

# SUBJECT: ECONOMETRIC ANALYSIS OF THE “FAMILY 500+” PROGRAM – A STUDY OF THE IMPACT OF THE SOCIAL BENEFIT ON THE FERTILITY OF POLES

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## **Abstract:**

**Background and Objective:** Currently the subject of public debate in Poland are potential demographic problems. Researchers predict, that the population of Poland will begin to decline. Due to demographic forecast, Polish government introduced “The Family 500+” Program, aimed at improving the number of live births. From the moment of its introduction, there were voices supporting the actions of the then government, as well as critical due to the possibility of negative effects on the country’s economy. The debate and research conducted so far have not answered the question whether the new benefit of PLN 500 actually increases the number of live births.

**Study Design/Materials and Methods:** The article presents two econometric models presenting possible factors influencing the value of live births. The data used for the study come from the Central Statistical Office and the European Statistical Office, and their analysis was performed for the period between Q1 2010 and Q2 2020.

**Results:** The conducted research has shown that the “Family 500+” program has no significant impact on the number of live births in Poland.

**Practical implications:** Research in the form of creating econometric models can be used in reforming public policy in the field of demography.

**Conclusion and summary:** The analysis of the “Family 500+” program to date has shown that the solution introduced by Beata Szydło’s government has no significant impact on improving the demographic situation of Polish society. The article is also a suggestion for politicians and demographers to carry out a reform in this area.

**Keywords:** econometric model, child-support benefit, live birth

**JEL Classification:** H5, J1

**Paper type:** Research

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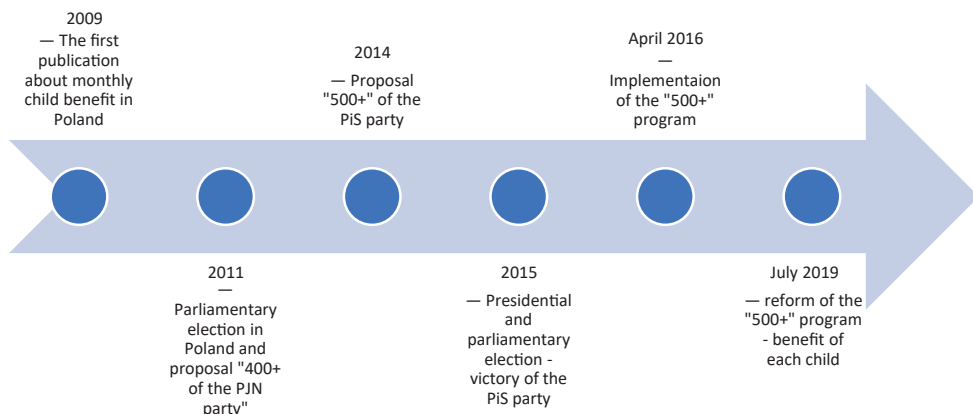
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## 1. Introduction

### 1.1. Objective and background of the research problem

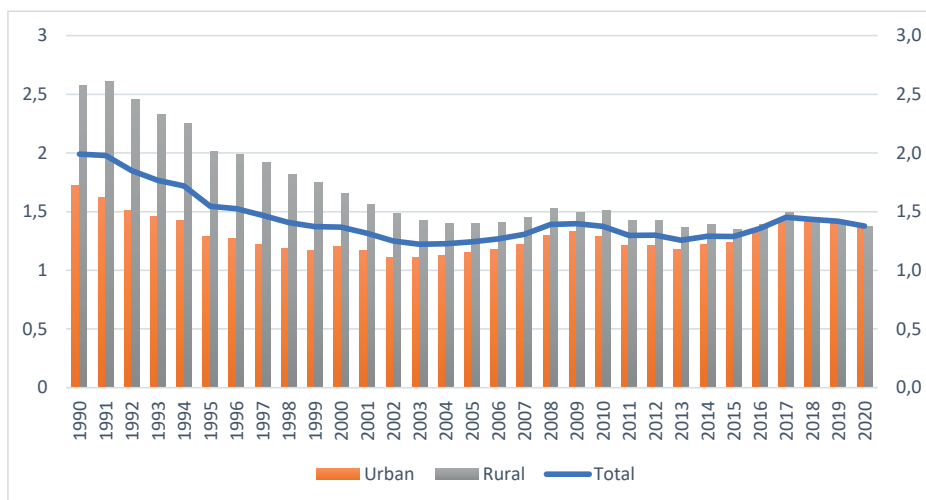
The essence of the following research paper is to analyze, using econometric methods, the impact of the “Family 500+” program on the fertility of the Polish society, as well as to check whether the objectives established by the creators of this social benefit have been achieved. Emerging scientific publications and journalistic articles about the impact, or lack thereof, of the studied program on reproduction prompted the author of this study to investigate this issue.

