

Article

Spatial Diversity and Impact of Selected Factors on Women's Labour Force Participation Rate in Poland during 2000–2020

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Abstract: The sustainable development (SD) policy is also a family-friendly policy. Its crucial element is the use of social transfers (STs) as cash benefits for children. This study aims to explain the existence of regional variation in Poland in terms of the rate of working women and to conduct an assessment of the selected factors' impact including the impact of STs on women's propensity to work in Poland between 2000 and 2020. The survey showed the existence of SD through a strong convergence of the study area in terms of the rate of working women (RWW). However, an increase in the RWW with a decreasing fertility rate (FR) was observed between 2017 and 2020. The study showed a negative correlation between the RWW and STs. This means that the higher the transfers, the lower the propensity of women to return to the labour market. This situation could have negative consequences in the future. Long-lasting non-working periods mean a shorter period of pension contributions. As a result, with a low fertility rate, an accelerated pauperisation of society and a growing group of people living below the poverty line can be expected, which could disrupt or halt the country's sustainable development. Appropriate reforms are needed to enable women to return to the labour market as soon as possible.

Keywords: spatial diversity; female labour; social transfers; fertility; Poland



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1. Introduction

The sustainability concept was seen through the prism of environmental concern. Its social and economic aspects remained peripheral to the definition of SD for a long time. The World Commission on Environment and Development report included a socio-economic aspect for the first time. Sustainable development was then defined as social and economic activities that ensure that the needs of the present generation are met and that the needs of future generations are considered while being aware of the limited possibilities arising from natural resources conservation. In light of the above, sustainable development should be considered on three levels: ecological, economic and social [1].

There are 17 Sustainable Development Goals (SDGs) in the 2030 Agenda for Sustainable Development, where some of which touch on the gender discrimination problem. The Agenda indicates that one of the many needs for sustainable development in the socio-economic sphere is the social and professional activity of women, located in various indicators of the social life quality, e.g., access to education and the level of women's education, accessibility to the health care system as well as activity in the labour market [2,3]. The above-mentioned factor relates to the general problem of gender equality as a foundation for a sustainable world where people will live in peace and prosperity. Unfortunately, research indicates that nearly 20 percent of women aged 15–49 have admitted to experiencing physical or sexual violence from a partner [4–7]. Legal protection for women from domestic violence is not in place in practically one in three countries in the world [8,9]. Violence is caused by economic problems, and women's labour force participation is not always welcome.

The pro-family policy is one of the factors stimulating sustainable development. One of the instruments of this policy is cash benefits for children [10]. They serve to improve the financial situation of families, access to education, culture and health care. In developing countries, they stimulate the quality of human capital and reduce poverty. Sometimes, they can help to improve fertility. Particularly, this problem applies to developed countries, for which increasing the birth rate is a crucial demographic goal. However, a negative effect of the non-wage income of households may cause a reduction in labour supply, particularly in women's professional activity. Professional deactivation has a destructive impact on reducing poverty and income inequalities. The depopulation and ageing of societies in developed countries caused by the mentioned phenomena are becoming a serious threat to the countries, particularly in their sustainable development.

This study attempts to explain the existence of regional diversity in Poland in terms of the rate of working women and to assess the impact of selected factors, such as social transfers, disposable income and the household expenditure fertility rate, on women's propensity to work in Poland over the period of 2000–2020.

Poland is a country with persistent disparities in terms of economic development [11,12]. This situation also affects the labour market, which generates the supply of jobs on the one hand and the demand for labour on the other. This creates job opportunities for women, and gender inequality can be seen as a factor in the country's economic development disparity [2]. Considering the fact above, the authors hypothesise that there has been a divergence of the Polish area's regional differentiation in terms of the rate of working women in the adopted research period of 2000–2020.

The selection of the above-mentioned factors was based on previous observations [13]. The addition of a child in a family affects the growth of the demand for material and intangible goods. Expenses are increasing, and the need for time to care for a new family member is growing. Dilemmas arise in a family in deciding whether to increase their professional commitment, change jobs, undertake additional work to provide additional funds to cover increased costs, or stay at home and take care of a child or children if there are several [14,15]. Considering this, the authors posit a second hypothesis: a higher fertility rate implies a higher occupational engagement of women.

Of course, not all women, especially those who have had their first child, will be willing to take up employment. In addition, the underdeveloped infrastructure of public nurseries may inhibit women's willingness to return to the labour market. However, women cannot be left without the means to earn a living, even more so as the fertility situation in Poland or Europe is worrying. The average annual fertility rates have, for years, remained below the threshold of the simple reproduction rate of 2.0, and it is 1.46 in Poland and 1.53 in Europe [16,17].

This is why states develop and apply various types of programmes to support families with children [18,19]. In their simplest form, these are social transfers and various support subsidies for non-working women who are bringing up children. However, depending on the amount of support, an undesirable phenomenon may occur, namely the definitive abandonment of work, not only for women but also for men. In some cases, the amount of social assistance can have a negative impact on the willingness to work. The polarised research results in this area lead to the reflection that the current state of knowledge may not be sufficient to explain how monetary transfers affect human behaviour in the case of women's work [20]. These considerations led the authors to propose the third hypothesis, namely that there is a negative correlation between social transfers and female labour force participation.

