

# **Self-employment and the Business Cycle: Evidence from Poland**

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## Abstract

We can distinguish between two reasons for undertaking self-employment. The first treats self-employment as the only way of avoiding unemployment. According to this view self-employment is anticyclical and acts as a buffer.

The second reason puts emphasis on the entrepreneurial, risk-taking nature of self-employment, which according to this view is procyclical and similar to wage employment.

We examine these views by looking on labor market flows obtained from the Polish LFS. The results point to an anticyclical behavior of self-employed farmers and the entrepreneurial nature of own account workers and entrepreneurs with employees.

Key words: self-employment, business cycle, flows

JEL: E32, L25, J21

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## **I. Introduction**

We can distinguish between two different reasons for undertaking self-employment. The first treats self-employment as the only way of avoiding unemployment. According to this view self-employment is being undertaken with the aim of avoiding unemployment when economic growth deteriorates. It can be regarded as a buffer, an inferior possibility of obtaining employment. The second reason puts emphasis on the entrepreneurial, risk-taking nature of self-employment. During booms self-employment reflects the use of entrepreneurship and risk-taking behavior. It is viewed as similar to wage employment, not as an inferior way of employment.

Empirical research shows that both reasons are true for different countries. It also distinguishes between different forms of self-employment and includes personal characteristics of people undertaking this kind of employment. Unfortunately in the case of Poland research focusing on the behavior of self-employment in business cycle is obsolete.

Therefore using data from the Polish LFS and applying the methodology of labor market flows we try to look on the behavior of different categories of self-employment over the business cycle in Poland. The main question is whether self-employment in Poland is pro- or anticyclical. The obtained results confirm different behaviors for different categories of self-employment: self-employed farmers are anticyclical and can be viewed as a buffer whereas in the case of entrepreneurs with employees and own-account workers the entrepreneurial factor is of importance.

The paper is structured as follows. Section 2 reviews the relevant literature and Section 3 describes the data. In section 4 we focus on self-employed farmers, entrepreneurs with employees and own-account workers. In the concluding remarks we suggest some directions for further studies.

## II. Literature review

We can distinguish two different views on self-employment. The traditional view comes from Todaro (1969) or Harris and Todaro (1970). According to this view urban employment is divided into a modern sector, characterized by high productivity growth and a traditional sector regarded as stagnant, unproductive and with a low level of innovation. Due to this division the approach is also called dualistic. It assumes that self-employed are working in the traditional sector, which serves as a buffer for urban unemployed and newly arrived rural migrants. As they can not find employment in the modern sector they move to the traditional sector where they take up self-employment (either as own-account workers or as owners of micro firms<sup>1</sup>). This kind of employment is viewed as involuntary – it is being taken up because of a lack of other alternatives. It is also regarded as temporarily as wage employment is being sought. The traditional sector is often associated with “disguised unemployment”, the informal sector (shadow economy, unregistered work) and developing countries (de Soto, 1989).

The opposite approach emphasizes the risk-taking, entrepreneurial nature of self-employment. In his classical model Lucas (1978) pays attention to individuals who are endowed with a given and known level of entrepreneurial and managerial abilities. Those with a sufficient high level of managerial abilities become entrepreneurs while the rest become waged workers. Jovanovic (1982) assumes that the individuals don't have an exact idea about their entrepreneurial skill and learn about them by starting a firm. A wide literature for developed countries points to individual characteristics i.e. age, education, risk aversion as factors having an important impact when undertaking self-employment (Johnson, 1978; Jovanovic, 1979; Evans and Leighton, 1989; Bates, 1990; Honjo, 2004). Additionally Blanchflower and Oswald (1998) show self-employed to have higher levels of job and life satisfaction in comparison to salaried workers with the same characteristics. Contrary to the dualistic approach the literature for developed countries puts emphasis on the voluntary nature of self-employment, which is taken up with the aim of maximizing utility and not because of a lack of other job opportunities.

However some studies for developed countries show that self-employment can be involuntary: in the case of adverse economic conditions i.e. high and prolonged unemployment individuals take up self-employment due to the lack of other opportunities

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<sup>1</sup> We define these firms as those with less than 9 employees.

(Carrasco, 1999; Moore and Mueller, 2002). On the other hand some other studies for developing countries contradict the dualistic approach by showing the voluntary nature of self-employment in those countries. Those studies also underline the fact that the nature of self-employment in developing countries is quite similar to the one in developed countries (Bhattacharaya, 2002; Fajnzylber et al., 2006).

