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# Female entrepreneurship in Poland

**Abstract:** The aim of this paper is to present the issues connected with female entrepreneurship and in particular to analyse the changes in the rates of female entrepreneurship in Poland between the years 1993 and 2010 against the background of the job market situation, as well as identifying the factors which determine the entrepreneurship of women. The dynamics of female entrepreneurship will be contrasted with entrepreneurship among men.

The entrepreneurship gender gap in Poland only slightly decreased during the studied period even though the situation of women in the job market is more difficult than that of men, which could engender a negative entrepreneurial motivation. The results of the research show that female entrepreneurship is significantly more susceptible to the influences of the general market situation, measured by GDP, than the entrepreneurship of men. This means that the entrepreneurship gender gap can decrease only when there is long-term economic growth.
**Keywords**: entrepreneurship, female entrepreneurship, gender gap in entrepreneurship.
**JEL codes**: L29, J62.

## 1. Female entrepreneurship – a theoretical view

Entrepreneurship is outside the mainstream of economics, therefore a comprehensive homogeneous theory of entrepreneurship, or even its definition, does not exist [e.g. Campbell 1992; Bygrave & Hofer 1991]. This lack of a generally accepted definition of entrepreneurship results in problems with defining female entrepreneurship, an area of research which originated in the mid-1980s so is relatively new [Moore 1990]. Three stages can be distinguished in the research into female entrepreneurship. The first stage, before the 1970s, was a move from the gender-neutral position to the male-specific position. The second stage, from the 1970s to the beginning of the 1990s, was stereotypical in nature, indicating how women are perceived in relation to men. Finally, the third, postmodernist, stage began to study the

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otherness of female entrepreneurship. The postmodernist context makes it possible to ask questions about how women perceive being entrepreneurs and business owners [Kyrö 2009].

Linking gender issues and entrepreneurship may be a result of the way in which the two topics are perceived in our culture and how they are incorporated into social practice. The symbolic image of a business enterprise is associated with a personality that is pragmatic, creative, open-minded and adventurous. Entrepreneurship is symbolically connected with initiative-taking, accomplishment and relative risk, which are traditionally thought to be the domain of men. The traditional image of women involves passivity, adaptation and flexibility. As a result, female entrepreneurship has to be justified, as femininity and entrepreneurship belong to different imageries [Bruni, Gherardi & Poggio 2004], and entrepreneurship is traditionally perceived as a male attribute.

The above imagery is connected with the issue of gender-role stereotyping in entrepreneurship. Research results show that when students were asked in a questionnaire study about their perception of entrepreneurs in the context of gender-role stereotypes, they tended to perceive being an entrepreneur as a male-type role [Gupta et al. 2005]. Those people who perceive themselves as more similar to males, have stronger entrepreneurial intentions than those who describe themselves as less masculine [Gupta et al. 2009].

In order to be treated as serious business people many women tend to play down any issues relating to their gender and try to stress their similarities to male entrepreneurs. This shows that the gender issue seems to be crucial in the perception of female entrepreneurs [Lewis 2006].

It may be noticed, however, that although entrepreneurship is strongly perceived through the prism of gender stereotypes, it can also be a factor which will alter the meaning of gender and the way in which gender is lived [Hanson 2009].

Female entrepreneurship can be divided into two categories: the traditional generation of entrepreneurial women, concentrated around businesses involving household services, which require reduced skills and experience; and the modern generation, more actively involved in businesses more oriented towards profit and creating new markets [Moore 1990].

Women worldwide are less likely to become involved in entrepreneurial activity than men [Minniti & Nardone 2007]. Male and female kinds of entrepreneurship differ in respect of the personal and business profiles, as the companies set up by men and women operate in different sectors, develop different products, have different aims and different structures [Verheul, van Stel & Thurik 2006]. Women tend to set up companies operating in the consumer or business service sectors and they usually achieve lower profits than men. They are also less willing than men to work very long hours [Zinger et al. 2007], which is obviously caused by the necessity to combine business and domestic duties.