Overall, this study is important because there is not much empirical research considering the percentage of working women in the group of total active women (employed and unemployed). According to the authors, a study focusing on a measure that is the percentage of working women in the group of economically active women is a somewhat new approach to the problem in existing research. Current research mostly considers economically active women rather than those who are actually working. This study's

method of selecting only a group of working women should give a more realistic answer to the impact of the selected determinants on women's entry into the labour market. Moreover, the results of existing surveys explaining how disposable income, social transfers, monthly expenditures and fertility rates affect women's presence in the labour market are inconclusive. This may have important economic and business implications, namely do governments still have the opportunity to increase women's access to the labour market? Will family-friendly policies, particularly social transfers, conflict with this idea? Do social transfers increase fertility? And, will measures to bring women into the labour market contribute to economic growth?

The rest of the article is organised as follows. Section 2 contains theoretical considerations and a review of previous research. Section 3 presents the data sources and research methods used in the paper. In Section 4, one can find the results and discussion. In Section 5, the authors make their conclusions.

2. Theoretical Considerations and Previous Research

2.1. Theoretical Considerations

The increased intensity of interest is triggered by the rapid pace of demographic change at the turn of the 20th and 21st centuries, which is leading to transformations in the labour sphere. Particularly pronounced changes leading to an increase in the labour force participation are taking place among women. This phenomenon affects the matrimonial and procreative behaviour of both women and men [21]. The tendency to postpone marriage or forgo it altogether, as well as postponing the decision to have offspring or consciously choosing not to have children, is becoming increasingly common. Turon, in her work, presents a series of facts on the differences over time and across countries in terms of family composition and maternal employment. She attempts to find answers to key questions about women's decisions to return to work after childbirth and combine motherhood and careers. She indicates large differences in different countries regarding policy choices, which reflects the difficulty of designing an optimal policy mix [22]. In the case of Poland, in 1990, the fertility rate was 2.06, reaching only 1.31 in 2010. Such a low level is an important premise for reorienting family policies and actions to prepare the labour market for families so that, when confronted with the choice of "career or family", it is possible to combine both goals [13].

In a period of rapid technological progress, education plays a key role and creates greater employability [23–26]. In this case, the phenomenon of subjective job insecurity arises. The relationship of this phenomenon with fertility intentions and behaviours has also been studied by differentiating between partners and partner employment insecurity [27]. These researchers have shown a strong gender-dependent effect of changes in job insecurity on reproductive decision making among populations with a higher education. Pioneering work in this area was undertaken by Spéder and Kapitány, who analysed the impact of unemployment on fertility intention trajectories [28]. It seems that the link between childbirth and employment can be mitigated by education. In Switzerland, one in five women with a higher education is childless. There is a strong tendency to prefer lifelong commitment to employment over having children [29]. Ensuring that women and girls have equal access to education [30,31], health care [32–34] and decent work also requires adequate and firm action in the process of building sustainability.

In light of the above, it appears that the economic position of women is the most crucial issue for sustainable development. Higher women's labour market participation improves their socio-economic status and enables women to access education or health care. It promotes poverty reduction and gender equality. Research on women's empowerment has been conducted for many years. Kabeer presents that in developing countries, women's economic empowerment leads to poverty reduction. There is improved access to material resources, education and health care, which gives hope for poverty reduction and improved overall well-being and contributes to the sustainable development of regions [35].

It would seem that an improvement in women's economic status should be seen as having a positive impact on society. However, numerous studies indicate that this is not the case, especially in developing countries. An economically strong woman means greater woman independence, but this situation is not accepted in some societies [36–38]. Nevertheless, an important issue related to the labour market is equal wages for males and females. This topic is practically unresolved worldwide. This problem affects not only underdeveloped countries [39,40], but also those with the highest level of development [41–43]. The solution to the problem of access to the labour market and wage discrimination against women may be women's own business activity. Such a solution gives women more independence and the opportunity to shape their careers. However, research conducted in this area also indicates several obstacles women have fought against. Some of these are of an economic and financial nature [44–46], and some result from cultural factors [47–49].

The situation of women in the labour market also depends significantly on the family model prevailing in a given society, and whether appropriate conditions have been created to facilitate the reconciliation of family and professional life. The Polish family policy in its current form still supports the traditional family model, where the male should support the family economically, and the female should care for the children [50]. The size of cash benefits is also of great importance. Previous studies link this factor to the age of women in Poland and indicate that the impact of cash benefits on women's labour force participation depends on the number of benefits and the women's age [51].

2.2. Previous Research

It is already clear from the material cited above that the sustainability problem of women's access to the labour market poses particular challenges for the whole of society. The multifaceted discrimination against women that is present in the economy does not serve sustainable development [2,44]. Governments, recognising the ineffectiveness of measures in this area, determined by many factors that are sometimes beyond the control of those in power, are trying to establish the determinants of greater labour force participation of women on the one hand and to support women in their maternal duties on the other [52].