A part of the literature focuses also on the behavior of self-employment over the business cycle. Mandelman and Montes-Rojas (2007) look on this labor market status in Argentina over the period 1995-2003. They distinguish between entrepreneurs with employees and own account workers. According to their results self-employment is anticyclical: the number of self-employed individuals increases in times of recession (1995, 2000-2003) and decreases during booms (1996-1998). This could be viewed as evidence for the dualistic approach treating self-employment as a buffer: during recessions individuals, who lose or are unable to find employment move to self-employment, which can be treated as a form of “disguised unemployment”. On the other hand entrepreneurs with employees are procyclical: during booms/recessions the number of individuals moving to this labor market status increases/decreases – this would underline the entrepreneurial nature of this kind of self-employment.

The literature analyzing self-employment behavior over the business cycle in Poland is very limited. Tyrowicz and Nestorowicz (2010) look on the cyclical behavior of self-employment determinants showing that in the case of young women self-employment is being taken up due to the lack of other opportunities. What more, self-employment for this group is anticyclical. Other studies focus on analyzing labor market flows without distinguishing self-employment (Strawiński, 2009) or on analyzing the determinants of these flows (Bukowski, 2005).

Table 1 shows the most important conclusions from the literature review.

**Tabela 1 Conclusions from the literature review**

	<b>Type of self-employment</b>	<b>Dynamics over business cycle</b>	<b>Important aspects</b>
<b>Entrepreneurial approach</b>	Entrepreneurs with employees	Procyclical	Entrepreneurship, risk-taking
<b>Dualistic approach</b>	Own-account workers	Anticyclical	Self-employment as a temporary activity, taken up due to lack of other opportunities

### III. Data

We use data from the Polish labor force survey (LFS) for the period 1q1995-4q2009. This data allows for a complex analysis of self-employment, which is being defined using questions from the LFS. In the LFS the following types of self-employment can be distinguished:

- a) self-employed in farming;
- b) own-account workers (non-farming);
- c) entrepreneurs with employees (owners of firms, who employ other individuals; non-farming).

The LFS allows for the use of micro data and also for the observation of different categories on the labor market: various forms of self-employment, wage employment, unemployment and inactivity. It also allows for estimating flows between these categories. Other available sources of data (i.e. data from the Central Statistical Office regarding micro firms) don't allow for such a kind of analysis due to the lack of information regarding self-employment and the degree data aggregation.<sup>2</sup>

Table 2 shows the size of different categories on the labor market during 1995-2009:

**Table 2 Size of various labor market categories (annual averages, thou.) 1995-2009**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
a) Self-employed farmers	2 975	2 970	2 781	2 596	2 398	2 465	2 494	2 397	2 281	2 266	2 230	2 084	2 016	1 991	1 899
b) Entrepreneurs with employees	750	769	768	812	794	762	790	739	714	752	753	785	812	830	843
c) Own account workers	567	578	658	670	711	670	696	690	718	671	652	698	747	800	866
d) Self-employed (a+b+c)	4 292	4 317	4 207	4 077	3 902	3 897	3 981	3 826	3 713	3 688	3 635	3 568	3 575	3 621	3 608
e) Wage employed	10 398	10 550	10 880	11 191	10 858	10 546	10 226	9 775	9 904	10 107	10 480	11 004	11 630	12 133	12 218
f) Working population LFS	14 690	14 868	15 086	15 268	14 761	14 443	14 207	13 601	13 617	13 795	14 116	14 571	15 205	15 754	15 826
g) Unemployed	2 206	2 039	1 867	1 754	2 229	2 785	3 170	3 385	3 342	3 257	3 076	2 378	1 654	1 238	1 443
h) Inactive	12 149	12 430	12 675	12 933	13 210	13 369	13 466	13 838	13 994	14 071	14 066	14 512	14 778	14 621	14 420

Data Source: LFS

The number of self-employed amounted in the period 1995-2009 for about 22% to 29% of the working population. This share reached its highest value during the period 1995-2002 – since then it diminished due to fall in the number of self-employed farmers (from 17% of the working population in 2002 to 12% in 2007). However self-employed farmers are still the biggest group of self-employed: during the period 1995-2009 their share in the population of self-employed ranged between 52% and 70% - although it gradually declined. Entrepreneurs with employees constitute about 17%-24% of all self-employed, whereas own-account

<sup>2</sup> A problem concerning LFS data is the discontinuity of the survey during 2q1999-3q1999. To obtain the missing data we extrapolate using the nearest observations.

workers 13%-24%. This second type of self-employment can be characterized by a high growth rate during most of the period 1995-2009 (especially since 2006).