The level of income achieved by female entrepreneurs is lower than that achieved by companies run by men. This discrepancy is usually explained by the lower level of women's human capital in business, which is a result of their more limited professional experience in similar companies or in family businesses, as well as their tendency to work shorter hours than men [Fairlie & Robb 2009].

In many other respects, however, male and female kinds of entrepreneurship do not differ significantly, for example in respect of the likelihood of their companies' success or failure, the level of risk involved in their business decisions, the choice of strategies and many others [Mueller 2004]. The rates of entrepreneurship among men and women react similarly to economic factors, the two exceptions being the unemployment rate and life satisfaction. The negative effect of the unemployment rate is weaker in the case of female than in the case of male entrepreneurship, and life satisfaction has a positive influence on women's entrepreneurial activity whereas it has no influence on male entrepreneurship [Verheul, van Stel & Thurik 2006]. Also, no significant gender differences have been found between men and women as regards the relationship between the likelihood of embarking on entrepreneurial activity and such factors as age, household income, work status or education. Men and women react in similar ways to the working environment [Minniti & Nardone 2007].

On the other hand, among the factors which are connected with gender those which have a positive and statistically significant influence on women's entrepreneurial activity include female education, the extent of female economic activities and the fertility rate, while the female earnings ratio has a negative influence [Kobeissi 2010].

The findings presented above were obtained by analysing, primarily, developed economies, whereas a study which compared female entrepreneurship in two countries undergoing a systemic transformation, Lithuania and Ukraine, showed that women had considerably more limited actual access to financial resources than men. Although formal access is equal, some informal factors such as gender norms and values, which are a reflection of a patriarchal system, restrict women's activity and their access to resources [Aidis et al. 2007].

Female entrepreneurs also come up against a number of myths and stereotypes when they try to obtain external financing from venture capital funds to develop their companies. Those myths relate to their abilities and capabilities, the composition and use of their networks, and the attractiveness of the industry where they run their businesses [Gatewood et al. 2009].

Despite these differences and similarities, in every country, regardless of the cultural or social factors, there exists a gender gap. The gender gap refers to a considerably lower level of entrepreneurship among women than among men. A review of the literature which discusses the causes of this gender gap [Startiene & Remeikiene 2008] has led to a grouping of the factors into the following catego-

ries: cultural factors, psychological factors, organizational factors, technical development, economic factors, demographic factors, institutional factors and governmental interventions. Additionally, these factors can be classified according to their influence on the gender gap. Some of the factors increase the gender gap, some decrease it, and some have no influence on it. For example, access to financial capital and the wage gap tend to increase the gender gap, whereas the share of the service sector in the economy is a factor which decreases the gender gap. The neutral factors, which do not affect the gender gap, include age and motivation [Startiene & Remeikiene 2008].

Above all, it is often stressed that, on the one hand, women are the driving force of the economy because they are active and efficient members of economic, political, professional or managerial communities. On the other hand, however, female entrepreneurs have a number of parental duties and inflexible household obligations which they try to effectively combine to maintain a balance between running a business and running a home [Apergis & Pekka-Economou 2010].

## 2. Female entrepreneurship in Poland in the years 1993–2010

In the discussion of female entrepreneurship it is assumed that entrepreneurship is one of the forms of professional activity. People who work can be either hired employees who receive remuneration for their work, or entrepreneurs who obtain income from running their own businesses. This approach is consistent with the occupational choice theory, which treats being an entrepreneur as one form of professional activity, which is an alternative to being an employee. The decision about becoming an entrepreneur or an employee is undertaken in a rational way, using all the available information to make the most profit from the chosen form of activity [Minniti & Bygrave 1999]. This choice is influenced by a number of factors, such as attitude towards risk-taking [Kihlstrom & Laffont 1979; Banerjee & Newman 1993], access to financial resources as a result of liquidity constraint models [e.g. Blanchflower & Oswald 1998; Holtz-Eakin, Joulfaian & Rosen 1994], or financial market imperfections [Paulson, Townsend & Karaivanov 2006].