The idea of a monthly child benefit paid by the state appeared already in 2009 in an article by Paweł Załęski in which he criticized the alimony and social policy existing at that time (Załęski, 2009). This social policy was “in reverse” due to the financial crisis of 2008 and the prevailing political consensus, whose parties were in favor of less state interference in the social sphere. The real breakthrough came in 2011 when the Poland Comes First (PJN) party published its program, which included a proposal, created in cooperation with professor Julian Auleytner, to pay a family benefit of PLN 400. This proposal was strongly criticized by other political parties, but the idea of a monthly benefit for raising children began to develop. In 2013, in a report on low fertility in Poland published by *Social Diagnosis*, 85% of respondents indicated difficult material conditions as the main obstacle in deciding to increase the number of offspring (Kotowska, 2013). Along with the emergence of demands encouraging increased state support in the family sphere, the two main parties proposed their pro-family solutions. In 2014, in her expose, Prime Minister Ewa Kopacz proposed: additional funds for the construction of kindergartens and nurseries, free textbooks, and a child-support benefit of 1,000 PLN for people who so far could not take maternity leave, known as “Kosiniakowe”. In turn, the then main opposition party – Law and Justice (PiS) – published its program, in which it promoted a new universal family allowance and benefits modelled on other European countries. According to this assumption, the state was to pay an allowance of 500 PLN for every second, third and subsequent child. PiS also postulated the introduction of an unspecified income threshold, thanks to which wealthy families would not receive the allowance. On the other hand, poorer families were to receive it also for the first child. This idea later became a flagship program point during Andrzej Duda’s presidential and parliamentary campaigns in 2015. The presidential as well as parliamentary elections ended with the victory of the Law and Justice party, and the new Prime Minister, Beata Szydło, announced the introduction of the “500+” benefit as soon as possible. The legislative process of the entire project took just over two weeks, and it was subsequently amended several times. The most significant change was made in 2019, when the first child in a family was also included in the program.



**Chart 1.** Timeline of development of the project supporting the monthly reproductive benefit  
*Source:* Author’s own elaboration.

In 2011, during the parliamentary campaign, the Poland Comes First party proposed a family allowance, referring to Poland’s impending demographic disaster. The same reason was given in the election program of Law and Justice.



**Chart 2.** Fertility rate in Poland, 1990–2018  
*Source:* Statistics Poland, Department of Demographic Research, 2019.

After the collapse of the communist system and the beginning of the economic transformation, the fertility rate in Poland was below 2.0 (Figure 2), which means a lack of replacement of generations. The reasons for the decreasing fertility rate in Poland are complex. The first factor worth noting was the economic situation,

which has been deteriorating since 1980, and the large social costs resulting from the transition from a centrally planned economy to a free market economy. The precarious financial situation of many Polish families has influenced their decisions not to enlarge their families. As Janusz Balicki points out in his work, the decrease in the number of births was certainly influenced by the abandonment of the caring role of the state in the family aspect, e.g., closing down kindergartens and nurseries (Balicki, 2010). An additional factor is also the increased economic activity of women and the changing nature of the family. The *Social Diagnosis* edited by Iwona Kotowska notes a progressive change in the family model compared to previous years (Kotowska, 2013). Previously, there was a dominant model with a single breadwinner (*male breadwinner model – female home career*). Currently, a model in which both men and women work (*dual earner model*) is common. However, the perception of the division of household chores has not changed; in many families there is still a traditional division of chores. As a result, women are more often responsible for raising children, maintaining order in the household and working. Consequently, families often decide to reduce the number of planned offspring as a result of the accumulation of chores to be done.