The feminisation of certain professions, in theory, may be an opportunity for women; however, in some cases, it is only an illusion of professional equality between men and women [53]. Świągosts-Kapocsi indicated the feminisation level of certain professions. She identified the mechanism of "false windows" of opportunity for women and the moments when the opportunity for women to enter a particular profession opens and closes. She showed that the labour market for women in Poland is dependent on the labour market for men. Hence, potential new employment opportunities for women come with certain restrictions, including poorer pay conditions [54]. Other researchers also point to the lack of full gender equality in terms of careers, and the wage gap in the availability of certain professions for women [23,55,56].

Studies have shown that more organised women, with a high control level over their work, are much more likely to plan on having a second child. Insufficient accessibility to childcare and high levels of women's workload negatively affect fertility intentions. A solution to this problem may be part-time work for women. However, this entails various other consequences for them in this mode of work [57]. Besides the above, whether a woman is a working person or not, it is her responsibility to look after her children. Reconciling work responsibilities with raising children is also a challenge. Most of the world's women work in the service sector. This creates some flexibility in the choice of working hours, but on the other side, unstable work schedules generate significant consequences for mothers working in the service industry [58]. Research shows that a substantial proportion of working mothers, compared to non-working mothers, experience parenting stress, which requires different types of interventions [59].

Poverty reduction and gender socio-economic equalisation have been the focus of various support programmes [50,60,61] and models [62,63]. These can include unconditional in-kind benefits, in-kind benefits for employees and employment-based cash transfers

including, *inter alia*, tax credits and employment-independent cash transfers [64]. A significant part of the benefits in the employment-dependent cash transfer form is dedicated to mothers to increase women's participation and improve children's education and well-being. The observed effects have generally included increased female participation [65,66]. Significantly, the benefits of cash transfers were more significant than those of other forms of support for women [59,67]. However, we can find studies indicating that family allowances harm the labour force participation rate of EU women [68,69]. It is believed that cash transfers, depending on employment, may lead to a decrease in women's labour market participation [60,69–72]. The studies also raise the issue of unemployed women, especially single mothers, who are at risk of involuntary unemployment. Financial support for this group enables them to return to the labour supply and move out of poverty [73], as well as change their lives for increased autonomy, and thus, education, for better job choices and future prosperity [74,75].

However, the heterogeneity of backgrounds seems to prevent the preparation of a single programme. Programme beneficiaries from different parts of society (urban *v.* rural; educational level; age and market situation) may respond differently to the same programme [35,51,76]. This is especially the case when the beneficiary is outside the influence area of a well-developed economy. In such a case, the traditional notion of a utility function will not apply. Family responsibilities will not be changed into work [77].

3. Materials and Methods

This study attempts to explain the existence of regional disparities in Poland in terms of the rate of working women and to assess the impact of selected factors such as fertility rate, disposable income and household expenditure on women's propensity to work in Poland in the period of 2000–2020. As a measure of women's willingness to enter the labour market, the authors used the rate of working women, reflecting the share of working women in the total group of economically active women, *i.e.*, both employed and unemployed.

3.1. Data

All data used in this study come from publicly available databases of the Central Statistical Office of Poland (CSO) [78]. The average monthly per capita disposable household income in total, and that derived from social transfers, including funds from the 500+ program, were used for the analysis. The authors assumed that the nearly thirty percent share of social transfers in total disposable income could influence women's decision to work or their return to the labour market after childbirth. The expenditure category adopted in the article includes average monthly expenditures per person in households. All values of income and expenses were referred to as the value of this variable from the basic year 2000. The annual price indices of goods and services from 2000 to 2020 announced by the Central Statistical Office were used as a deflator. Considering constant prices makes it possible to eliminate the influence of inflation and shows, in dynamic and structural terms, the pure trend occurring in the phenomenon under study.

3.2. Model Specifications and Estimation Techniques

As a first step, the authors analysed the dynamics of the average growth rate of economically active women and its relative distribution at the provincial level. The results are presented in the form of the initial and final distribution of the relative average growth rate of economically active working women and the change in the relative mentioned variable in each country from 2000 to 2020. The provinces were categorised and grouped based on the distribution of quartiles of the variable under study. The variability of the average growth rate of the number of economically active working women over time was then examined. This study made it possible to determine the degree of spatial differentiation of the examined factor in the study area [79,80].

Sigma convergence refers to changes in the distribution of the working women's percentage among economically active women over time. It takes place when the dispersion

of this phenomenon between regions decreases over time [81,82]. The concept of beta convergence refers to the relationship between the average growth rate of economically active working women and the initial level of working women numbers in the economically active women group. It comes in two variants in the literature. Absolute convergence assumes that regions with a lower level of the phenomenon under analysis experience a faster increase in the measure describing the phenomenon, and that a higher real increase is observed when the initial level is lower. This means that the initial conditions and level of development of the regions do not cause them to become similar. In the case that regions with similar structural parameters become more similar to each other, we can talk about conditional convergence. Finally, we can say that provinces with different characteristics converge to different income levels [81,83].

Beta convergence is related to the mobility of the female working population size between regions within the same distribution and is in itself necessary but not sufficient for sigma convergence.