We focus on labor market flows to/from self-employment by analyzing the probability that an individual changes his labor market status between two quarters. This probability was equal to the number of individuals leaving one labor market status during a quarter divided by the number of individuals in this status and was measured from 0 to 1. The probabilities of change from/to self-employment are quite low (both in quarterly and annual data): they don't exceed 0,05 and often they range from 0.01 to 0.02. The highest probabilities, 0.85-0.95, are obtained in the case an individual remains in the same labor market status between two quarters.

Due to large number of flows<sup>3</sup> we focus solely on flows between self-employment and unemployment. Other flows are analyzed only in case they lead to some interesting results.

## **IV. Results**

### **IV.1 Self-employed farmers**

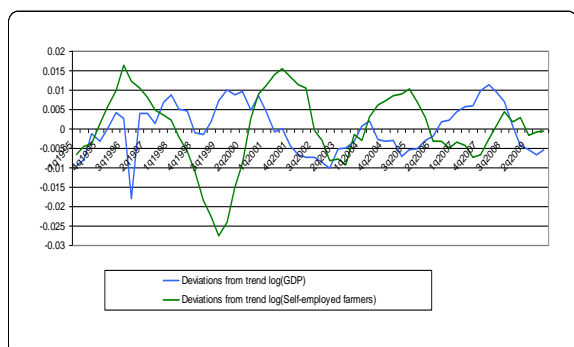
According to Table 2 self-employed farmers are the most numerous group among self-employed. It was also the only group which was diminishing in the long run: by about 37% between 1995-2009.

Figure 1 and Figure 2 can be used to analyze self-employed farmers over the business cycle. Figure 1 presents deviations from trend obtained with Hodrick-Precott (HP) filter for the log of self-employed farmers and for the log of GDP for the period 1q1995-4q2009. Figure 2 shows the number of self-employed farmers, its HP trend and the unemployment rate.

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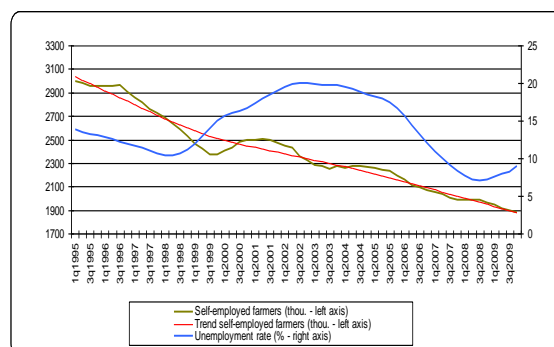
<sup>3</sup> We distinguish 3 kinds of self-employment and 3 other labor market categories (wage employment, unemployment and inactivity). Analyzing all flows between self-employment and other labor market categories we obtain 18 flows based on quarterly data. Additionally the same analysis was repeated for yearly data. Altogether we obtain 36 flows.

**Figure 1 Deviations from HP trend log(self-employed farmers) and from HP trend log(GDP), 1q1995-4q2009**



Data Source: LFS, Statistical Bulletin

**Figure 2 Self-employed farmers (sa), HP trend and unemployment rate (sa), 1q1995-4q2009**

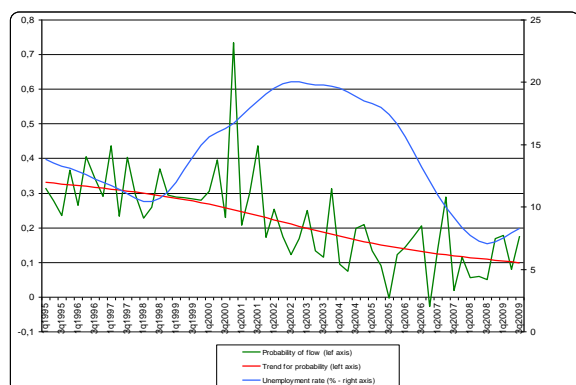


Data Source: LFS, Statistical Bulletin

According to Figure 1 self-employed farmers are behaving anticyclical: during booms/recessions the number of self-employed farmers declines/increases. Therefore we can assume that self-employed farmers act as a buffer when economic growth is weak and this trend is reversed during boom times. The correlation between the variables shown on Figure 1 is equal to -0.24 (and is statistically significant at 10%). The anticyclical behavior of self-employed farmers is also confirmed on Figure 2 (although it is weaker than on Figure 1): when unemployment rose in the period 4q2000-3q2001 the number of self-employed in farming increased. The HP trend on figure 2 shows a decreasing number of self-employed farmers. This can be explained by ongoing restructuring processes in farming. The number of individuals working in individual farming decreased during 1993-2008 due to two reasons. First the flow of individuals aged 45 and more to inactivity rose substantially (this was connected to pensions, and structural rents). Second young people aren't interested in employment in farming and so their flow to employment outside of farming increased.