The labour market is another factor influencing the occupational choice, e.g. the relationship between the wages available in the labour market and the potential profits from entrepreneurial activity [Blau 1987; Bernhardt 1994; Taylor 1996], or imbalances in the spheres of labour demand and labour supply [Alba-Ramirez 1994] which influence the quantity and quality of the jobs offered as well as the opportunities to find a job as an alternative occupational choice to entrepreneurship. According to empirical findings the propensity to take up self-employment is higher for males, unemployed people and those with past entrepreneurial experience, who

live in more densely populated and faster growing regions with higher rates of new company formation [Wagner & Sternberg 2004].

Adopting the assumption that entrepreneurship is one of the forms of professional activity, any alternative to entrepreneurship means that female entrepreneurship in Poland must be considered against the background of the situation of women in the job market in comparison with the situation of men. In order to do this, first the rates of unemployment among men and women were compared together with the average periods of looking for work (Table 1).

**Table 1. Unemployment rate and the average period of looking for work in 1993 and 2010**

| Time | Rate of unemployment | | | Average period of looking for work (in months) | |
|---|---|---|---|---|---|
| | total | women | men | women | men |
| 1st quarter 1993 | 14.2 | 15.6 | 13.1 | 13.6 | 12.4 |
| 4th quarter 2010 | 9.6 | 10 | 9.3 | 10.3 | 10 |

Source: Own compilation on the basis of Central Statistical Office data, *Aktywność ekonomiczna ludności Polski w IV kw. 2010* [Economic activity of the Polish population in the 4th quarter of 2010], Warszawa 2011.

Between the beginning of 1993 and the end of 2010 the situation of men and women in the job market improved, which is reflected in the decline of the overall unemployment rate from 14.2% to 9.6% as well as in the reduction of the period of looking for employment. This improvement did not depend on gender as for both men and women the unemployment rate was lower, and both men and women needed less time to find work.

It must be noticed, however, that despite those favourable trends in the job market, throughout the whole analysed period the situation of women was more difficult than that of men. The rate of female unemployment was higher than the rate of male unemployment both in 1993 (women – 15.6%, men – 13.1%) and in 2010 (women – 10%, men – 9.3%), even though the difference decreased. In 1993 the difference between male and female unemployment amounted to 2.5 percentage points, and in 2010 it fell to the level of 0.7 percentage points.

The average time of looking for work among unemployed women throughout the analysed period was longer than in the case of unemployed men, although in this respect also the difference became smaller. In 1993, on average, women spent 13.6 months looking for employment, whereas men spent 12.4 months, which means that women had to look for work, on average, 1.2 months longer than men. In 2010 unemployed women needed, on average, 10.3 months to find work while men needed 10 months, so the difference in the time necessary to find a job decreased, on average, to 0.3 months.

The next set of variables which describe the situation in the job market is the professional activity rate and the employment rate (Table 2).

**Table 2. Professional activity rate and unemployment rate among men and women in 1993 and 2010**

| Time | Professional activity rate | | | Employment rate | | |
|---|---|---|---|---|---|---|
| | total | women | men | total | women | men |
| 1st quarter1993 | 61.4 | 53.5 | 69.2 | 52.3 | 45.1 | 60.1 |
| 4th quarter 2010 | 55.8 | 48.2 | 64.1 | 50.4 | 43.4 | 58.6 |

Source: Own compilation on the basis of Central Statistical Office data, *Aktywność ekonomiczna...*, op. cit.

Between the beginning of 1993 and the end of 2010 the overall rate of professional activity decreased from 61.4% of the total productive age population to 55.8%. This decrease affected both men and women. The level of women's professional activity was lower than men's both at the beginning of the analysed period (women – 53.5%, men – 69.2%) and at the end (women – 48.2%, men – 64.1%). The discrepancy between the rates of men's and women's professional activity decreased from 15.7 to 12.9 percentage points.

