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### **The Economic Standing of the Partnership Companies which Lease Agricultural Real Estate from the Agricultural Property Agency of the State Treasury in Gorzów Voivodeship in 1996 and 1997**

by

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# **The Economic Standing of the Partnership Companies which Lease Agricultural Real Estate from the Agricultural Property Agency of the State Treasury in Gorzów Voivodeship in 1996 and 1997**

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*Abstract:* The aim of the work was to present the results of the analyses economic standing of the partnership companies which lease agricultural real estate from Agricultural Property Agency of State Treasury (APA) in 1996 and 1997. The analyses proved poor economic condition of the firms under investigation and especially their low level of stabilisation (the index of total debt was in 1996 equal to 0.88 and in 1997 to 0.96) and the low level of their solvency.

## **1. Introduction**

The aim of the work is the presentation of the economic standing of the liability limited partnerships acting in agriculture in Gorzów Voivodeship in 1996 and 1997. This topic is not well described in the agricultural economics literature because of difficulties in data availability. The economic analyses were done in using methods of determining the relations between economic performance and its cost as well as the used resources. The measurement and presentation of the economic events were carried out in using selected financial indexes scheduled by Wasniewski (1993, p. 48). The index package was constructed on the base of nomenclature and ways of calculation by Wasniewski (1993, p. 39-46), Rutkowski (1993, p. 1-5) and Bednarski (1998, p. 71).

The analysis of financial indexes comprises following groups of indexes: indexes of financial support (index of equity capital usage, index of external capital usage, index of capital structure, index of assets structure, index of general financial standing, index of total debt,

index of long-term debt, index of interest cover, index of credit certainty, debt repayment time), indexes of liquidity (general and current), turnover indexes (of assets, fixed assets, stocks turnover time, dues vindication), profitability indexes (of sale, total assets, stocks wages, operational turnover), labour efficiency indexes (assets per employee, work efficiency and average labour cost), additional indexes calculated per ha of arable land (sale value, cost according to the types, assets value, obligations value, investment value, equity capital change).

The work was prepared on the base of following the statistical reports from 1996 and 1997: income reports and cost and financial results reports (F-01), financial statistical reports (F-02), reports of land use, crops structure and yields (R-05), reports of animal herd status and animal production (R-09), reports of employment and wages (Z-06). The analyses were based on 35 firms in 1996 and 34 firms in 1997, which leased agricultural real estate and had a completed reports set in Statistical Office in Gorzów Wielkopolski. In the analyses we have divided the firms into three groups:

1. According to arable land area. Three classes have been indicated: the first class up to 1000 hectares of land, the second class with the 1000 to 2000 ha of arable land, and the third class above 2000 ha of arable land.
2. According to total obligations value per ha of arable land. There were three classes: up to 1000 zloties per ha, in between 1000 - 2000 zloties per ha, and above 2000 zl/ha.
3. According to short-term obligations per ha of arable land. There were three classes distinguished: up to 1000 zl/ha, in between 1000 to 2000 zl/ha, and above 2000 zl/ha.

The tables in the paper and in the supplement describe the data. Table 1 presents financial support indexes, table 2 turnover indexes and indexes of financial liquidity. Table 3 contains probability indexes and labour efficiency indexes. Table 4 presents sale returns and cost according to the types. Table 5 contains assets value and table 6 obligations value, investment value and equity capital change. There are following abbreviations used in the work: a.l - arable land, T.O. - total obligations value, S.O. - short-term obligations value.

Table 1 presents the characteristic of the analysed companies. The average area of the farms in 1996 was 1560 ha of arable land and 1549 ha in 1997. The total arable land (a.l.) of the examined partnerships was 54595 ha of a.l. which made 15.4% of arable land in Gorzów Voivodeship in 1996. There were in total 1639 employees occupied in these companies in 1996 and 1393 in 1997, that is 3 persons per 100 ha of a.l. in 1996 and 2.65 persons in 1997.