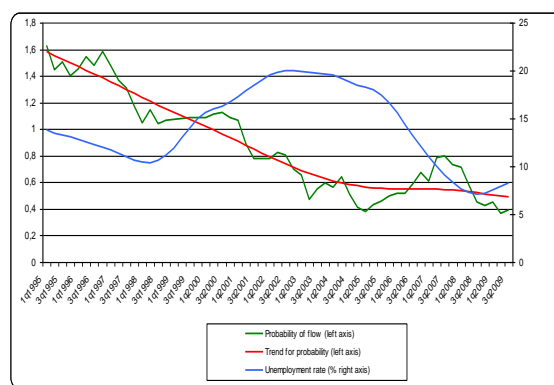
Figure 3 and 4 show the probability of flow from self-employed farmers to unemployment and vice versa, respectively.

**Figure 3 Probability of flow from self-employed farmers to unemployment (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

**Figure 4 Probability of flow from unemployment to self-employed farmers (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

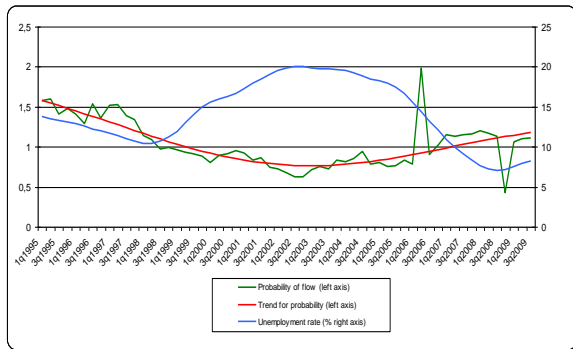
The trend for flows from self-employed farmers to unemployment indicates that these flows are diminishing over the long run. We should also observe the increase in these flows during the period 4q2000-3q2001 when unemployment was rising as a consequences of deteriorating economic conditions. In boom times flows from self-employed farmers to unemployment decrease. We can interpret this fact as an evidence for the anticyclical nature of these flows. However the correlation between the unemployment rate and these flows is very weak (0.054) and statistically insignificant. The last few observations in the given period show only a slight increase in the flows from self-employed farmers to unemployment although unemployment is rising.

The trend for flows from unemployment to self-employed farmers is diminishing in the long run. We can also observe a stabilization of the trend during 3q2002-4q2002, the moment the unemployment rate begins to fall. Flows form unemployment to self-employed farmers move around this trend. For the last few observations theses flows are stable when unemployment is rising. This can point to the anticyclical nature of these flows.

Other flows to/from self-employed farmers also influence the behavior of this labor market status. The most interesting of these flows are shown on Figure 5 and Figure 6: the flow from self-employed farmers to wage employment (Figure 5) and to inactivity (Figure 6). Both flows exhibit similar patterns – they rise in boom times and decrease during recessions. Both have also a strong negative correlation with the unemployment rate: -0.5 for flows to wage employment and -0.44 for flows to inactivity (both flows are statistically significant at 10%).

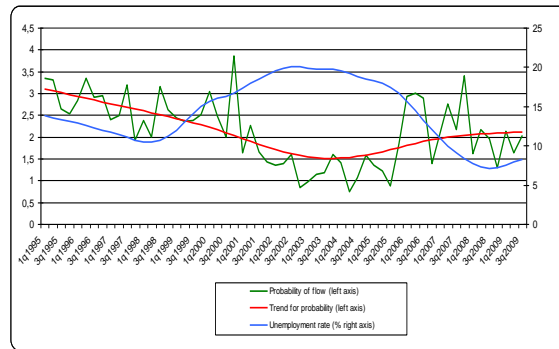


**Figure 5 Probability of flow from self-employed farmers to wage employment (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

**Figure 6 Probability of flow from self-employed farmers to inactivity (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

We use the Mann-Whitney test for each flow to/from self-employed farmers to test whether or not our results are robust. If we assume that the flows are connected to business cycle then the Mann-Whitney test should point to significant differences between the medians in the subsamples. We divide the sample arbitrarily into subsamples according to changes in the trend for the unemployment rate. We obtain four subsamples for the periods: a) 1q1995-4q1998; b) 1q1999-4q2002; c) 1q2003-2q2008; d) 3q2008-3q2009. We conduct the test for all the possible combinations of subsamples.<sup>4</sup> In case of the flows to/from self-employed farmers the results of the test point to significant differences between medians in subsamples. Therefore we can assume that there is a relation ship between these flows and the business cycle.

