DOES LABOUR MARKET UNCETAINTY MATTER TO CHILDBEARING?

EVIDENCE FROM THE CZECH REPUBLIC

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Abstract

The Czech Republic belongs to group of countries which underwent profound socio-economic transformation after the collapse of communist regime in the year 1989. The period of transformation is characterised by a broad range of changes which significantly influenced everyday life. One of the most important changes is a switch from a command to market economy which brought into decision making of people more uncertainty. Economy became organised by new rules which were unknown for major population. Although family formation which is associated with childbearing is a complex process influenced by factors both at micro and macro level, it is reasonable to assume, that people perceive general economic development and situation in the labour market in their country and reflect that either directly or indirectly to their decision about family formation and child birth. Therefore, the contribution focuses on development trends in the Czech labour market and examines possible effect of employment uncertainty on fertility in the Czech Republic in the period 1993–2012. More precisely, the attention is devoted to position of women in the labour market. Analysis employs data EU-SILC for the Czech Republic as well as the official demographic and labour market statistics issued by the Czech Statistical Office.

Key words: labour market, uncertainty, fertility, Czech Republic

JELCode: J1, J4, J13

Introduction

The association between fertility and economic fluctuations was studied from the very beginning of formation Demography as a scientific discipline. Thomas Malthus's work *Essay on the Principle of Population* (1798) that relates better standard of living with the higher population growth rate and perceives poverty and famine as inevitable, is well known. For decades his law held but then fertility decreased and in the second half of the 20th century fertility reached values far away from the replacement level 2.1 children per woman in some

countries. Therefore, Malthus's concept has been tested by the fact that in the developed rich countries fertility has been lower than in developing poor countries. No one has doubts that population and economic development are related, but it seems that the issue is more comprehensive than Thomas Malthus declared.

In the Czech Republic decline in the total fertility rate started in comparison with western European countries little bit later. As Fig.1 illustrates below replacement level of fertility was reached at the beginning of the 80's of the 20th century. Nevertheless the steep fall in fertility is documented in the 90's when the collapse of communist regime took place and the society and the economy underwent profound transformation. In case that we focus on fertility in cohort perspective, the fall in fertility is not so deep, but anyway completed cohort fertility reached the values below 2.1 children per woman in the last decade[1] (see Fig. 1). The Czech women postponed childbearing to higher ages as in other developed countries. The fertility development reflects the changes in lifestyles, individual values as well as changes in economy.

Fig. 1: Total fertility rate and Completed cohort fertility at age 40 years, Czech Republic, 1975–2011
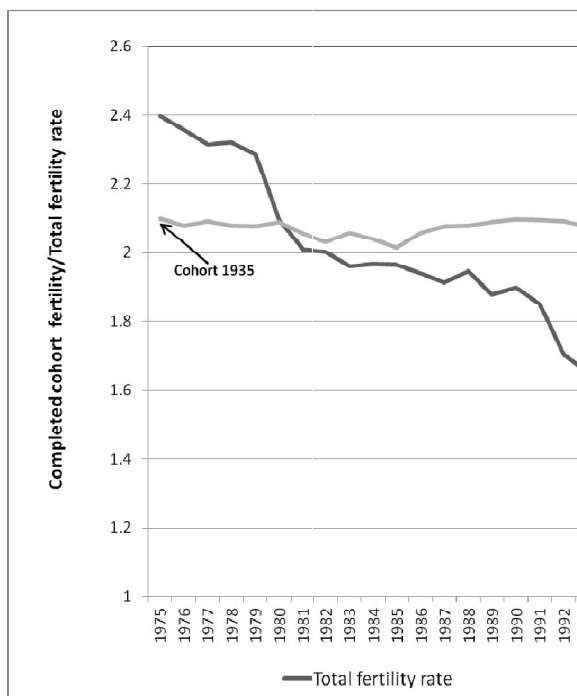
Source: Human Fertility Database 2014

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[1] If the completed cohort fertility is calculated for fertile age 15-49 than it is reasonable to assume that fertility from the cohort perspective will be below replacement level even earlier (see Rychtaříková, 2010).

Mc Donald (2006), Blossfel and Hofmeister (2006), Kreyenfeld (2010), or Pailhé and Solaz (2012) relate the postponement in childbearing to uncertainties in female employment careers and instability in the labour market. Uncertainty related to labour market is also discussed in works of Adserà (2004), Hofman and Hohmayer (2013) and Vignoli et al. (2012). Therefore this paper deals with the position of women in the Czech labour market and examines whether labour market uncertainty may relate to childbearing in case of the Czech Republic.