The animals herd index described by Big Calculation Units per 100 ha of a.l. was 26 and 25 units respectively. The crops yield in the examined firms as about 31.5 dt per ha of a.l., the rape yield 18.4 dt/ha in 1996 and 21.4 dt/ha in 1997, and finally the sugar beets yields were 330 dt/ha and 407 dt/ha respectively.

## **2. Researches results**

### **a. Financial Support Indexes**

The equity capital usage index expresses the share of equity capital to total capital. More equity capital in economic activity financing indicates that the firm is more solid and operation risk is lower. Large equity capital ensures independence, protects from bankruptcy as the consequence of in debtness and creates solvency foundations for getting new credits as well as reduces the short-term financial liquidity loss hazard.

Equity capital usage index in the examined firms was equal to an average of 0.34 in 1996 and 0.05 in 1997. In the partnership companies grouped by arable land area it varied from 0.11 (firms of 1000 to 2000 ha class) to 0.53 in firms above 2000 ha of a.l. While the criterion of obligations value in total was used this index was in between 0.13 and 0.73 in 1997. The highest index of equity capital usage was observed in companies with the total obligations level per ha under 1000 zł, but the lowest one in firms where obligations value was calculated above 2000 zł/ha a.l. In the partnerships grouped by short-term obligations level per ha of a.l. the value of the analysed index varied from 0.1 in the firms with these obligations above 2000 zł/ha of a.l., to 0.53 in firms with short-term obligations under 1000 zł/ha.

In 1997 the index of equity capital usage in the companies compared by the arable land area varied from -0.60 to 0.45. In the size group under 1000 ha of a.l. it was -0.07, in the group 1000 to 2000 ha of a.l. -0.60 and in the group above 2000 ha of a.l. 0.45. In the group of firms classified according to the value of total obligations the level of equity capital usage index varied from -0.24 (in the class of total obligations above 2000 zł/ha of a.l.) to 0.80 for the firms in the class under 1000 zł/ha of a.l. In companies grouped according to short-term

*Table 1. Description of the examined population*

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
Employees per 100 ha a.l.	3.00	2.65	3.08	2.80	3.07	2.90	2.94	2.47	2.20	1.39	3.16	2.55	3.79	3.43	2.72	2.32	3.63	2.68	3.96	4.21
Animal stock in big units/100 ha a.l.	26.0	25.0	16.0	33.0	14.0	11.0	36.0	28.0	20.0	10.0	25.0	21.0	33.0	38.0	24.0	23.0	44.0	23.0	15.0	38.0
Cereals crops	31.5	31.4	22.2	24.6	30.3	30.8	36.4	35.3	30.0	33.2	25.7	27.7	36.9	35.7	31.4	29.8	35.4	35.7	31.7	28.5
Rape crops	18.4	21.4	18.0	15.6	15.2	19.6	19.6	23.7	15.0	23.0	21.2	18.9	19.7	22.6	17.1	22.5	23.5	20.6	9.4	18.2
Sugar beets crop	330	407	330	390	319	400	348	413	326	409	406	425	326	402	350	415	338	405	312	400

obligations in 1997 the index was in between -0.77 and 0.37. The highest level of equity capital usage index was observed in the partnerships where level of short-term obligations varied from 1000 zł to 2000 zł/ha and the lowest one in the companies with a short-term obligations value of above 2000 zł/ha of a.l.

An additional index in this analysis was an index of external capital usage, which informs about the level of debt and is related to this financial risk. One can discuss advantages in the financial situation of the firm if:

- ⇒ the index of equity capital usage is higher than 1 and external capital usage index is below 1,
- ⇒ the index of equity capital usage indicates a rising trend and the external capital usage index shows a decreasing trend.