We also apply Iterated Proportional Fitting to aggregated data on flows to/from self-employed farmers. The obtained data doesn't deviate from the data on flows obtained form the LFS.

We therefore can assume that self-employed farmers act as a buffer in recession times. However this is due to smaller outflows from this labor market status rather than to increased inflows into it.

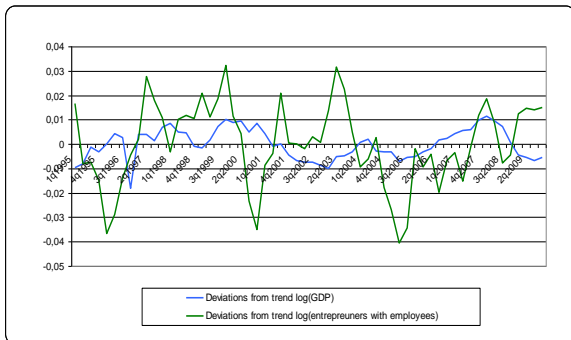
## IV.2 Entrepreneurs with employees

The longtime trend shows an increase of entrepreneurs with employees (Figure 8). Both Figure 7 and Figure 8 show a procyclical behavior of this labor market status. Decreases/increases in the number of entrepreneurs with employees are connected to

<sup>4</sup> The results of the test are listed in Appendix 2.

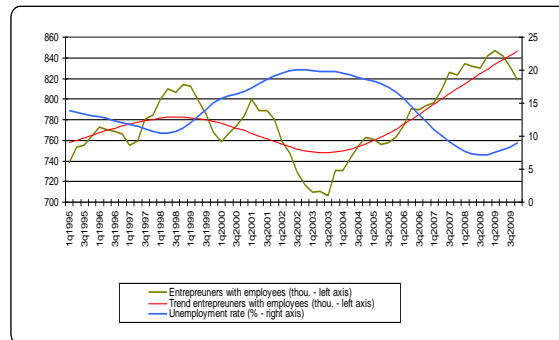
recessions/booms and a rise/fall in the unemployment rate. Additionally the correlation between the unemployment rate and entrepreneurs with employees is strongly negative: -0.82 (and statistically significant at 1%). This would rather point to the entrepreneurial nature of this labor market status in contrast to the buffer nature of self-employed in farming.

**Figure 7 Deviations from HP trend log(entrepreneurs with employees) and from HP trend log(GDP), 1q1995-4q2009**



Data Source: LFS

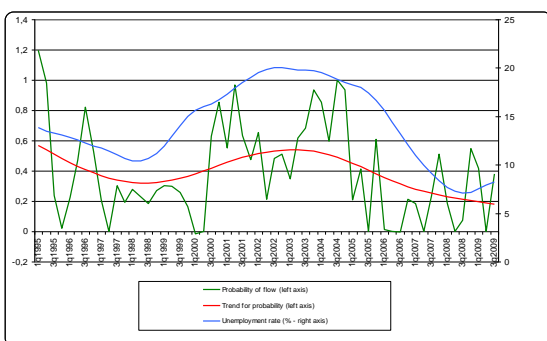
**Figure 8 Entrepreneurs with employees (sa), HP trend and unemployment rate (sa), 1q1995-4q2009**



Data Source: LFS

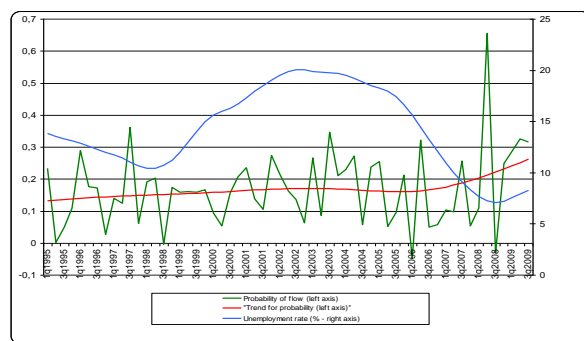
Figure 9 and Figure 10 show the probability of flow from entrepreneurs with employees to unemployment and vice versa. The business cycle is mostly responsible for the destruction of entrepreneurs with employees and flows from unemployment to this labor market status are rather acyclical. However we can observe an increase in the trend for this flow despite rising unemployment. We are not able to say anything interesting for other flows to/from entrepreneurs with employees.