In addition, making the labor market more flexible with the phenomenon of „junk contracts”, employers’ growing requirements for employees’ qualifications, increase the feeling of uncertainty and possibility of loss of income, which makes people postpone their decision to enlarge the family. The introduction of the child-support benefit of PLN 500 was supposed in theory to encourage society to start a family, and consequently to increase the fertility rate.

## 1.2. Research methodology and hypothesis

In the methodological aspect, the aim of the research was to construct an econometric model to investigate, respectively, the determinants on the number of live births. After thorough literature research, the research results of Waldemar Florczak, who created an econometric model describing fertility rates in the period 1970–2005, were used as an aid in constructing the model (Florczak, 2009). The research will be based on quarterly data, which provides a better insight into the impact of the program on Polish fertility. Data are obtained from the Local Data Bank of the Statistics Poland and Eurostat. The model was initially based on data on live births, female and male unemployment, labor force participation according to LFS, average monthly nominal wages and salaries, average monthly nominal pension, and the number of people receiving pensions, both agricultural and nonagricultural.

The introduction of a monthly benefit of 500 PLN for the second and each subsequent child, and later also for the first child, was supposed – in the legislator’s assumption – to result in a natural increase. Based on the above assumption, the author of this paper formulated the following research hypothesis – the increase in

income of families living in Poland as a result of the “Family 500+” program leads to an increase in the number of offspring.

**Table 1.** List of variables used in the conducted research

Variable	Explanation of Variable
LB	Number of live births in the quarter
EA	Labor force participation rate according to LFS
AQW	Average monthly nominal gross wage and salary in the national economy
AQP	Average monthly nominal pension – the average calculated from the average monthly nominal pension from the non-agricultural social insurance system and individual farmers
NP1000	Average number of pensioners from non-agricultural social insurance system and individual farmers
RELWER	The quotient of the average pension to the average wage and salary
F500	Dummy variable describing the “Family 500+” program
WQUN	Number of women who remained unemployed
MQUN	Number of men who remained unemployed
dq1	Seasonal variable for quarter 1
dq2	Seasonal variable for quarter 2
dq3	Seasonal variable for quarter 3
dq4	Seasonal variable for quarter 4

*Source:* Author’s own elaboration.

## 2. Characteristics of data

### 2.1. Research assumptions

The primary purpose of the following research is to find out to what extent the PLN 500 benefit influences the improvement in the number of live births in Polish society. Additionally, other factors which may contribute to encouraging citizens to enlarge their families will be analyzed. According to preliminary assumptions, the introduction of the additional financial transfer should result in an increase in live births. The data collected includes only a fragment of the beginning of the Sars-CoV-2 pandemic. This was done in order to eliminate the potential influence of the coronavirus on the decision to give birth to a child or children. Single-equation simple regression econometric models were created for the research. The models

are intended to describe the stochastic relationship between the phenomenon under research, in this case the number of live births in a given quarter, and the factors that may shape it. The econometric analysis was carried out for data from the first quarter of 2010 to the second quarter of 2021. To obtain the statistically best model, the exogenous variable whose significance level exceeded 0.05 was removed. In this way, only statistically significant factors were left in both equations. The following sections present the two econometric models:

- first – not including the “Family 500+” program, consisting of other factors affecting the number of live births,
- second – with a benefit of PLN 500.

For both models, the correlation between the variables was analyzed and the same statistical tests were performed.

## 2.2. Correlation matrix

**Table 2.** Correlation matrix between variables used in the research

Linear correlation coefficients for observations from sample 2010:1–2020:2  
Critical value (with bilateral 5% critical area) = 0.3044 for  $n = 42$

NLB1000	EA	AQW	WQUN	MQUN	RELWER	
1.0000	-0.2058	-0.5087	0.1720	0.0948	0.3689	NLB1000

*Source:* Author’s own elaboration.

The first step in building an econometric model is to create a correlation matrix to reduce variables that are weakly related to the endogenous variable. The correlation coefficients based on Table 2 are significantly different from zero based on the critical value. In all cases, no significant relationship was observed between the number of live births and the other variables. Based on the assumption of accepting factors with a correlation coefficient of at least low, the following would be taken to build the econometric model: the labor force participation rate, the average monthly nominal gross wage and salary in the national economy, and the quotient of the average pension to the average wage and salary. A variable for the number of unemployed women was also added in both models to increase the coefficient of determination (R-squared). On the other hand, the variable on the number of unemployed men based on the results of the correlation matrix was not included in building the econometric model.