Also, the rate of employment fell from 52.3% of the productive age population in 1993 to 50.4% in 2010, irrespective of gender. The rate of women's employment was lower than the rate of men's employment both in 1993 (women – 45.1%, men – 60.1%) and in 2010 (women – 43.3%, men – 58.6%). However, in the case of this parameter the difference between the rates of men's and women's employment increased from 15 percentage points in 1993 to 15.2 percentage points in 2010, and although this increase is relatively small, it indicates a growing discrepancy between the rates of employment of men and women.

The rates of employment were also studied in respect of the age of men and women (Table 3), although due to data availability only the 4th quarter of 2010 was analysed.

**Table 3. Rate of employment for men and women according to age in the 4th quarter of 2010**

| | Employment rate according to age | | | | | | |
|---|---|---|---|---|---|---|---|
| | total | 15–24 | 25–34 | 35–44 | 45–54 | 55–59(64) | over 60(65) |
| Total | 50.4 | 25.8 | 77 | 81.9 | 73.9 | 42.4 | 6.4 |
| Women | 43.4 | 21 | 68.9 | 77.1 | 70 | 35.8 | 5.8 |
| Men | 58.6 | 30.4 | 85 | 86.8 | 77.3 | 46.5 | 7.5 |

Source: Own compilation on the basis of Central Statistical Office data, *Aktywność ekonomiczna...*, op.cit.

In the 4th quarter of 2010 the rate of employment in the total population of women (43.4%) was lower by approximately 15 percentage points than the rate of employment in the total population of men (58.6%). The situation was very similar in each age group. The rate of employment is the highest among women between 35 and 44 years of age, in which group 77% of women work. Obviously, the lowest rate of employment is recorded among women at retirement age, of which only about 5.8% are employed.

Comparing the discrepancy between men's and women's rates of employment, it can be observed that the greatest discrepancy occurs in the 24–34 age group, where the rate of employment among men (85%) is higher by over 16 percentage points than among women (68.9%). The smallest discrepancy, only 1.7 percentage points, is in the retirement age group, where 5.8% of women and 7.5% of men are employed. Apart from the retirement age group, the second smallest discrepancy, about 7.3 percentage points, was recorded in the 45–54 age group, in which 70% of women and 77.3% of men work.

The above data indicate that the situation of women in the job market in respect of the possibilities of employment, the rate of professional activity and the rate of employment is worse than the situation of men. Between the years 1993 and 2010 the situation with regard to unemployment improved in general, but unemployment among women is still higher than among men. As regards professional activity, it declined both for men and for women, but the proportion of professionally active women is lower than professionally active men.

It is generally thought that despite a high level of education, women in Poland generally tend to work in lower positions and get lower salaries than men who do comparable work. As a result of this, women might be tempted to start their own businesses for two main reasons: firstly, to create a workplace for themselves; and secondly, to become independent as regards managing their time [Wasilczuk & Zieba 2008].

One could assume that the above situation will trigger a negative motivation in women and push a considerable number of them into entrepreneurship as an alternative to paid employment, especially that running one's own business makes it possible to be independent. Table 4 presents the professional activity structures of men and women. However, the interpretation of the data is not clear-cut.

Women accounted for approximately 46% and men for approximately 54% of wage-earning employees both at the beginning of 1993 and at the end of 2010. So the gender structure of wage earning employees remained fairly stable over time, and the difference between the proportions of men and women, about 8 percentage points, is not very large.

Far greater discrepancies can be observed when analysing the gender structure of entrepreneurs. Only about 30% of entrepreneurs are women and about 70% are men. Among the self-employed, i.e. people who run their own businesses but do

**Table 4. Structure of professional activity according to gender (in %)**

| Structure | | 2nd quarter 1993 | 4th quarter 2010 |
|---|---|---|---|
| Proportion of working women in: | labour force | 39.08 | 40.80 |
| Proportion of working men in: | | 47.12 | 49.90 |
| Proportion of women in: | wage-earning employees | 46.10 | 46.57 |
| Proportion of men in: | | 53.90 | 53.43 |
| Proportion of women in: | self-employed in the non-agricultural sector | 29.68 | 32.74 |
| Proportion of men in: | | 70.32 | 67.26 |
| Proportion of women in: | entrepreneurs in the non-agricultural sector | 28.72 | 31.08 |
| Proportion of men in: | | 71.28 | 68.92 |

Source: Own compilation on the basis of Central Statistical Office data.

not employ workers, the proportion of women is higher by approximately 1 percentage point than among entrepreneurs proper, i.e. those who run a business and employ staff.