Indexes of external capital usage in 1996 among the examined firms was in average 1.31 and varied according to the analysed groups from 1.31 to 1.54. In the partnerships the highest level of this indexes is observed in the firm of the area under 1000 ha of a.l. (1.54) and the lowest in the companies with the area of 1000 to 2000 ha of a.l. (1.27). In the group formed by the total obligations value per ha of a.l. the lowest index is observed in the firms with obligations level under 1000zł/ha of a.l., but the highest (1.36) in firms with obligations exceeding 2000 zł/ ha of a.l. In the third types of partnerships in 1996 we have observed the level of external capital usage index in between 1.27 and 1.50. The highest level of this index was reached in the companies with short-term obligations between 1000 and 2000 zł/ha of a.l., and the lowest in the firms having short-term obligations under 1000 zł/ha and above 2000 zł/ha of a.l.

In 1997 the index of external capital usage in the examined firms of Gorzów Voivodeship had a value of 1.62 (average) and varied accordingly to the analysed groups from 1.14 to 2.14. The group defined by the agricultural land area had indexes in the range of 1.39 to 1.86. The minimum value of the external capital usage index was identified in firms of the size over 2000 ha of a.l., and the maximum in firms in the group under 1000 ha of a.l. In the group of firms defined by the level of obligations the index varied in all classes from 1.14 to 1.80. The minimum value had the partnerships with total obligations level under 1000 zł/ha of a.l. and the maximum one in firms with the obligations above 2000 zł/ha of a.l. In the group of firms defined by the short-term obligations index level of the external capital usage the index varied from 1.33 to 2.14. The lowest value of this index was observed in the firms with short-term

obligations between 1000 and 2000 zł/ha of a.l. The highest value was observed in the firms with-term obligations above 2000 zł/ha of a.l.

The index of the capital structure expresses the relation of equity capital to all the firm's obligations. High levels of this index prove the good standing of the firm and their good financial condition. Among the examined firms in 1996 the average level of the capital structure index was 0.13 and varied according to the analysed group from 0.03 to 0.39. In the companies defined by the agricultural area size this index level was in between 0.03 and 0.27. The lowest value of this index was observed in the firms with an area size of 1000 to 2000 ha of a.l. and the highest one in the companies with a size over 2000 ha of a.l. In the partnerships examined by the level of total obligations value per ha of a.l. the index of the capital structure varied from 0.04 to 0.39. The lowest level of this index had been noticed in the firms with total obligations above 2000 zł/ha of a.l. and the highest in firms with total obligations under 1000 zł/ha of a.l. In the analysed companies according to short-term obligations per ha the capital structure index varied from 0.02 to 0.26. The minimum level of this index (0.02) was observed by the firms with short-term obligations over 2000 zł/ha of a.l., the maximum by the firms with short-term obligations under 1000 zł/ha of a.l.

In 1997 the index of capital structure had an average value of 0.02 and varied according to the analysed groups from -0.23 to 0.50. In 1997 the companies defined by the agricultural level area had a level of the capital structure index in between -0.17 and 0.24. The minimum value of this index (-0.17) was observed in companies with a size of 1000 to 2000 ha, the maximum in the firms above 2000 ha of a.l. In 1997 in the group of firms analysed according to the total obligations level, the index of the capital structure varied from -0.09 to 0.50. The lowest value was registered in the firms with total obligations above 2000 zł/ha of a.l., the highest one in the firms with total obligations per ha under 1000 zł. The companies defined by the criteria of short-term obligations per ha of a.l. had a the level of -0.23 to 0.16. The highest value was registered in the companies with short-term obligations of 1000 to 2000 zł/ha of a.l. and the lowest one in the firms with short-term obligations over 2000 zł/ha of a.l.