1   Labour market trends in the Czech Republic

The basic indicator of a situation in the labour market is the unemployment rate which relates the number of people unemployed to the labour force. Furthermore, an unemployed person is defined by International Labour Organisation (ILO) as someone at the age of 15 years and more without work during the reference week, available to start working in the next two weeks and actively seeking employment at some time during the last four weeks. In the Czech statistics, registered unemployment rate can be found, that indicator differs to those from the Labour Force Survey which respects ILO. For the purpose of the paper overall trends in the labour market are presented utilizing data from the Labour Force Survey held in the Czech Republic and issued by the Czech Statistical Office.

Considering communist ideology unemployment did not exist before the year 1989. Since then extraordinary development of the unemployment rate in the Czech Republic is documented. The initial level of the annual unemployment rate equalled 0.7% in 1990. Afterwards, in the 1st half of the 1990's the unemployment rate remained at the relatively low level due to highly qualified work force, effective tripartite negotiation (e.g. restrictive wage policy), active policy in the labour market, and geographical location which ensure the Czech Republic better access to western markets. The positive development of the unemployment rate was interrupted by economic downturn in 1997 caused by the fall in consumption and investments. In the end of the 20th century, the unemployment rate reached about 9%. In addition, the regional disparities in unemployment became more significant and visible. Since 2004, the unemployment rate gradually diminished to 4.4% in 2008. The positive trend was stopped by the economic recession caused by the worldwide economic downturn and recently the unemployment rate fluctuates around the level of 7%. Considering Europe, than the Czech Republic belongs to the group of countries with relatively low level of unemployment. On the other hand, long-term unemployment, low employment of disabled and young people as

well as gender and regional disparities in employment remain negative aspect of the Czech labour market.

Fig. 1: Unemployment rate, Czech Republic, 1993–2012
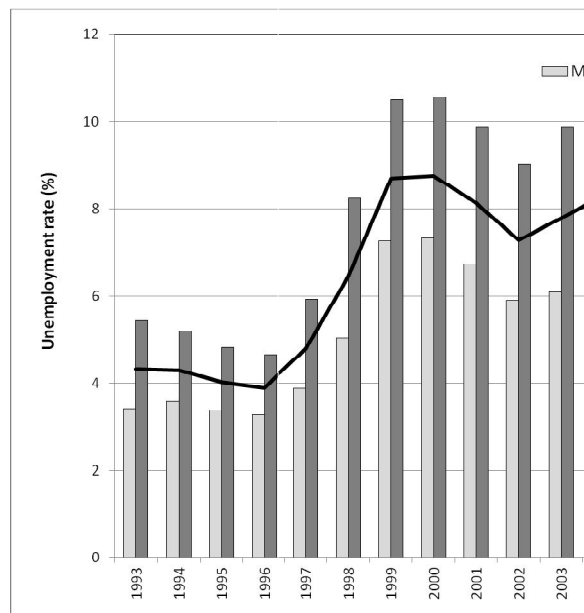
Source: CZSO 2014, data Labour Force Survey

Considering the gender gap [2] in employment rate and unemployment rate in the Czech Republic in the period 1993–2012, than it is obvious that women are more often unemployed than men (see Fig. 1 or Tab. 1). The average gender gap in unemployment rate equals 2.5 percentage points in the given period. Looking at it from a different angle, then the childbearing postponement is captured in data about labour market. The gender gap in employment rate by age reveals that while the gender gap in the age-group 25-29 years declined in the studied period, contrarily the gap increased in the age-group 30-34 years. This pattern is also reflected in case of the gender gap in the unemployment rate for given age-groups and time. If the attained education level is taken into account than the gender gap in the employment rate and unemployment rate are the greatest for the secondary education without certificate and with certificate. Development of these gender gaps in time reflects the fact that much more people in the Czech Republic attained higher education. While the gender gap in the employment rate for the secondary education without certificate declined in time, the gender gap in the employment rate for the secondary education with certificate increased in time, e.g. from 9.3 percentage points in 1993 to 15.5 percentage points in 2012. The lowest and relative stable disparities are in case of elementary degree in the studied period, e.g. 5

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[2] Gender gap equals absolute difference between specific rates related to the position in the labour market by sex.

percentage points in 2012. In addition, in case of the lowest level of attained education the gender gap in the unemployment rate was positive in the given period, which means that women with basic education were more often employed than men with the same education in the period 1993–2012.