**Figure 9 Probability of flow from entrepreneurs with employees to unemployment (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

**Figure 10 Probability of flow from unemployment to entrepreneurs with employees (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

As in the case of flows to/from self-employed farmers we use the Mann-Whitney test for each flow to test whether or not our results are robust. The test showed no statically significant difference between medians in subsamples for the flow from entrepreneurs with employees to unemployment. This can be interpreted as a lack of relationship between this flow and the business cycle. In the case of the flow from unemployment to entrepreneurs with employees the differences between medians in subsamples significant.

We also apply Iterated Proportional Fitting to aggregate data on flows to/from self-employed farmers. The obtained data doesn't deviate from the data on flows obtained from the LFS.

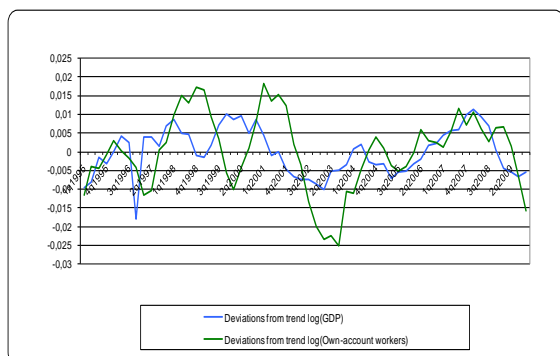
The obtained results show that the creation of entrepreneurs with employees (and firms connected to these entrepreneurs) is independent of the business cycle. The business cycle influences its destruction, which increases during recessions. This would point to the entrepreneurial nature of this labor market status. However the results of the Mann-Whitney test show rather a lack of relationship between the business cycle and the flow from entrepreneurs with employees to unemployment.

### **IV.3 Own account workers**

Figure 11 shows a gradual increase in the number of own-account workers in the long-run. Two periods of extremely high growth: 1q1996-4q1999 (growth by 35,6%), 2q2005-4q2009 (growth by 41,4%) and a period of stabilization: 1q2000-3q2004 can be distinguished. The increase in the number of self-employed in the period 2q2005-4q2009 can be attributed to the introduction of a flat tax rate of 19% - own-account workers were able to choose between this tax rate or a progressive one. Applying the flat tax rate allows for an increment in the after tax income and could be a factor driving flows from other labor market status to own account workers. On the other hand these changes can't be really seen in the data on flows from wage employment to own-account workers.

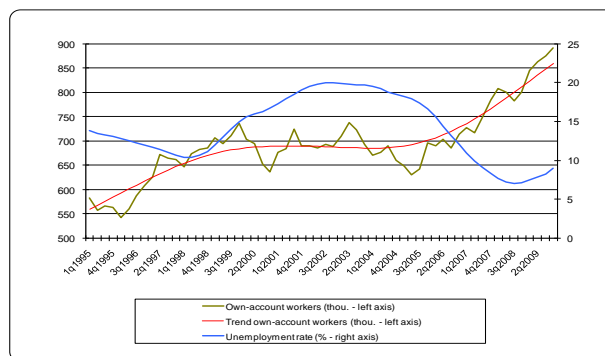
Figure 10 and Figure 11 show that own-account workers behave rather procyclical: the number of own-account workers increases with a decreasing unemployment rate. When the unemployment rate increases the number of own-account workers stabilizes.

**Figure 11 Deviations from HP trend log(own-account workers) and from HP trend log(GDP), 1q1995-4q2009**



Data Source: LFS, Statistical Bulletin

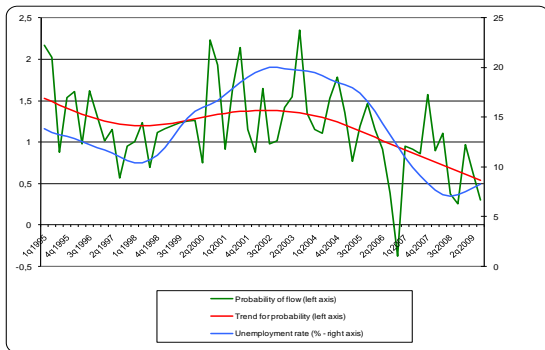
**Figure 12 Own-account workers (sa), HP trend and unemployment rate (sa), 1q1995-4q2009**