The basic index of the assets structure (called degree of the assets lock or elasticity degree) expresses the ability of the company to adjust to market changes. The value of an index above 1 means a relatively low elasticity and below 1 a higher elasticity. We should consider the fact that moveable assets are directly connected with profits. So the relation between fixed assets and moveable assets is not indifferent for the company. Firms including the agricultural ones should try to increase the value of moveable assets and decrease the amount of fixed

assets. The average index of the assets structure in analysed companies was in 1996 0.48 and varied from 0.30 to 0.84. The group of firms defined according to the size structure indicated our index level of 0.30 in the size group 1000 to 2000 ha of a.l., an index level of 0.69 in the size group under 1000 ha and of 0.68 in the group above 2000 ha of a.l. In the group of firms examined according to the total obligations level per ha of a.l. this index varied from 0.42 to 0.62. The lowest value occurred in firms with total obligations exceeding 2000 zł/ha of a.l. and the highest in firms with total obligations under 1000 zł/ha. In the group defined by the short-term obligations per ha the level of assets structure index varied from 0.30 to 0.66. The lowest value of this index was observed in partnerships with obligations over 2000 zł, and the highest in the firms with short-term obligations between 1000 and 2000 zł/ha of a.l.

In 1997 the value of the assets structure index was in average 0.67 and varied from 0.52 to 0.83. In 1997 in the firms analysed according to the agricultural land area the assets structure index varied from 0.52 to 0.83. The minimum level of this index was observed in the partnerships with 1000 to 2000 ha of a.l. and the maximum one in the firms of size under 1000 ha. In the group of firms defined according to the total obligations level the index of assets structure ranged from 0.64 to 0.71 in 1997. The minimum value of this index (0.64) was registered in the firms with total obligations value above 2000 zł/ha. The highest value (0.71) was noticed in the companies with the total obligations value under 1000 zł/ha a.l. and firms between 1000 to 2000 zł/ha of obligations value. Among the partnerships defined according to the level of short-term obligations per ha of a.l. the level of the assets structure index ranged from 0.64 to 0.78. The lowest level of this index was observed in the firms with short-term obligations value over 1000 zł/ha of a.l. the highest value of the assets structure in the firms with short-term obligations under 1000 zł/ha of a.l.

The index of general financial standing expresses the assets structure and capital structure of the company and the way of assets financing. A decrease of this index indicates a worsening of firm's financial standing. The average level of this index was 0.26 in 1996 and ranged (according to the groups) from 0.09 to 0.46. In the companies grouped according to the agricultural land area the level of this index was the lowest (0.09) in the size group 1000 to 2000 ha, and the highest in the firms above 2000 ha of a.l. While the analysis was done according to the total obligations level per ha of a.l. this index varied from 0.10 to 0.63. The lowest level of this index is observed in the firms, where obligations value is under 1000 zł/ha of a.l. While the short-term obligations describe the general financial standing the index ranged from 0.07 to 0.42. The lowest level was registered in the group of firms with the

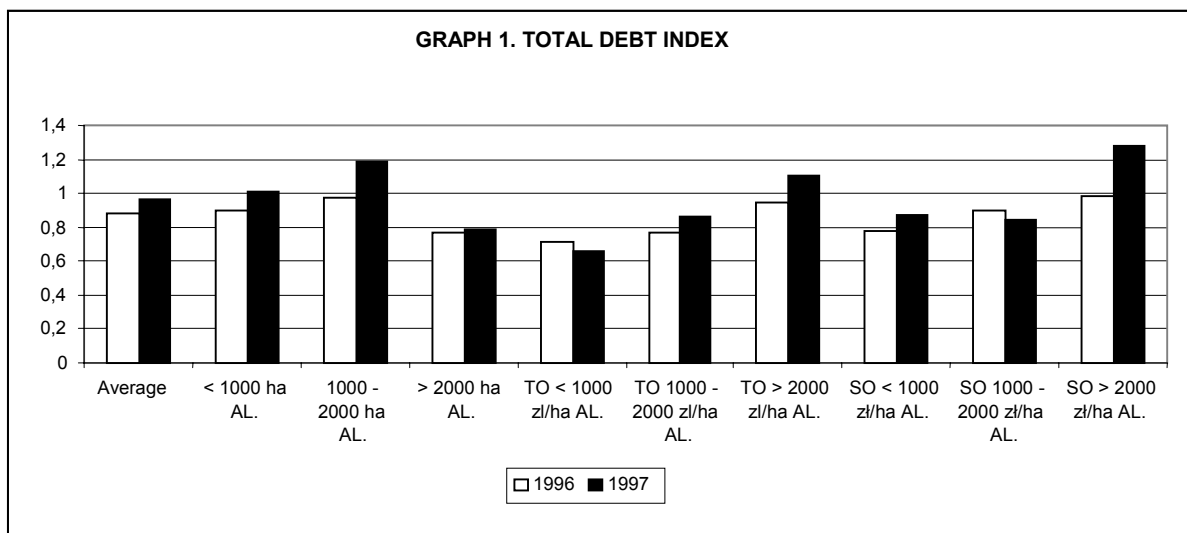
obligations per ha higher than 2000 zł. The highest level of the general financial standing index of this group was noticed in the companies with short-term obligations under 1000 zł/ha of a.l.