### 2.3. Econometric model of fertility

**Table 3.** Results of significance test of structural parameters of the model

Variables	Coefficient	Stand. error	t-distribution	p-value	
const	223365	15867.5	14.08	<0.0001	***
AQW	-14.4645	1.11137	-13.02	<0.0001	***
WQUN	-0.0267310	0.00342427	-7.806	<0.0001	***
RELWER	-107590	30836.7	-3.489	0.0012	***
dq1	2556.17	898.639	2.844	0.0070	***
dq2	2540.62	1160.61	2.189	0.0346	**
dq3	10879.0	1126.46	9.658	<0.0001	***

*Source:* Author’s own elaboration.

In the research, an attempt was made related to the estimation of the best-fitting model, describing the number of live births in the time interval from the first quarter of 2010. to the second quarter of 2021. The Classical Least Squares Method was used by creating an econometric model based on linear regression. Among the variables, EA variables – labor force participation rate – were eliminated from the model due to statistical insignificance and seasonal variable dq4 – for the fourth quarter of each year due to strict collinearity of the variable. The estimation results are shown in Table 3.

A model of the following form was obtained:

$$LB = 2.23e+05 - 14.5*AQW - 0.0267*WQUN - 1.08e+05*RELWER + 2.56e+03*dq1 + 2.54e+03*dq2 + 1.09e+04*dq3$$

$$(1.59e+04) (1.11) (0.00342) (3.08e+04) (899) (1.16e+03) (1.13e+03)$$

All variables used in this econometric model are statistically significant, in all cases the p-value is less than 0.05.

Based on the coefficient of determination (R-squared), it can be concluded that the endogenous variable was explained by the above econometric model in 90.99%. The standard error of the residuals is approximately 2098.35, which means that the standard deviation of the residuals from the model may differ by approximately 2098 average live births. The coefficient of variation in this case is 2.21%.

**Table 4.** Evaluation of model fit to data

Arithmetic mean of the dependent variable	95013.04	Standard deviation of the dependent variable	6506.769
Sum of squares of residuals	1.72e+08	Standard error of residuals	2098.353
Coefficient of determination (R-squared)	0.909868	Adjusted R-squared	0.896002
F(6.39)	65.61657	P-value for F-test	7.68e-19
Logarithm of credibility	-413.3241	Akaike information criterion	840.6482
Bayesian information criterion	853.4487	Hannan–Quinn information criterion	845.4434
Autocorrelation of residuals – rho1	0.253617	Durbin–Watson Statistic	1.483774

*Source:* Author's own elaboration.

**Table 5.** Statistical tests of the econometric model

Test name	Test statistics	Significance level
Ramsey (square and cube of the variable)	1.15894	0.324949
Ramsey (square of the variable)	1.31927	0.257902
Ramsey (cube of the variable)	1.39025	0.245693
White test	18.646159	0.607827
Breusch-Pagan test	10.439380	0.107327
Koenker test	9.088651	0.168653
Normality of the distribution of residuals	1.72272	0.422588
Autocorrelation	2.27896	0.0803637

*Source:* Author's own elaboration.

The p-value significance level is greater than 0.05 for all variants of the Ramsey test, which means that the hypothesis of correct model specification should not be rejected. According to the assumptions made, it can be concluded that the constructed model has a correct specification. In the case of tests for heteroskedasticity in the model, the resulting significance level is also greater than the accepted cut-off significance level of 0.05. Therefore, there is no basis for rejecting the null hypothe-



sis of non-existence of heteroskedasticity in the residuals. For tests on the normality of the distribution of residuals and the existence of autocorrelation, the p-value also satisfies the inequality  $p\text{-value} > 0.05$ . This means no rejection of the null hypothesis in favor of the alternative one.