Although the proportion of women in the number of wage-earning employees remained fairly stable between the years 1993 and 2010, their proportion among entrepreneurs increased. In 1993 women accounted for 29.68% of self-employed people in the non-agricultural sector, and in 2010 this figure increased to 32.74%; an increase of approximately 3 percentage points. The proportion of women among entrepreneurs was 28.72% in 1993 and 31.08% in 2010, so the proportion increased by approximately 2.4 percentage points.

Concluding, it can be observed that although the proportion of women among entrepreneurs is rather low, it did increase a little, which may indicate that female entrepreneurship is beginning to catch up.

Additionally, the results of research into entrepreneurship in Poland show that companies run by women are on average smaller than those run by men and are characterised by lower development aspirations [Wasilczuk & Zieba 2008].

## 3. The dynamics of female entrepreneurship in Poland

In this article entrepreneurship is understood as conducting business activity on one's own account, regardless of issues such as employing workers or the extent of ownership or co-ownership of the company. Thus female entrepreneurs are those women who are involved in business activity. As a result of the definition adopted

two rates of female entrepreneurship were distinguished, which was the basis for analysing changes in the areas studied:

– the rate of female self-employment (RFS) in labour force, which denotes the proportion of women involved in business activities without employing workers in the non-agricultural sector of the female labour force
– the rate of female entrepreneurship (RFE), which denotes the proportion of women involved in business activities and employing workers in the non-agricultural sector of the female labour force.

For comparison purposes the situation of women is contrasted with the situation of men, where male entrepreneurship is a reference point. For this reason the rate of male self-employment in the non-agricultural sector (RMS) and the rate of male entrepreneurship in the non-agricultural sector (RME) were determined.

In order to calculate the above mentioned rates data from the Central Statistical Office were used, which is published quarterly in "Aktywność ekonomiczna ludności Polski"[Economic activity of the Polish population].

First of all, the dynamics of the male and female rates of entrepreneurship in the years 1993–2010 were analysed. The findings are presented in Table 5.

**Table 5. Dynamics of the rates of male and female entrepreneurship in the years 1993–2010**

| Measures | Rate of female self-employment in the labour force | Rate of female entrepreneurship in the labour force | Rate of male self-employment in the labour force | Rate of male entrepreneurship in the labour force |
|---|---|---|---|---|
| Average | 3.58 | 1.98 | 6.56 | 3.85 |
| Standard deviation | 0.39 | 0.27 | 0.45 | 0.41 |
| Percentage deviation | 10.76 | 13.47 | 6.85 | 10.55 |
| Dynamics | 145.14 | 176.94 | 121.17 | 152.22 |

Source: Own compilation on the basis of Central Statistical Office data.

On average, in the years 1993–2010 the proportion of self-employed women in the non-agricultural sector amounted to approximately 3.58% of the total female labour force, whereas the proportion of self-employed men amounted to approximately 6.56% of the total male labour force. Additionally, in the female labour force, on average, about 1.98% of women were entrepreneurs, whereas male entrepreneurs represented approximately 3.85% of the male labour force. These data show that women undertake both of the above-mentioned kinds of entrepreneurial activity approximately half as often as men, which confirms the existence of a gender gap in this respect in Poland.

Calculating the standard deviation as a percentage of the average value, it can be observed that the dynamics of entrepreneurship is greater than the dynamics of self-employment in relation to both genders. However, both the female self-employment rate and the female entrepreneurship rate are characterised by greater dynamics than the corresponding rates among men. In the case of both rates, the differences amount to approximately 3 percentage points.

Throughout the analysed period the rates of male and female entrepreneurship increased, but the rates among women were more dynamic. Between the 2nd quarter of 1993 and the end of 2010 the rate of self-employment among women rose by about 45% and among men by about 21%. During the same period the rate of entrepreneurship increased by about 76% among women and by about 52% among men.