Tab. 1: Gender gap in employment and unemployment rate by age, Czech Republic, selected years, percentage points

| Age group	Employment rate				Unemployment rate			
	1993	2003	2008	2012	1993	2003	2008	2012
15-19	5.5	2.3	2.1	1.4	-3.8	-11.2	-6.5	4.6
20-24	**32.2**	12.3	14.7	13.7	-2.7	-1.0	0.8	0.1
25-29	**34.8**	**31.5**	*24.7*	*23.3*	-5.9	*-4.4*	*-1.6*	*-1.8*
30-34	**19.3**	**28.2**	**33.4**	**34.3**	**-2.8**	**-8.4**	*-5.1*	*-4.9*
35-39	8.9	14.4	20.0	18.7	-1.7	-5.6	-3.5	-4.4
40-44	6.7	7.8	6.8	8.6	-1.5	-3.5	-1.6	-3.5
45-49	2.0	4.5	4.1	3.2	-0.4	-2.2	-2.3	-1.6
50-54	10.7	7.2	5.5	5.4	-1.0	-2.8	-1.8	-2.0
55-59	44.9	36.9	28.5	18.7	-2.7	-1.5	-1.0	-0.3
60-64	**13.4**	**16.9**	**25.1**	*22.6*	-0.5	0.5	-0.4	1.1
Total	**14.3**	**14.9**	**15.8**	**14.4**	**-2**	**-3.8**	**-2.2**	**-2.2**

Source: CZSO 2014, data Labour Force Survey, own calculation

Structural earnings statistics 2010 show that earnings grew only at the beginning of the working carriers. While the median earnings of the employee at the age below 19 years equalled 14 211 Czech crowns in 2010, in the age-group 30-34 years the median earnings reached 23 699 Czech crowns, what is an increase by 66% comparing these two age-groups. For the employee 35 years and more the median earnings, with the exception of the age-group 60-64 years[3], declined or stagnated in 2010. Considering gender differences, the marginal differences were documented in younger age-groups what is more likely due to the fact that a lot of youths studied that time (see Fig. 2). The most significant difference in median earnings between males and females were in the age groups 30-34 years and 30-39 years. While males earned 25 777 and 26 101 Czech crowns respectively, females obtained 20 133 and 26 101 Czech crowns in a given order in 2010. Therefore, the gender gap in the median earnings equalled for the age-group 30-34 years 5 644 Czech crowns and for the age-group 35-39 years 6 905 Czech crowns, i.e. 21% and 26%. This difference was caused undoubtedly by the

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[3] The median earnings of the age-group 60-64 years are distorted by the fact that a part of the population has been already in retirement and more educated population which has higher earnings remained in the labour market.

maternal and parental leave. In addition, the fact that women study at the university more often than man and therefore they enter later on the labour market has to be taken into account too. What is striking from the 2010 data is that female's earnings dropped at the age of 30 years and than remained at the lower or same level.

Fig. 2: Median earnings by age-groups and sex, Czech Republic, 2010
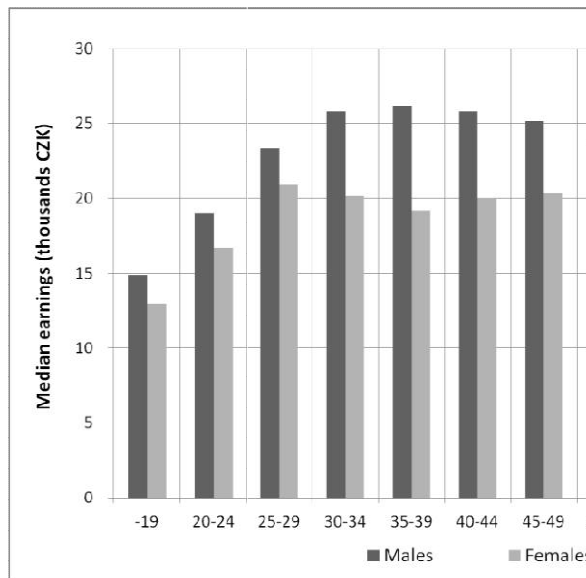
Note: Data originate from the Structure of Earnings Survey and Information System of Pay.
Source: CZSO, 2014

2   Labour market uncertainty

Although all human life is accompanied by uncertainty, because as it is well known only death is certain, the issue of uncertainty in demographic research is a relatively new. The reason is self-evident. It is questionable how to uncertainty capture. While demographers usually work with somewhat accurate data from vital statistics, censuses or surveys, uncertainty by its nature is something hardly countable. For the purpose of this article and due the data limitation, uncertainty is related to the form of employment contract.