## 2.4. Econometric model of fertility including the “Family 500+” program

**Table 6.** Results of significance test of structural parameters of the model including the “Family 500+” program

Variables	Coefficient	Stand. error	t-distribution	p-value	Statistical Significance
const	212700	16035.6	13.26	<0.0001	***
AQW	-14.4752	1.06556	-13.58	<0.0001	***
WQUN	-0.0206046	0.00438843	-4.695	<0.0001	***
RELWER	-98314.9	29892.2	-3.289	0.0022	***
dq1	2538.36	861.631	2.946	0.0055	***
dq2	2366.89	1115.82	2.121	0.0405	**
dq3	10729.9	1082.35	9.914	<0.0001	***
F500	3293.70	1565.55	2.104	0.0421	**

*Source:* Author’s own elaboration.

A dummy variable (F500) describing the “Family 500+” program was added to the above econometric model, taking into account the date the act came into force, that is, April 2016. The statistical significance of the other variables after the addition of the null variable did not change. The estimation results are shown in Table 6.

The model of the following form was obtained, taking into account the variable F500 – “Family 500+” program:

$$\begin{aligned}
 LB = & 2.13e+05 - 14.5*AQW - 0.0206*WQUN - 9.83e+04*RELWER + 2.54e+03*dq1 + \\
 & + 2.37e+03*dq2 + 1.07e+04*dq3 \\
 & .60e+04) (1.07) (0.00439) (2.99e+04) (862) (1.12e+03) (1.08e+03) \\
 & + 3.29e+03*F500 \\
 & (1 (1.57e+03)
 \end{aligned}$$

**Table 7.** Evaluation of model fit to data

Arithmetic mean of the dependent variable	95013.04	Standard deviation of the dependent variable	6506.769
Sum of squares of residuals	1.54e+08	Standard error of residuals	2011.841
coefficient of determination (R-squared)	0.919271	Adjusted R-squared	0.904400
F(7. 38)	61.81611	P-value for F-test	8.27e-19
Logarithm of credibility	-410.7900	Akaike information criterion	837.5799
Hannan–Quinn information criterion	852.2090	Hannan–Quinn Information criterion	843.0601
Autocorrelation of residuals – rho1	0.082589	Durbin–Watson Statistic	1.818899

*Source:* Author’s own elaboration.

Based on the coefficient of determination  $R^2$ , it can be concluded that the endogenous variable was explained by the above econometric model by 91.93%. The standard error of the residuals is approximately 2011.84, which means that the standard deviation of the residuals from the model can differ by approximately 2011 persons. The coefficient of variation in this case is 2.12%. The results of tests of measures of the quality of the second model after the addition of the dummy variable, F500, are better, but it is difficult to consider an increase of 1 percentage point in the coefficient of determination  $R^2$  as a significant improvement.

In the case of the model including the “Family 500+” program, the statistical significance of the above tests does not differ from the first model not including “500+”. The results of all the tests performed give the same results as the tests from the first econometric model.

**Table 8.** Statistical tests of the econometric model including the “Family 500+” program

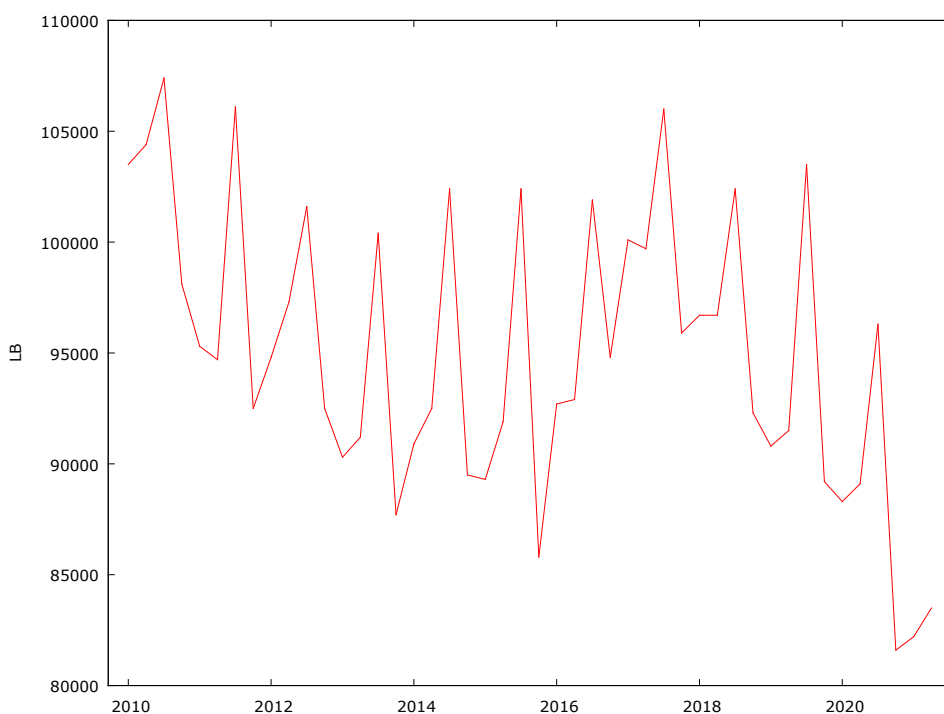
Test name	Test statistics	Significance level
Ramsey (square and cube of the variable)	1.64381	0.207416
Ramsey (square of the variable)	2.01287	0.164339
Ramsey (cube of the variable)	2.10922	0.154842
White test	32.5293	0.253508