This study applied the beta convergence research method of real convergence between economies developed by Baumol [84]. His original growth equation shown below was adapted to the considered case:

$$\frac{1}{T}[\ln(y_{i,T}) - \ln(y_{i,t_0})] = \beta_1 + \beta_2 \ln(y_{i,t_0}) + \varepsilon_i, \quad (1)$$

where T is the end of the time period, y_T is the real GDP per worker at the end of the period, t_0 is the initial period, y_{t_0} is the real GDP per worker at the beginning of the period, β_1 is the intercept, β_2 is the slope parameter, ε_i represents statistical error term and i is the index marking each country.

For the current work, the Baumol equation was modified as follows:

$$\frac{1}{T} \log \left(\frac{AWW_{i,T}}{AWW_{i,t_0}} \right) = \alpha + \beta \log(y_{i,0}) + \varepsilon_i, \quad (2)$$

where $\log AWW$ is the logarithm of economically active working women, α is the constant level, β is the slope parameter, ε_i is the random component, 0 and T are the indexes indicating the time ($0 = 2000$; $T = 2020$) and i is an index indicating the province.

In the following part of the study, fixed-base dynamics indices were calculated for each year, and the average rate of change was determined for the population of economically active working women. The beginning of the research period is the year 2000, and the subsequent data were related to the values of that year. Then, the geometric mean for each province was determined, and the dynamics of the phenomenon were calculated. The following formula for the geometric mean was used for the calculation:

$$i_g = \sqrt[n-1]{\frac{y_T}{y_0}} \quad (3)$$

where y_T is the rate of working women among economically active women at the end of the period, t_0 is the initial period and y_{t_0} is the percentage of working women among economically active women at the beginning of the period.

To determine the relationship between the women's labour force participation rate in Poland in the period of 2000–2020, the authors used a multiple regression method. It is presented as the following function:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 \quad (4)$$

where x_1 —disposable income per capita in the household without social transfers; x_2 —the value of social transfers per capita; x_3 —the value of average monthly expenditure per capita in the household; and x_4 —the level of fertility rate.

4. Results and Discussion

4.1. Spatial Diversity of Active Working Woman in Poland

The relative distribution of the percentage of working women in a group of economically active women shows the initial distribution in 2000 and the final distribution in 2020 of the percentage of working woman in the total population of active working woman in each province (Figure 1). On each cartogram, the provinces are divided into equidistant groups based on the quartiles of the distribution of the represented variable.