In 1997 the general financial standing index was according to the analysed group in between -0.36 and 0.70. In 1997 in the firms defined by the size structure this index ranged from -0.33 to 0.33. The minimum values of the general financial standing index were noticed in the firms with of 1000 to 2000 ha of a.l., the maximum values in the companies over 2000 ha. In 1997 the index of general financial standing of the firms analysed according to the level of total obligations per ha of a.l. had values from -0.14 to 0.70. The lowest values of this index were registered in the partnerships where the total obligations level was above 2000 zł/ha, the highest in firms with the total obligations level under 1000 zł/ha of a.l. While the criteria of the short-term obligations level was used the value of the general financial standing index varied from -0.36 to 0.28. The lowest level was observed in the companies with the short-term obligations level ranged from 1000 to 2000 zł/ha of a.l. and in the class above 2000 zł/ha. The maximum values were registered in the firms with short-term obligations under 1000 zł/ha of a.l.

The index of the total debt expresses the relations among the different forms of capitals. The average value of the total debt index in the examined group was 0.88 in 1996 and ranged from 0.71 to 0.97 according to the analysed group. It means that the companies are characterised by the high level of indebtedness. While the firms are divided by the size structure the index of total debt was 0.77 to 0.97. The lowest values (0.77) were observed in the firms with over 2000 ha of a.l. and the highest (0.97) in the companies of 1000 to 2000 ha of a.l. The index of total debt was in the case of partnerships with below 1000 ha 0.90. While the criterion of the total obligations level per ha was used this index ranged from 0.71 in firms with total obligations under 1000 zł/ha of a.l. to 0.95 in the firms with total obligations exceeding 2000 zł/ha of a.l. When the short-term obligations level was used, in 1996 the total debt index level ranged from 0.78 to 0.98. The lowest value of this index was registered in the companies with the short-term obligations under 1000 zł/ha of a.l., the maximum in the firms with short-term obligations exceeding 2000 zł/ha of a.l.

In 1997 the average index of total debt in the examined companies was 0.96 and ranged from 0.66 to 1.28. While the firms were classified according to the size structure the total debt index varied from 0.79 to 1.19. The lowest value of this index was registered in the companies administering the area above 2000 ha, but the highest in the size group 1000 to

2000 ha of a.l. While the criterion of total obligations level was used the index of total debt was in between 0.66 and 1.1. The minimum level of this index was observed in the partnerships where the total obligations level was under 1000 zl/ha of a.l., the maximum level



was registered in firms where total obligations value was higher than 2000 zl/ha of a.l. In the group of partnerships analysed according to the short-term obligation the total debt index ranged from 0.84 to 1.28. The lowest value of this index was noticed in the firms with the short-term obligations of 1000 to 2000 zl/ha of a.l., the highest in the firms with short-term obligations of more than 2000 zl/ha of a.l.