continued tab. 8

Breusch-Pagan test	9.52613	0.217055
Koenker test	10.7708	0.148932
Normality of the distribution of residuals	1.6914	0.429257
Autocorrelation	0.748687	0.565765

*Source:* Statistical tests of the econometric model including the “Family 500+” program.

## 2.5. Chow’s structural change test



**Chart 3.** Number of live births 2010–2020

*Source:* Author’s own elaboration.

The essence of the following research was to test whether the “Family 500+” program brought a significant change in the number of live births. The Chow test is one of the tests that verifies the hypothesis of the existence of structural changes in the model. The null hypothesis of the above test is the assumption of equality of structural parameters in in both disjoint subsamples

**Table 9.** Chow's structural change test result

Test type	Test statistics	Significance level
Chow test	0.975893	0.4654

*Source:* Author's own elaboration.

In the analyzed model, the second quarter of 2016 was taken as the turning point, when the act on the basis of which the payment of benefits for the second and subsequent children began to come into force from April. Based on the p-value, which is greater than 0.05, there is no basis for rejecting the null hypothesis. The assumption can be made that the "500+" program does not cause a statistically significant change in the parameters in the above model

## 2.6. Test results

According to previous assumptions, the "500+" program resulted in an increase in the average quarterly number of live births during the period under research. According to the results of the model estimation in Table 6, it can be concluded that the introduction of the financial transfer of PLN 500 contributed on average to an increase in births by approx. 3294 persons. An interesting comparison for the above variable is the variable AQW – average monthly nominal gross wages and salaries. In the case of this factor, a PLN 1 increase in wages and salaries causes an average decrease in live births by approx. 14.5 persons in both models. Intuitively, an improvement in the material situation through, among other things, an increase in wages and salaries should encourage the population to expand their families. In the case of female unemployment, the parameter at the WQUN variable is negative – on average, an increase in unemployment by 1,000 persons contributes to a decrease in births by approx. 26 persons, and in the case of the model that does not include „500+” by approx. 21 persons. An interesting issue is the effect on fertility of the old-age security motive. Contrary to the positive correlation between the endogenous and exogenous variables, an improvement in the RELWER coefficient contributes to a decline in live births by as much as approx. 98,315 on average. The parameter at this variable in the model in Table 3 is even larger.

## 3. Conclusions

The „Family 500+” program causes a lot of controversy among the public. There is an opinion among supporters about the positive impact of the benefit on fertility and the material situation of families, especially those with many children. Opponents, on the other hand, indicate the high cost of maintaining this program and the negative effects of the program in the form of discouraging mainly women from