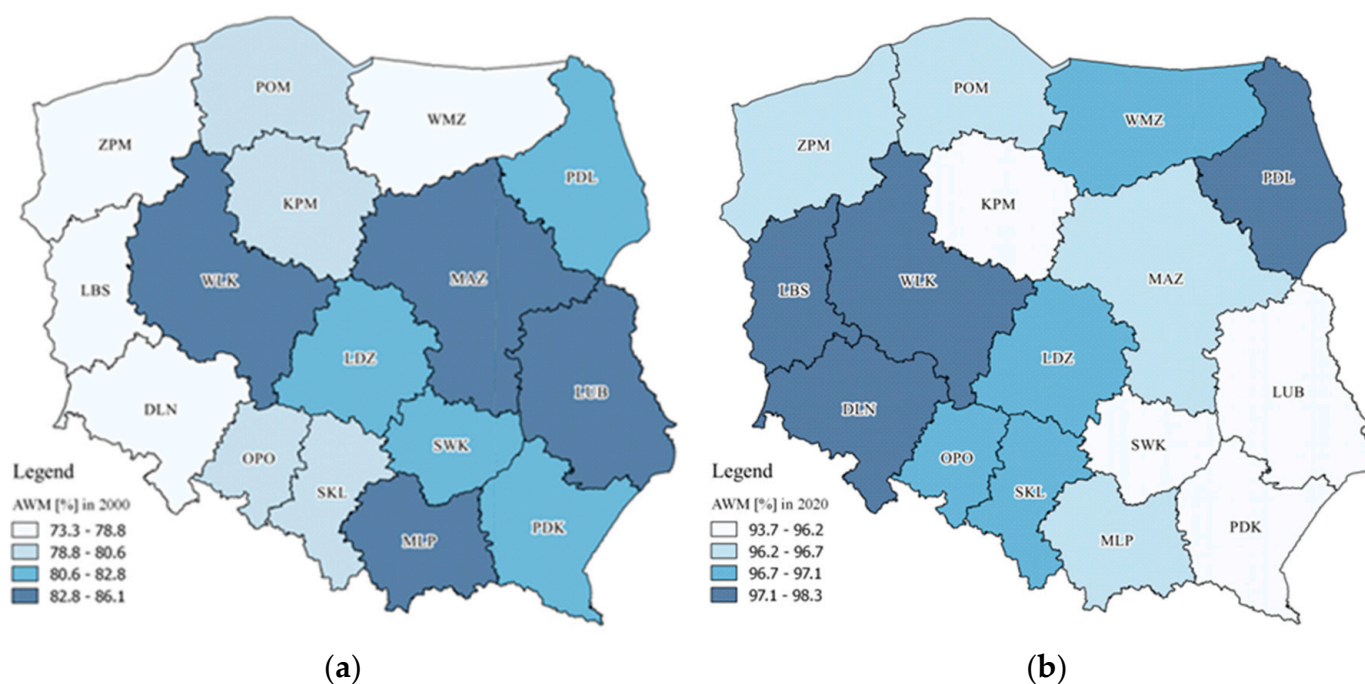


Figure 1. Percentage of working women in a group of economically active women in (a) 2000 and (b) 2020. DLN: Dolnośląskie; KPM: Kujawsko-Pomorskie; LUB: Lubelskie; LBS: Lubuskie; LDZ: Łódzkie; MLP: Małopolskie; MAZ: Mazowieckie; OPO: Opolskie; PDK: Podkarpackie; PDL: Podlaskie; POM: Pomorskie; WMZ: Warmińsko-mazurskie; SKL: Śląskie; SWK: Świętokrzyskie; WKL: Wielkopolskie; ZPM: Zachodniopomorskie. Source: authors' own elaboration using Quantum GIS 2.8 Wien.

The model as a whole is statistically significant at a 5% significance level. The value of the correlation coefficient R indicates that the percentage of active working women (AWW) in each province is 97.5% dependent on the development of the explanatory variable, i.e., the initial levels of percentage of working woman in surveyed economies. The coefficient of determination (R^2) says that the explanatory variable explains $\left(\frac{AMW_{i, 2020}}{AMW_{i, 2000}}\right)$ during the reporting period from 2000 to 2020 at 95.1% (Table 1).

Table 1. Estimates of the parameters α and β and summary of the beta convergence model.

Period	α	p	β	p	R	R^2	p F Change
2000–2020	0.259	0.000	−0.013	0.000	0.975	0.951	0.000

The result of the econometric model reflects the cross-section effect in the 2000–2020 period in terms of the studied phenomenon. The second column of Table 1 contains α , which corresponds to the average economic level in particular periods, assuming that the explanatory variable obtained a value of zero. Modelling the percentage of working women levels in Polish provinces from 2000 to 2020 was an attempt to identify whether these levels

are convergent or not. The carrier of such information is the β parameter. The modelling of the input variables resulted in a functional dependence relationship as follows:

$$\frac{1}{T} \log \left(\frac{AWW_{i,T}}{AWW_{i,t0}} \right) = 0.259 - 0.013 \log(y_{i,2000}), \quad (5)$$

The presented model did not include the values of the future explanatory variables; therefore, it can be applied to analyse the development of the tested phenomenon levels only ex-post.

Then, the hypothesis of the levels of sigma and beta convergence in the provinces was graphically verified. The sigma convergence analysis consists of analysing changes in the variation coefficient of the relative percentage of working women in the economically active women population group among the provinces (Figure 2).

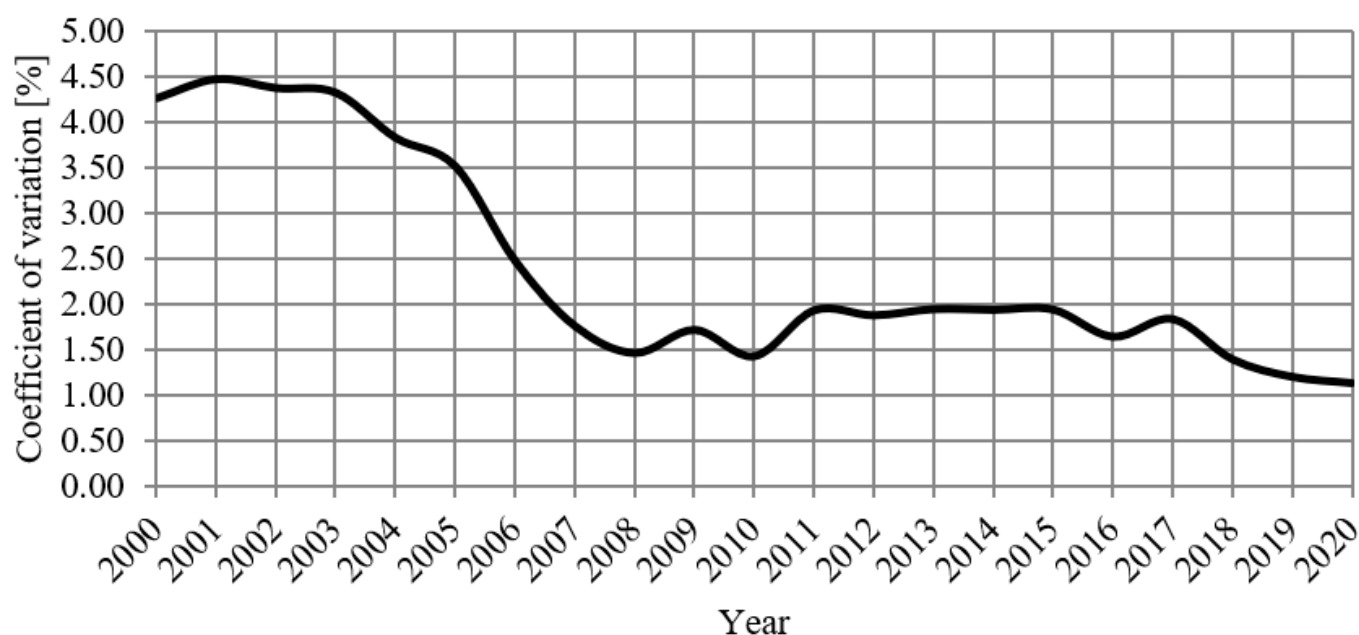


Figure 2. Sigma convergence according to percentage of working women in the group of economically active women in the period of 2000–2020.