Data Source: LFS, Statistical Bulletin

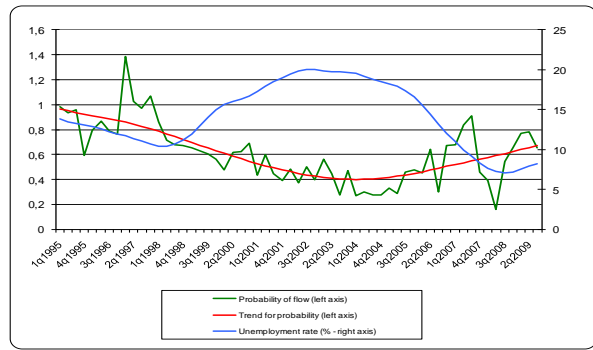
The cyclical behavior of own-account workers is better observed in data on flows. We can observe that flows from own-account workers to unemployment are anticyclical: a high probability for this flow is associated with a high unemployment rate. This probability declines when the unemployment rate falls (Figure 13). We can also observe that during 2008-2009 the unemployment rate rises and flows from own-account workers to unemployment decline – however further comments on this fact are only possible after data for 2010 is analyzed (this data isn't yet available). The anticyclical behavior of flows from own-account workers towards unemployment can also be documented by a high correlation between these flows and the unemployment rate: 0.44 (statistically significant at 10%). Flows from unemployment to own-account workers are procyclical: these flows decrease during recessions and increase during booms. The correlation between these flows and the unemployment rate is equal to -0.49 and statistically significant at 10%. Therefore we can assume that the business cycle influences both the creation and the destruction of own-account workers.

**Figure 13 Probability of flow from own-account workres to unemployment (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

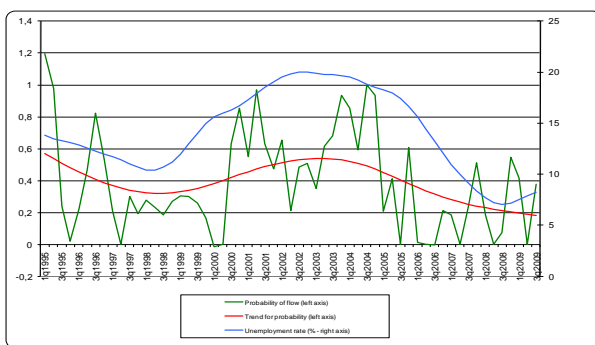
**Figure 14 Probability of flow from unemployment to own-account workers (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

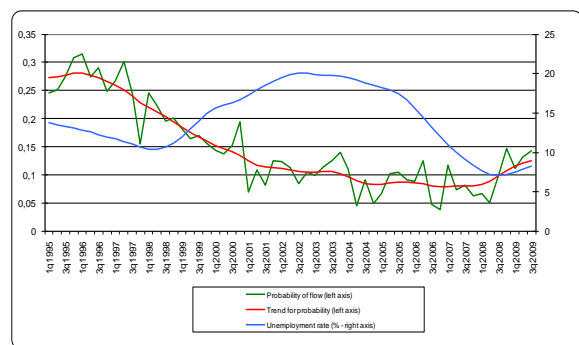
Figure 14 to Figure 16 show other important flows to/from own-account workers. We can observe diminishing flows from own-account workers to wage employment with a large drop in these flows in the 4q1999 when unemployment begins to rise. Flows from wage employment to own-account workers are procyclical: during recessions these flows decrease; they increase during booms. The correlation between these flows and the unemployment rate is equal to  $-0.25$  (statistically significant at 10%). Flows from own-account workers to inactivity decrease when the unemployment rate increases and vice versa. The correlation between these flows and the unemployment rate is equal to  $-0.32$  (statistically significant at 10%).

**Figure 15 Probability of flow from own-account workres to wage employment (sa) and HP trend, 1q1995-4q2009**



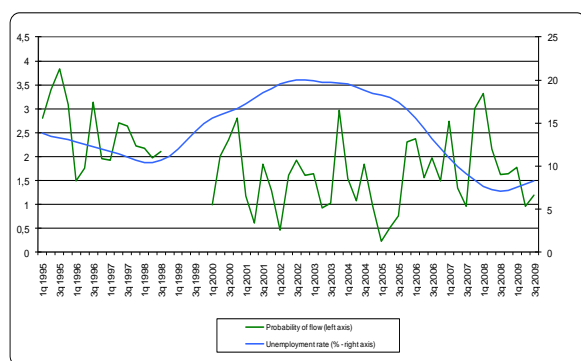
Data Source: LFS

**Figure 16 Probability of flow from wage employment to own-account workers (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

**Figure 17 Probability of flow from own-account workers to inactivity (sa) and HP trend, 1q1995-4q2009**



Data Source: LFS

We use the Mann-Whitney test for flows to/from own-account workers to test whether or not our results are robust. The results of the test point to significant differences between medians in subsamples. Therefore we can assume that there is a relationship between these flows and the business cycle.

We also apply Iterated Proportional Fitting to aggregate data on flows to/from own-account workers. The obtained data doesn't deviate from the data on flows obtained from the LFS.

Our results underline the entrepreneurial nature of own-account workers.