entering the labor force. The strong political polarization of society and, in the opinion of the Author of this paper, the deepening of prevailing stereotypes by politicians of different options does not favorably affect the debate on Poland’s demographic policy and the assessment of the PiS government’s flagship initiative. It should be reminded that the initial motive of the initiators of this solution was to significantly improve the fertility rate of Poles and avoid the predicted demographic disaster and its associated side effects, such as the collapse of the pension system. The results of the research are inconclusive. The econometric model created confirms the accepted hypothesis of a positive effect of the program on the number of live births. In this respect, it can be said that the “500+” program fulfilled its initial assumptions. On the other hand, analyzing the results of the research in detail, it can be concluded that the increase in live births by approx. 4371 persons per quarter does not indicate a significant improvement in fertility. The live births that result from the program represent approx. 4% of their total number. It is also essential to look at the phenomenon of the negative impact of the increase in average wages and salaries on the number of live births. The existence of such a discrepancy between wage and salary data and “500+” data contradicts the theory that the financial motive is the key to improving Poland’s demographic situation. The result of the research conducted is inconsistent with the conclusions of the 2013 *Social Diagnosis* (Kotowska, 2013). The effect of such a discrepancy may explain the phenomenon of growing social inequality cited in Waldemar Florczak’s work – an increase in average wages and salaries does not mean an equal distribution of wealth (Florczak, 2009). Another explanation could be the fact of the possibly greater impact of the “500+” program on the fertility rate of families of lower material status, who are more likely to decide to procreate compared to families, belonging to the middle and upper classes. In the latter two groups, the model of families with 1 or 2 children is more common. In addition, the urban lifestyle, the popularity of flexible forms of employment, the high cost of raising a family and frequent fluctuations in the economy are likely to be effective in postponing the decision to start or expand a family. Additional research in this area should focus on understanding those incentives that may affect Poland’s demographics. The prevailing belief that a better material situation is a key factor causing an increase in live births is, in my opinion, incorrect. Understanding the other motives influencing the reproduction of Polish society is key to creating the right policy in this aspect. The impact of the “Family 500+” program on the number of live births is minimal, and one cannot speak of its success in the field of demography. Therefore, the next actions of the legislature and the government should be based on past and future research by experts in the field of social sciences and economics. The state should create such solutions that will popularize conscious parenthood and support parents not only financially, but also, for example: by creating an adequate number of nurseries and kindergartens, support for families with people with disabilities,

support for those affected by infertility, improving the quality of education or ensuring the permanence of employment, especially for young people.

#### 4. References

1. Balicki, J. (2010). Uwarunkowania i skutki kryzysu demograficznego w Polsce. *TEOLOGIA I MORALNOŚĆ*.
2. Bargu, A. M. (2018). Can Mothers Afford to Work in Poland?: Labor Supply Incentives of Social Benefits and Childcare Costs. *Policy Research Working Paper*.
3. Bochenek, M. (2019). *500+ po nowelizacji w pytaniach i odpowiedziach. Edytowalne wzory dostępne na stronie internetowej*. Warszawa: Wolters Kluwer.
4. Chrzanowska, M. i Landmesser, J. M. (2017). Symulacja efektów ex ante programu „Rodzina 500+”. *PRACE NAUKOWE UNIwersYTETU EKONOMICZNEGO WE WROCLAWIU*.
5. Ciesielska, A. (2017). Program Rodzina 500+ – sukces czy porażka? *Roczniki Ekonomii i Zarządzania*.
6. Dziwosz, E. (2017). Minusy programu Rodzina 500 Plus. *Zeszyty Naukowe. Organizacja i Zarządzanie / Politechnika Śląska*. Pobrano z lokalizacji <http://libr.sejm.gov.pl/tek01/txt/onz/1948.html>
7. Florczak, W. (2009). Ekonometryczny model szacowania liczby urodzeń dla Polski. *Wiadomości Statystyczne. The Polish Statistician*.
8. Gajewicz, M. (2018). Dwa lata z programem „Rodzina 500 plus” – ocena oraz uwarunkowania ekonomiczne program. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*.
9. Galbarczyk, T., Kawczyńska-Butrym, Z., Mendryk, I. i Oleszko-Kurzyna, B. (2020). *Gospodarstwa domowe z 500+ w procesie rozwoju kapitału ludzkiego. Wybrane problemy ekonomiczne i socjologiczne*. Warszawa: C.H. Beck.
10. Gromada, A. (2018). Czemu służy program Rodzina 500 plus? Analiza celów polityki publicznej i polityki partyjnej. *Ruch Prawniczy, Ekonomiczny i Socjologiczny*.
11. Kotowska, I. (2013). *Niska dzietność w Polsce w kontekście percepcji Polaków, Diagnostyka Społeczna*. Warszawa: Ministerstwo Pracy i Polityki Społecznej.
12. Liszatyński, D. (2017). Analiza skutków społecznoekonomicznych wprowadzenia programu „Rodzina 500+”. *Humanum. Międzynarodowe Studia Społeczno-Humanistyczne*.
13. Michał, B. (2019). *500+ po nowelizacji w pytaniach i odpowiedziach. Edytowalne wzory dostępne na stronie internetowej*. Warszawa: Wolters Kluwer.
14. Osiński, K. (2019). Program „Rodzina 500+” – próba jego oceny po trzech latach funkcjonowania. *Zeszyty Naukowe ZPSB Firma i Rynek*.
15. Sierdzińska, A. R. (2018). Krótkookresowe skutki programu Rodzina 500+. *Studia z Polityki Publicznej*.
16. Szafenberg, R. (2006). *Definicje, zakres i konteksty polityki społecznej*. Pobrano z lokalizacji Witryna Instytutu Polityki Społecznej Uniwersytetu Warszawskiego: [http://rszarf.ips.uw.edu.pl/pdf/dzk\\_ps.pdf](http://rszarf.ips.uw.edu.pl/pdf/dzk_ps.pdf)
17. Szafenberg, R. (2017). Teoria i praktyka polityki społecznej. *Studia BAS*.
18. Uścińska, G. (2021). *Prawo zabezpieczenia społecznego*. Warszawa: C.H. Beck.