In the next step, the authors used a graph of the relations between the average growth rate and initial percentage of working women for each province to test the existence of the absolute beta convergence (Figure 3).

When analysing the convergence of provinces concerning the used measure of women's working activity and the percentage of working women, we need to ask whether provinces with an initially smaller percentage of working women have faster growth in this measure when the growth of the measure is slowing down in regions with a higher initial value. However, we must accept the hypothesis that the state to which the provinces of the study area converge is a percentage of non-working women on average. This average is dynamic over time, and its value from year to year is equal to one. The answer to the question given above can be found in Table 2.

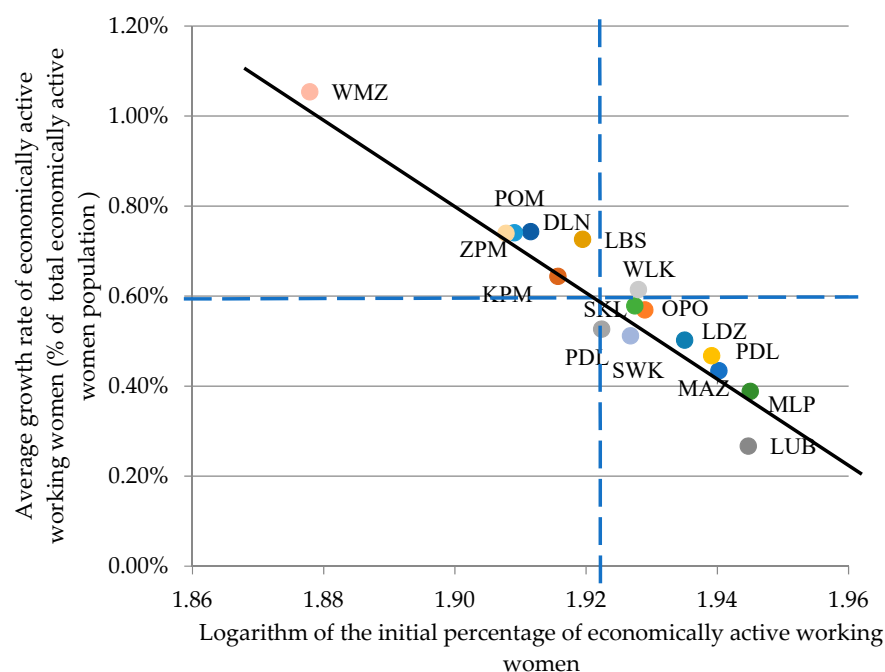


Figure 3. Beta convergence according to the percentage of working women in the economically active women's group in the period of 2000–2020 (see Supplementary Materials). Notes: The horizontal dashed line indicates the mean value for an average real growth rate of the percentage of economically active working women (0.60%), and the dashed vertical line indicates the mean value for the logarithm of the initial percentage of economically active working women (1.92%). DLN: Dolnośląskie; KPM: Kujawsko-Pomorskie; LUB: Lubelskie; LBS: Lubuskie; LDZ: Łódzkie; MLP: Małopolskie; MAZ: Mazowieckie; OPO: Opolskie; PDK: Podkarpackie; PDL: Podlaskie; POM: Pomorskie; WMZ: Warmińsko-mazurskie; SKL: Śląskie; SWK: Świętokrzyskie; WLK: Wielkopolskie; ZPM: Zachodniopomorskie. Source: authors' own elaboration.

Table 2. Growth of the percentage of working women in the economically active women population in the period of 2000–2020.

Province	AVG AWW = 100		Change	Convergence Process
	2000	2020		
DLN	95	101	6	Converge from below
KPM	99	99	0	Unchanged
LUB	105	97	−8	Converge from above
LBS	95	102	7	Converge from below
LDZ	101	100	−1	Converge from above
MLP	107	100	−7	Converge from above
MAZ	106	100	−6	Converge from above
OPO	99	100	1	Converge from below
PDK	102	98	−4	Converge from above
PDL	103	101	−2	Converge from above
POM	99	100	1	Converge from below
SKL	98	100	2	Converge from below
SWK	101	99	−2	Converge from above
WMZ	91	101	10	Converge from below
WLK	104	101	−3	Converge from above
ZPM	97	100	3	Converge from below

Note: AVG AWW—the average percentage of working women in the economically active women population for the entire study area by year. Source: authors' own elaboration.

4.2. Impact of Selected Factors on Women's Labour Force Participation Rate

Next, the degree of dependence of the women's labour force participation rate on the selected factors was explained. The results are presented in Tables 3 and 4.

Table 3. Regression summary of the dependent variable.

Period	R	R ²	Adjustable R ²	Estimation Standard Error	p F Change
2000–2020	0.980	0.961	0.950	1.741	0.000

Table 4. Estimates of the parameters.