The long term debt index is a relation of long term obligations to equity capital. The desired value of this index is close to 0.5. A serious debtor is a firm with an index exceeding 1. The medium long-term debt index for the analysed partnerships in 1996 was calculated on 2.5 and varied according to the examined groups from 1.04 to 8. In the group of firms divided by size structure the value of the long-term debt index was 1.54 in companies above 2000 ha of a.l., 8.0 in companies of size 1000 to 2000 ha of a.l., and 4.55 was this indexvalue in the group under 1000 ha. While grouping this firms by the level of total obligations following values of the index were obtained: the lowest one (1.04) in the companies with total level of obligations under 1000 zl/ha of a.l., the highest one (6.79) in the partnerships with obligations level more than 2000 zl/ha. In the groups of firms analysed by short-term obligations burden the value of this index was in between 1.87 and 7.38. The minimum value was observed in the firms with short-term obligations exceeding 2000 zl/ha of a.l.

In 1997 the average index of long-term debt was 15.16. In the group of partnerships classified according to arable land area long term debt index varied from -14.5 to 1.54. The lowest

index was observed in the firms up to 1000 ha of a.l. and the highest one in the firms with the area above 2000 ha of a.l. As far as the level of total obligations is concerned the long-term debt index varied from -3.79 to 0.47. The minimum values of the index were connected with firms where total obligations level exceeded 2000 zł/ha of a.l., the maximum values with the firms where total obligations were under 1000 zł/ha of a.l. As far as the short-term obligations in 1997 were concerned the index of long term debt varied from -0.87 to -3.91. The minimum level of this index was observed in companies with short-term obligations over 2000 zł/ha of a.l., but the maximum in the firms with short-term obligations under 1000 zł/ha of a.l.

The index of interest cover is an instrument to measure and analyse the efficiency of inputs in connection with the obtained obligations. Investigations of this index proved, that gained money exceeded obligations connected with credit services. The average index of the interest cover for the examined partnerships in 1996 was 5.59 and varied according to the group of analysed firms from 3.83 to 22.33. In the group defined by the size structure the value of this index ranged from 3.83 to 9.11. The lowest index value was observed in companies over 2000 ha of a.l. and the highest value in companies up to 1000 ha. While the criterion of the total obligations burden was used the index of the interest cover varied from 4.56 to 10.16. The lowest level of this index was observed in companies, where total obligations were under 1000 zł/ha of a.l., but the highest one in companies where total obligations were between 1000 and 2000 zł/ha of a.l. When the short-term obligations criterion was used, the index of interest cover ranged from 3.58 to 10.43. The minimum value was registered in the firms with short-term obligations between 1000 and 2000 zł/ha of a.l. The highest level of this index was noticed in 1996 in the firms with short-term obligations exceeding 2000 zł/ha.

In 1997 the index of interest cover was 3.53 in average. In the firms analysed according to arable land area the index of interest cover varied from 2.1 to 6.8. The minimum value of this index was registered in firms bigger than 2000 ha of a.l., the maximum in the firms from 1000 to 2000 ha of a.l. In the analyses considering total obligations level the index of interest cover was in between 1.97 and 5.74. The minimum value of the index one could observe in the firms with total obligations level under 1000 zł/ha of a.l., the maximum the firms with 1000 to 2000 zł/ha of a.l. In the group of companies estimated according to the short-term obligations level in 1997 the index of interest cover ranged from 2.13 to 8.02 and minimum values were observed in companies with the short-term obligations value between 1000 and 2000 zł/ha of a.l.

The possibilities of running a company into debt depends on the ability of paying back the credits. One of the indexes to describe repayment ability is an index of credit certainty, which expresses firm's ability to pay effective obligations coming from the money surpluses. The index of credit certainty in examined firms in 1996 was 0.1 and varied from 0.06 to 0.19. The analyses of the companies according to the size structure proved a level of the credit certainty index between 0.06 and 0.19. The lowest index was observed in the firms in classes 1000 to 2000 ha of a.l. and the highest one in firms under 1000 ha of a.l. In the division by total obligations level we registered an index of 0.06 to 0.19. The lowest level of this index was observed in companies with total obligations value over 2000 zł/ha of a.l., the highest level companies with the total obligations value between 1000 and 2000 zł/ha of a.l. In the group of short-term obligations the credit certainty index was between 0.06 and 0.15. The lowest value of this index was found in the partnerships with short-term obligations value over 2000 zł/ha of a.l., the highest one in companies where short-term obligations burden was under 1000 zł/ha of a.l.