In order to further analyse female entrepreneurship in comparison to male entrepreneurship the time series were transformed into logarithms, and then subjected to seasonal decomposition to eliminate any seasonal and irregular components. As a result, time series were obtained which reflected the effect of the development trend and cyclical fluctuations. These are presented in Chart 1 and Chart 2.

As the data in Chart 1 show, throughout the 1993–2010 period the rate of female self-employment remained at a lower level than the rate of male self-employment, which confirms the existence of a gender gap in Poland in the time period studied. This difference is fairly stable over time: in those time periods when the rate of male employment increased (e.g. 1996–1998 or 2006–2010), the rate of female self-employment increased as well. On the other hand, when the rate of male self-employment dropped (e.g. 1998–2006), so did the rate of female self-employment.

It is worth noting, however, that the trajectory over time for the rate of male self-employment is considerably more stable than that for the rate of female self-employment, with the latter showing greater fluctuation.

The situation was very similar in the case of entrepreneurship rates. One can observe that the changes in the rates of male and female entrepreneurship followed a broadly similar pattern. Over the whole of the period studied the rate of male entrepreneurship remained at a higher level than the rate of female entrepreneurship. The two rates tended to rise simultaneously in the same time periods (e.g. 1993–1998, 2003–2009) as well as drop simultaneously (e.g. 1998–2003).

One look at the rates self-employment and entrepreneurship among men and women (Chart 1 and Chart 2) reveals that there exists a considerable gender gap which did not significantly decrease during the analysed period.

In order to assess the influence of the economic situation on female entrepreneurship, an estimation of regression function parameters was conducted. The dependent variables were two rates for women (RFS and RFE) and two rates for men (RMS and RME), and the independent variable was GDP. The value of GDP was adjusted according to the Consumer Price Index, then transformed into a logarithm and, just as in the case of entrepreneurship rates, cleared of seasonal and random

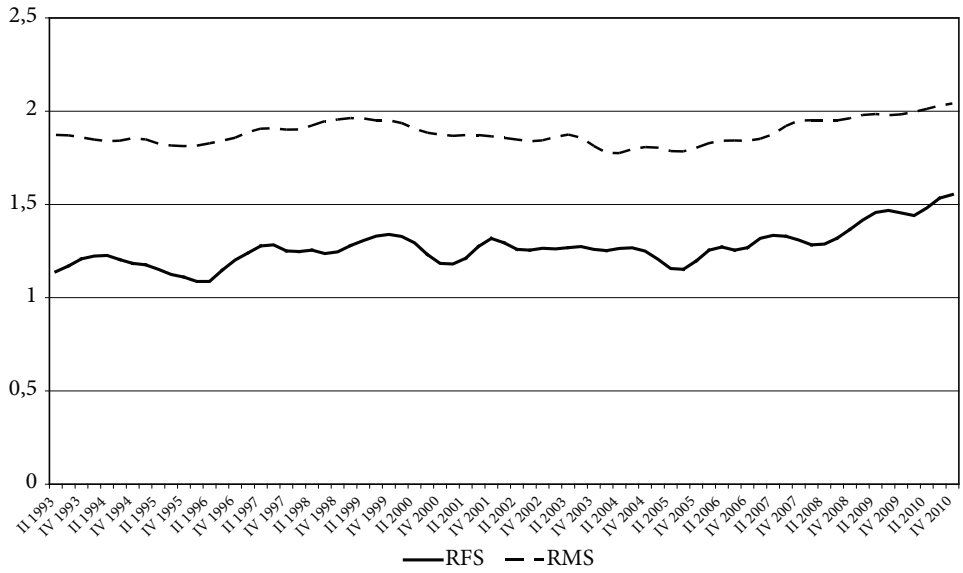
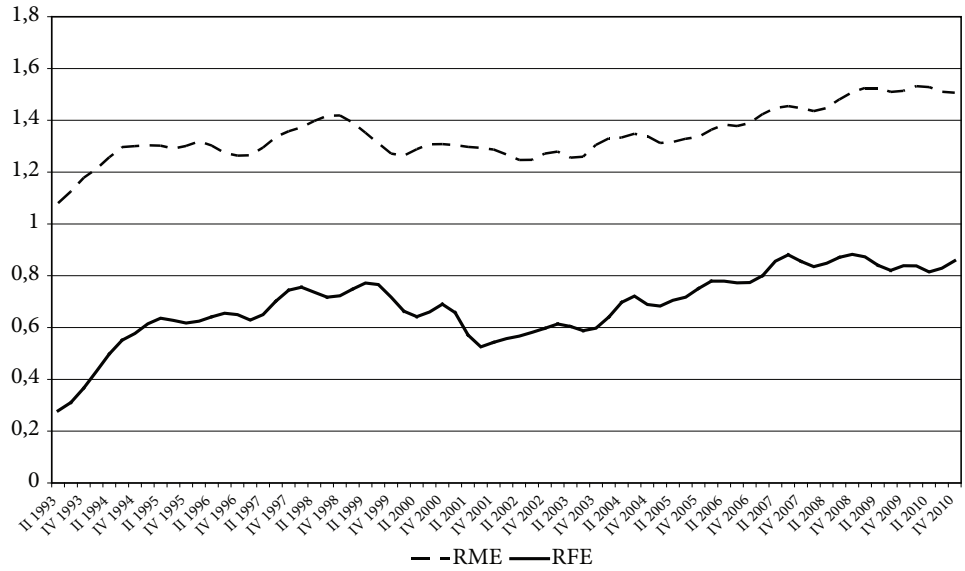