It is assumed that if an employee has a contract for the fix period of time or part-time job than he or she is more vulnerable in the labor market, because employer probably does not count with the employee in future and a person is not working full time and to fulfill person's income expectations he or she has to have more jobs. The shortcoming is, that contract for the fix period can be forced by legislation and in case of part-time job it is hard to distinguish whether the job was accepted because there was no other choice and person has to have several jobs, or because it was wanted and it is just an intermediate stage to better paid and

stable job. Available data do not enable to separate those possibilities, therefore in this article only the structure of contract by gender and the chance of women to have part-time job and factors influencing that are tested. In the analysis data EU-SILC 2012 for the Czech Republic and the logistic regression are utilized.

Tab. 2: Form of employee contract, Czech Republic, 2012, %

	Males	Females	Total
For an indefinite period of time[1]	87.5	85.4	86.5
For a fix period of time[1]	12.2	**14.2**	13.1
Full-time job[2]	98.8	95.0	97.2
no dependent child	45.9	36.3	41.7
dependent child	52.9	**58.7**	55.4
Part-time job[2]	1.2	5.0	2.8
no dependent child	0.7	1.6	1.1
dependent child	0.5	**3.4**	1.8

Note: 1 = from population with given contracts by sex, 2 = from full-time and part-time workers by sex
Source: EU-SILC 2012, own calculation

Table 2 shows the basic structure of data according the contract type and gender in 2012. The percentages reveal that majority of men and women have contract for indefinite time period, which is in general related to stability. Although difference is not so huge, only two percentage points the shares are in favour of women disadvantage in the Czech labour market, because 14.2% of them have contract with fix period of time. Furthermore, full-time job is for both men and women more common than part-time job. If the presence of dependent child in the family is considered than the higher share of the women with part-time job is recognized in comparison with men.

Tab. 3: Result of logistic regression with respect to the form of employment contract, Czech Republic, 2012

Part-time job (ref. full time job)		Exp(B)
Basic education	Education (ref. university)	1.373*
Secondary education		.526*
15-24 years	Age group ref. age group (55-64 years)	.825*
25-34 years		.559*
35-44 years		.756*
45-54 years		.435*
Females	Sex (ref. males)	**4.538***
No dependent child	Dependent child (ref. with child)	.876*

Note: * significant at the 0.01 level

Source: EU-SILC 2012, own calculation

The logistic regression tested whether women have higher chance to get part-time job than men and what other factors influence that. The attained education level, age, sex and presence of dependent child are tested. All the variables are significant in the model. If whole data set is considered than women with basic education at the age group 55-64 years with dependent child have higher chance than men with the same characteristic get part-time job. The gender is in the model highly significant what implies that women more likely have part-time job than men. If the age-group is considered than the lower chances with respect to reference category are present but it is due to the fact that women at higher age group are more often unemployed and to find the full-time job is difficult for them. The regression results show that the woman at age-group 30-34 years has higher chance to get part-time job with respect to reference category than the woman at age-group 25-34 years what could lead to the idea that women have problem to find full-time job or they have part-time job for combining family life with paid work. Although data do not allow that, it would be interesting to study how the results change with respect to age of dependent child.

Conclusion

The article deals with the issue of the labour market uncertainty which is relatively new in demographic research and discusses whether it could influence childbearing. Population data for the Czech Republic show that the total fertility rate significantly fall in the first half of the 90's of the 20th century. The lowest value 1.13 per children was reached in 1999. In addition, the labour market statistics reveal that women have higher unemployment rate and lower median income than man in the Czech Republic in the period 1993–2012. In addition, median earnings of women grow only at the beginning of their employment carrier and with the children – considering mean age of childbearing in the Czech Republic they decline and stagnate on that level for the rest of their working carries. Combining data both about fertility and labour market, it seems that situation in the labour market is important for forthcoming parents. The uncertainty in this article is simplified and narrowed to the type of contract because it is assumed that some contract as the contract for fix time period or part-time job could be connected with less stability in the labour market. The results of the basic analysis employing data EU-SILC 2012 for the Czech Republic do not reject the hypothesis that women are more vulnerable in the labour market. If we take into account that women study more often at university than men than their lower revenue and position in the labour market

with their return from maternal or parental leave may discourage them to form family and have children.

Acknowledgment

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