In 1997 the average index of credit certainty was 0.10. In the analysed firms according to the size the structure index of credit certainty ranged from 0.09 to 0.12. The minimum value of this index was observed in firms of 1000 to 2000 ha of a.l. The highest value of the index was registered in companies above 2000 ha of a.l. While the criterion of the level of total obligations was used the index value varied from 0.09 to 0.16. The lowest level of the credit certainty index had the firms with total obligations value more than 2000 zł/ha of a.l. The highest level of this index was observed in firms, where the level of total obligations was under 1000 zł/ha of a.l. In the analyses using the criterion of short-term obligations the index of credit certainty was in between 0.05 and 0.15. The lowest value was observed in firms where short-term obligations level exceeded 2000 zł/ha of a.l., the highest in companies with short-term obligations value in the class 1000 to 2000 zł/ha of a.l.

Reciprocal to the index of credit certainty is a time of debt repayment presuming that current surplus level will be obtained in future. The average time of debt repayment in the examined population was equal to 10 years in 1996 and varied according to the reference group from 5.3 to 17.9 years. In the size structure group the analysed index ranged from 5.3 to 15.4 years. The shortest debt repayment time in this group was observed in companies up to 1000 ha of a.l., and the longest time of repayment in companies of class 1000 to 2000 ha of a.l. While the criterion of total obligations was used the time of repayment ranged from 5.3 to 15.6 years. In this group the shortest time is connected with firms having total obligations value of 1000 to

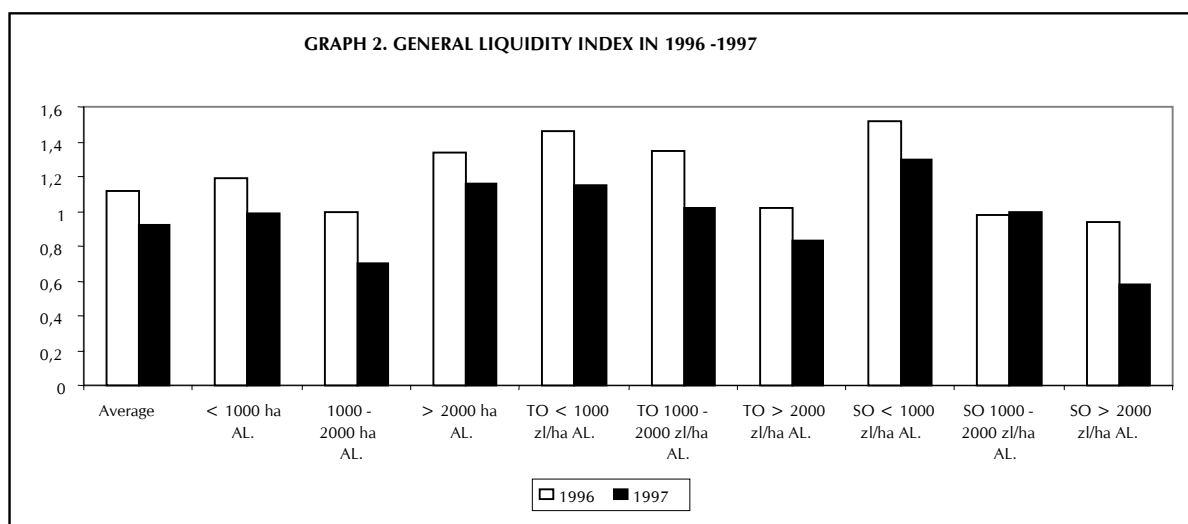
2000 zł/ha of a.l., but the longest time is observed in companies, where total obligations value exceeded 2000 zł/ha. When short-term obligation criterion is considered time of repayment varies from 6.5 to 17.9 years. The shortest time is observed in firms with short-term obligations value under 1000 zł/ha of a.l. (6.5 yrs.). The longest time (17.9 yrs.) is needed to repay debts in firms with short-term obligations over 2000 zł/ha of a.l.