## V. Conclusions

The literature is dominated by two opposite views on the nature of self-employment. According to the dualistic view self-employment is a buffer providing work for the unemployed. It is temporary and is being taken up due to the lack of other opportunities. The dualistic view also underlines the anticyclical behavior of self-employment. The opposite hypothesis puts emphasis on the entrepreneurial nature of self-employment and regards self-employment as procyclical.

The literature analyzing self-employment behavior over the business cycle in Poland is very limited. It mostly focuses on determinants of self-employment rather than on flows to/from self-employment.

In this paper we use data from the Polish LFS for the period 1q1995-4q2009. We distinguish between 3 types of self-employment: a) self-employed farmers; b) entrepreneurs with employees; c) own-account workers. The main form of self-employment is still self-

employment in farming although its share declined during 1995-2009 whereas the shares for the other two types of self-employment increased.

A detailed analysis of aggregate data and flows shows that self-employed farmers are anticyclical. They act as a buffer during recessions. However this is due to smaller outflows from this labor market status than to increased inflows into it. The creation of entrepreneurs with employees is independent of the business cycle, which has influence on its destruction. This would underline the entrepreneurial nature of this labor market status. However the test Mann-Whitney showed no statically significant difference between medians in subsamples for the flow from entrepreneurs with employees to unemployment. For own-account workers business cycle influences the creation and destruction. Flows from own-account workers to unemployment are anticyclical and flows from unemployment to own-account workers are procyclical.

The obtained results also suggest directions for further research concerning the behavior of different types of self-employment over the business cycle. One of them can focus on self-employment in different sectors of the economy (agriculture, industry, construction, services). Another should investigate the influence of individual determinants i.e. age, gender, education on the probability of undertaking self-employment.

## Appendix 1

### Correlations for the most important flows to/from various kinds of self-employment with unemployment rate

* - significant at 10%	Unemployment rate
Self-employed farmers>> Unemployment	0,054
Self-employed farmers >>Wage employment	-0,503*
Self-employed farmers >>Inactivity	-0,449*
Entrepreneurs with employees>> Unemployment	0,4342*
Own-account workers>> Unemployment	0,446*
Own-account workers >> Wage employment	-0,193
Own-account workers >> Inactivity	-0,325*
Unemployment >> Self-employed farmers	-0,16
Unemployment >> Entrepreneurs with employees	-0,071
Unemployment >> Own-account workers	-0,498*
Wage employment >> Self-employed farmers	-0,131
Wage employment >> Entrepreneurs with employees	-00002
Wage employment >> Own-account workers	-0,245*

Source: Own calculations



## Appendix 2

### P-value for Manna-Whitney test for the most important flows to/from various kinds of self-employment

<b>H0: medians in subsamples are equal *-H0 is rejected at 5%</b>	<b>I period vs. II period</b>	<b>II period vs. III period</b>	<b>III period vs. IV period</b>	<b>I period vs. III period</b>	<b>I period vs. IV period</b>	<b>II period vs. IV period</b>
Self-employed farmers >> Unemployment	0,18	0,00*	0,95	0,00*	0,00*	0,00*
Self-employed farmers >> Wage employment	0,00*	0,312	0,71	0,00*	0,01*	0,01*
Self-employed farmers >> Inactivity	0,00*	0,12	0,62	0,00*	0,00*	0,26
Entrepreneurs with employees >> Unemployment	0,41	0,58	0,64	0,77	0,79	0,39
Own-account workers >> Unemployment	0,53	0,44	0,01*	0,76	0,00*	0,00*
Own-account workers >> Wage employment	0,00*	0,19	0,32	0,00*	0,00*	0,18
Own-account workers >> Inactivity	0,00*	0,86	0,73	0,00*	0,00*	0,59
Unemployment >> Self-employed farmers	0,00*	0,00*	0,00*	0,00*	0,00*	0,00*
Unemployment >> Entrepreneurs with employees	0,64	0,91	0,24	0,45	0,15	0,05
Unemployment >> Own-account workers	0,00*	0,06	0,02*	0,00*	0,02*	0,03*
Wage employment >> Self-employed farmers	0,00*	0,01*	0,80	0,00*	0,00*	0,14
Wage employment >> Entrepreneurs with employees	0,11	0,27	0,80	0,03*	0,06	0,50
Wage employment >> Own-account workers	0,00*	0,00*	0,01*	0,00*	0,00*	0,46

Note: I period: 1q1995-4q1998; II period: 1q1999-4q2002; III period: 1q2003-2q2008; IV period: 3q2008-3q2009

Source: Own calculations

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