family policy in post-communist Central Europe. *Journal of Comparative Policy Analysis: Research and Practice* 8(2): 185-202.
- Stevenson, Betsey and Justin Wolfers. 2007. Marriage and Divorce: Changes and their driving forces, *Journal of Economic Perspectives* 21(2): 27-52.