19. Wojciuk, M. (2018). Wpływ programu „Rodzina 500+” na poziom dochodów rozporządzalnych. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*. Pobrano z lokalizacji <https://www.social-protection.org/gimi/RessourcePDF.action?ressource.ressourceId=53846>
20. Wyrzykowski, W. i Kasprzak, P. (2018). Mechanizmy wsparcia polityki prorodzinnej w Polsce po roku 2015 na tle krajów Unii Europejskiej. *Przedsiębiorczość i Zarządzanie*.
21. Załęski, P. (2009). Miłość w czasach alimentów. *Nowy Obywatel*.
22. Opracowanie zbiorowe. (2018). *Ukryty potencjał polskiego rynku pracy*. Deloitte i Co-ca-Cola.
23. Zgliczyński, W. S. (2017). Polityka społeczna w Europie – ewolucja i rozwiązania modelowe. *Studia BAS*.

### Streszczenie:

**Cel:** Zagadnienia związane z dzietnością społeczeństwa polskiego są przedmiotem toczącej się debaty publicznej. Demografowie przewidują, że w ciągu kilkunastu lat liczba mieszkańców naszego kraju będzie dramatycznie spadała. Aby zapobiec katastrofie demograficznej, rząd Beaty Szydło wprowadził program „Rodzina 500+”, którego istotą miała być poprawa liczby urodzeń w Polsce. Od momentu jego wprowadzenia pojawiały się głosy, które popierały działania ówczesnego rządu, jak też krytyczne z uwagi na możliwość negatywnych efektów na gospodarkę kraju. Dotychczasowa debata oraz badania nie odpowiadały na pytanie, czy nowe świadczenie w wysokości 500 PLN rzeczywiście powoduje wzrost liczby urodzeń.

**Materiały i metody badawcze:** W artykule przedstawiono dwa modele ekonometryczne, przedstawiające możliwe czynniki wpływające na wartość urodzeń żywych. Dane użyte do badania pochodzą z Głównego Urzędu Statystycznego oraz Europejskiego Urzędu Statystycznego, a ich analizę wykonano dla okresu między I kwartałem 2010 r. a II kwartałem 2020 r.

**Wyniki:** Przeprowadzone badania wykazały, że program „Rodzina 500+” nie ma istotnego wpływu na liczbę urodzeń żywych w Polsce.

**Wnioski praktyczne:** Badanie w formie stworzenia modeli ekonometrycznych może znaleźć zastosowanie podczas reformowania polityki publicznej w zakresie demografii.

**Wnioski i podsumowanie:** Dotychczasowa analiza programu „Rodzina 500+” wykazała, że rozwiązanie wprowadzone przez rząd Beaty Szydło nie ma istotnego wpływu na poprawę sytuacji demograficznej społeczeństwa polskiego. Artykuł jest również sugestią dla polityków i demografów do przeprowadzenia reformy w tym zakresie.

**Słowa kluczowe:** model ekonometryczny, świadczenie wychowawcze, „Rodzina 500+”, urodzenia żywe