Factors		Coefficients	Standard Error <i>t</i>	<i>t</i> -Stat	<i>p</i> -Value *
Intercept		32.969	12.323	2.675	0.018
Social transfers per capita	x_1	−0.049	0.018	−2.807	0.014
Disposable income without social transfers per capita	x_2	0.043	0.017	2.469	0.027
Household expenditures per capita	x_3	0.001	0.016	0.092	0.928
Fertility rate	x_4	28.345	8.331	3.402	0.004

Note: *—statistical significance of 0.05.

The multiple regression shown in Equation (6) indicates the statistical significance of the parameters describing social transfers, disposable income without social transfers, fertility rate and free expression as follows:

$$\hat{y} = 32.969 - 0.049x_1 + 0.043x_2 + 0.001x_3 + 28.345x_4 \quad (6)$$

The level of household expenditures per capita appears to be statistically insignificant. The high value of the coefficient of determination R^2 indicates a good fit of the obtained equation to the empirical data. This claim is also supported by the statistical significance of the F statistic, which tells us about the strength of the influence of the selected parameters describing the phenomenon under study.

4.3. Discussion of the Results

The results of the study of the relative distribution of the rate of working women in the group of economically active women at the provincial level (Figure 1-map) show that in 2000, the value of this measure ranged from 91% to 107% of the average value for all provinces. In the case of Warmińsko-Mazurskie province, the value was 91% of the average value, and in the case of Małopolskie province, the value was 107% of the average value. The lowest professional activity was presented by women in the following provinces: Warmińsko-Mazurskie (91%), Dolnośląskie (95%) and Lubuskie (95%). The most professionally active women were residents of Małopolskie (107% of the value of the Polish average), Mazowieckie (106%) and Lubelskie (105%) provinces. In 2020, the province with the highest rate of working women to the average for all provinces for that year was Lubuskie province (102%). The smallest value of this measure was presented by Lubelskie province (97%). It should be noted that in 2020, the variation in the average percentage of working women in the population of economically active women was very negligible. Differences of 1–2 percentage points testify to the homogeneity of the studied areas in terms of the rate of working women in the population of economically active women in general. These results show that the provinces are becoming more similar to each other. It means that we can talk about the provinces' sustainability development in terms of the average working women's percentage in the population of economically active women relative to the average value of this measure for Poland.

The coefficient of variation between 2000 and 2020, after a slight increase from 4.26% (2000) to 4.47% (2001), steadily decreased to almost 1.12% in 2020. The small values of the coefficient of variation indicate that the total study area, represented by 16 provinces, did

not show variation. Nevertheless, it can be concluded that during the study period, sigma convergence occurred, and the area of Poland shows a lack of differentiation in terms of the studied characteristic. A confirmation of the convergence existence of the studied areas is also found in the beta convergence case. As can be seen from Figure 2, the slope of the regression line is negative, so there is convergence among the studied provinces in the period of 2000–2020. The positions of the individual provinces confirm the theoretical basis of beta convergence according to which areas with a low level of the studied characteristic (Warmińsko-Mazurskie, Dolnośląskie, Lubuskie) tend to grow faster than the provinces with a higher initial level of the rate of working women. The study confirms the hypothesis of absolute beta convergence. A graphical representation of the relationship (Figure 2) between the average growth rate of the trait under study (vertical axis) and its initial value (horizontal axis) shows a close relationship between these variables. The results of the analysis indicate that there has been an absolute convergence of beta at the provincial level between 2000 and 2020. The provinces with a low initial value of the studied trait (percentage of working women in the population of economically active women in general) showed a higher growth rate of this trait compared to provinces with a higher initial value of the percentage of working women. The study shows that the market saturation of the female workforce is equal in the Polish provinces. This means that women are aware of their position in society and take advantage of the opportunities provided to them. Access to the labour market creates opportunities for women themselves as well as for their families. By working, they build the foundations of prosperity and self-reliance. They create opportunities to develop and educate themselves and their children. This situation contributes to the country's sustainable development.

Concerning the impact of the selected factors on the female labour force participation rate in Poland, it should be noted that regardless of personal or labour market conditions, 32.97% of economically active women will take up paid work. In the case of social transfers, any increase in this factor will hurt the female labour market. The current study confirms the findings of other researchers [52,69–72]. An increase in social transfers of, for example, PLN 1000, can cause as much as 49% of the total working female population to withdraw from the labour market. Because social transfers related to having children subsidise children under the age of 18, the population of women in the age range of 25/27–43/45 may withdraw from the labour market. Such a situation is dangerous for this social group because of the periodicities associated with returning to the labour market after a long break. Of considerable importance is also the so-called “non-contributory period”, i.e., the period during which no contributions are paid to the broadly defined social security system, including to the future pension. Lower contributions mean lower pension benefits. Generally, one can say that today's social transfers may contribute to the pauperisation of a significant part of society in a few decades. In this respect, the results confirm the negative impact of social transfers on women's willingness to return to work after childbirth and are consistent with earlier studies [28,50,60]. Such a situation will also have negative budgetary consequences, particularly with the low fertility rate that has been received for years. A study has shown that a 1 percentage point change in the fertility rate will have very little effect on increasing the percentage of women entering employment. The study shows that financial resources in general have the greatest influence on women's decisions to stay at home with their children or to return to work. In the case of disposable income without social transfers, we note an inverse trend to the position of social transfers. In the case of income, an increase of 1000 units can contribute to a significant increase in the percentage of women working (increase of 43 percentage points). Systematic increases in the minimum wage may seem appropriate for a population of women who are considering re-entering the labour market. This would serve the sustainable development of the country. On the other hand, however, the simultaneous announcements of raising the value of subsidies under the “500+” programme stand, as it were, in contrast to the intended effect (return to the labour market).