**Figure 1. Rates of male and female self-employment in the labour force in the non-agricultural sector (data in natural logarithms cleared of seasonality and random fluctuations)**

Source: Own compilation on the basis of Central Statistical Office data




**Firgure 2. Rates of male and female entrepreneurship in the labour force in the non-agricultural sector (data in natural logarithms cleared of seasonality and random fluctuations)**

Source: Own compilation on the basis of Central Statistical Office data

fluctuations. As a result of the regression function parameter estimation, four functions were specified. These are presented in Table 6.

**Table 6. The results of an estimation of regression function parameters for the rates of self-employment and entrepreneurship among men and women in relation to GDP as an independent variable**

| Dependent variables | Function adjustment | Independent variables | | | | |
|---|---|---|---|---|---|---|
| | | name | coefficient | std. error | t-ratio | p-value |
| RFS | Sum squared resid = 0.357269<br>S.E. of regression = 0.071957<br>R-squared = 0.456780<br>Adjusted R-squared = 0.448907<br>F(1, 69) = 58.02033 | const | 0.4320 | 0.1101 | 3.9230 | 0.0002 |
| | | GDP | 0.1128 | 0.0148 | 7.6170 | 0.0000 |
| RFE | Sum squared resid = 0.458289<br>S.E. of regression = 0.081498<br>R-squared = 0.619198<br>Adjusted R-squared = 0.613679<br>F(1, 69) = 112.1963 | const | –0.6319 | 0.1247 | –5.066 | 0.0000 |
| | | GDP | 0.1777 | 0.0168 | 10.59 | 0.0000 |
| RMS | Sum squared resid = 0.258777<br>S.E. of regression = 0.061240<br>R-squared = 0.130582<br>Adjusted R-squared = 0.117982<br>F(1, 69) = 10.36346 | const | 1.5833 | 0.0937 | 16.89 | 0.0000 |
| | | GDP | 0.0406 | 0.0126 | 3.2190 | 0.0020 |
| RME | Sum squared resid = 0.292769<br>S.E. of regression = 0.065139<br>R-squared = 0.554387<br>Adjusted R-squared = 0.547929<br>F(1, 69) = 85.84294 | const | 0.4233 | 0.0997 | 4.2460 | 0.0000 |
| | | GDP | 0.1242 | 0.0134 | 9.2650 | 0.0000 |

Source: Own compilation on the basis of Central Statistical Office data.