As a result, an additional mass of money appears on the market, which neither solves the problems of fertility growth nor significantly stimulates women to return to the labour market after giving birth. In this respect, the results of this paper could contribute to research into whether such a strategy is one of many inflationary factors.

The obtained result indicates the potential negative consequences of the incorrect parity of social transfers in the household budget. Thus, they suggest possible directions for their theoretical and practical application. (1) The weak involvement of women in the labour market may have negative consequences in the future when women retire. Longer non-working periods mean there is a shorter period to make pension contributions. As a result, with a low fertility rate, there is an accelerated pauperisation of society and a growing group of people living below the poverty line. With the significant dynamics of the ageing of the Polish population, there will be an increase in the number of people in the social group who are unprotected by pensions. This will create negative consequences for the state budget and disturb the country's sustainable development. There may be strong income polarisation (large low-income group), and thus, a reduction in domestic demand. Appropriate reforms are essential to enable women to return to the labour market as quickly as possible. (2) Humans model their behaviour using the environment in which they live. This process is referred to in psychology as learning by observation. It is one of the mechanisms described by Bandura [85]. Modelling behaviour is crucial when it comes to raising children and forming more than just specific behaviours. It is how children learn about different norm types, values and social rules. By observing the environment, children learn not only positive behaviour patterns, but also negative ones [86]. In a specific case, this can be the reproduction of the behaviour of the mother (parents) who does not take up gainful employment and bases their existence on social transfers. In children, the need to work in adulthood disappears. They tend to function in society using only social benefits. Such an attitude does not only serve the concerned people, but also the state. It leads to all sorts of degeneration and social pathologies. (3) This study shows the importance of the problem addressed in the paper and the seriousness of the situation in the Polish female labour market. It is not only women's problem. It is a broadly conceived problem of the state in terms of equal access to health care and education, levelling social exclusion, building a society that is aware of the need to work, current revenues from direct and indirect taxes, retirement security for women or sustainable development of the country, *inter alia*. (4) Global research indicates that women's behaviour on the market varies due to cultural differences. Poland is monolithic in this respect. However, the imperfections of the mechanisms operating in the economy, and the progressive centralisation of key development factors, result in a clear difference between central and peripheral regions [87]. This leads to variations in the development of the regions because of the impact of endogenous or exogenous factors as one of the main elements of the development process [88]. As a result, migration processes are activated. This determines the presence of women in the labour market. In this case, the balanced development of the regions is also disrupted. This seems to be an interesting topic for theoretical reflection and a developmental contribution of practical solutions to prevent these undesirable phenomena.

5. Conclusions

This study shows a strong convergence of the study area in terms of the rate of working women. Provinces with a high level of female labour force participation were characterised by a slight increase in the rate, while those with a low logarithm of the value of the rate of working women showed a faster increase in this respect. The phenomenon observed during the research period indicates that provinces are becoming more similar in terms of the percentage of working women in the group of economically active women. Thus, the first hypothesis posed by the authors was not confirmed.

The second hypothesis was partially confirmed. A systematic increase in the rate of working women over the period under study is noticeable. The parameter $\beta_4 = 28.345$

(Equation (6)) indicates a significant positive relationship between the studied explanatory variable with the level of the fertility rate. In contrast, an increase in the rate of working women with a decrease in the fertility rate is observed between 2017 and 2020.

This study shows a negative correlation of the rate of working women with social transfers. This means that the higher the transfers, the lower the willingness of women to return to the labour market.

A shortcoming of the paper is that the authors treated the transient problem and the method of investigation as a contribution to further extended studies. Therefore, they conducted the study using the entire population without dividing it into individual age groups. The full or partial confirmation of the individual theses provides an aspiration for further in-depth studies. It is possible that the explained positive convergence phenomenon for the entire population may not be so clear-cut when divided into age groups. Some areas of Poland are subject to depopulation, and there, the proportion of women aged 24–34 or children and young people under 18 is low. Thus, the impact of factors such as social transfers earmarked for the under-18 population may not be statistically significant. The solution to the problem presented in the paper and the results obtained can be used as one of the elements for a family-friendly state policy creation. Of course, in-depth research is highly recommended.

The limitations of the presented work, paradoxically, are its advantage. They point to the determinants of the studied phenomenon that are so far poorly explored in the theoretical scope, and show the need to intensify multifaceted activities in the subject of practical solutions to the presented problem. The authors are aware of this situation and plan to continue the research.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su151712933/s1>. Table S1. Total economically active women; Table S2. Economically active working women.

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