As indicated by the data in Table 6, the level of GDP is a factor which in a statistically significant way influences the statistical activity rates of entrepreneurs irrespective of gender. The evidence for this is the p-value, which in the case of each of the regression functions is lower than the critical value 0.01.

For each of the functions the value of the regression function parameter is positive, which means that the level of GDP is directly proportional to the rates of male and female entrepreneurship. An improvement in the overall economic situation, measured by GDP, contributes to an increase in entrepreneurial activity, both in the form of self-employment and full entrepreneurship, among men and women. Thus it can be stated that both male and female entrepreneurs respond to positive motivations generated by the market.

When comparing the values of the regression function parameters, one can notice that the parameters of the regression functions for the rates of female entrepreneurship are higher than for the corresponding functions for male entrepreneurship. This indicates that the level of female entrepreneurial activity is more sensitive to changes in the overall market situation. In times of economic growth the increase in entrepreneurial activity among women is greater than among men, so the entrepreneurial gender gap decreases. However, when the economic situation deteriorates, the level of entrepreneurial activity among women declines more substantially than among men, so the gender gap increases. The ultimate proportion between male and female levels of entrepreneurial activity is the result of changes occurring over a long period of time, when the periods of economic upturn were altogether relatively longer than the periods of economic downturn. The findings presented above can also be linked with the results of research which compared female entrepreneurship in Lithuania and Ukraine, two countries undergoing transformation. The research in Lithuania discovered that the relatively fast economic growth contributed to a rapid increase in the number of female entrepreneurs [Aidis et al. 2007]. Thus it can be assumed that a prolonged period of economic growth is a factor which could lead to a decrease in the gender gap in the long term.

When comparing both rates of female entrepreneurship it can be observed that the rate of full entrepreneurship is more susceptible to the influence of changes in the economic situation measured by GDP than the rate of female self-employment. This is showed in the values of regression function parameters: in the case of the regression function relating to the rate of female entrepreneurship the value is higher.

## Conclusions

During the period between 1993 and 2010 a considerable and lasting gender gap in entrepreneurship existed in Poland. The rates of female self-employment and entrepreneurship in the non-agricultural sector were on average approximately half as high as the corresponding rates among men. In the studied period self-employed women represented approximately 3.58% of the total female labour force, whereas self-employed men accounted for approximately 6.56% of the total male labour force. Additionally, in the female labour force, on average, 1.98% of women were entrepreneurs, while in the male labour force the proportion of entrepreneurs was approximately 3.85%.

The rates of female self-employment and entrepreneurship are not only lower but also more dynamic and more susceptible to changes in the overall economic situation than the corresponding rates among men. This greater susceptibility means that during economic upturns the rates for women increase faster than the rates for

men, but also that during economic downturns they tend to decrease more sharply than the rates of male entrepreneurship. This relationship might be the result of the overall female situation. During economic upturns there is a growing number of business opportunities and it is much easier to achieve entrepreneurial success even with reduced effort. This might encourage women to become entrepreneurs because running a business during a time of economic growth is easier and more profitable than during downturns and helps women to combine professional and family duties. Conversely, during economic downturns business opportunities are less numerous and profitable, which means that it is much more difficult to run a business. Therefore it might be much more difficult for women to combine their professional and private activities and this could be the reason why during such times the rate of female entrepreneurship decreases more sharply than the rate of male entrepreneurship.

The above findings indicate that decreasing or even eliminating the entrepreneurship gender gap in Poland is going to be a long-lasting process which will only be possible if there are prolonged periods of economic growth. At the same time the results of the analyses presented in this paper seem to provide some support for the opinion that there is a link between entrepreneurship and masculinity [Bruni, Gherardi & Poggio 2004]. However, it also seems appropriate to stress that women ought to be provided with support so that they could more easily combine their home responsibilities with running their own companies [Apergis & Pekka-Economou 2010], which from the perspective of the foreseeable future could reduce the extent of the entrepreneurial gender gap. Further research could investigate questions regarding how entrepreneurial women perceive running their own companies as a part of their overall activities.

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