In 1997 the average time of debt payment was equal to 9.8 years. In the examined firms according to the size structure the time of repayment was in between 8.7 and 11.7 years. Companies with arable land up to 1000 ha and firms with more than 2000 ha paid their debts in 8.7 years. The companies with 1000 to 2000 ha had a time repayment of 11.8 years. According to the total obligations group the analyses proved that the time of repayment was 6.3 to 11.2 years. When the criterion of short-term obligations was used we observed an average time of repayment from 6.7 to 21.0. The shortest time was noticed in the firms, where the level of short-term obligations was 1000 to 2000 zł and the longest time in companies with short-term obligations level above 2000 zł/ha of a.l.

## b. Liquidity Indexes

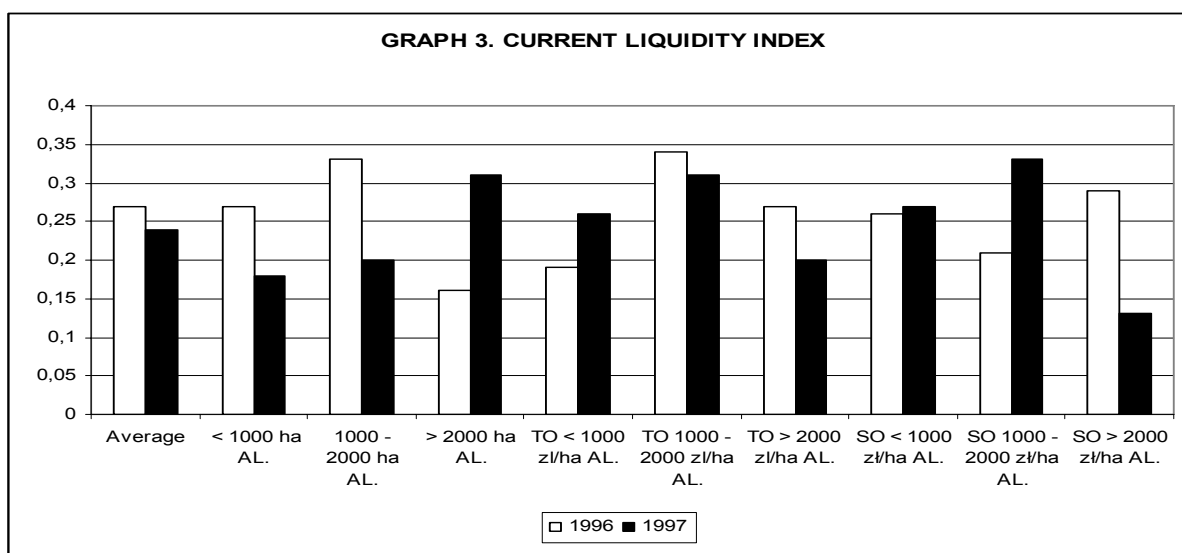
The general liquidity index expresses the extent of quick repayment of current obligations possibility. The pattern value of this index is about 1, because it means that the firm is able to cover the obligations in short time. Smaller values of this index can indicate some lack of liquid assets, but higher values could be a result of non-effective assets collection on bank accounts and high level of dues. The average index in the examined population was 1.12 in 1996 and ranged according to selected analysis base from 0.95 to 1.52.

While the analysis was based on the firms area the general liquidity index was from 1.0 to 1.34. The minimum value of this index was observed in companies between 1000 and 2000 ha, the maximum in firms having an area over 2000 ha. The index was 1.19 in the companies up to 1000 ha. When the criterion of total obligation was used the minimum value of the index was 1.02 and was present in companies, where total obligations value exceeded 2000 zł/ha of a.l. The highest level of general liquidity index was indicated in firms, where total obligations level was under 1000 zł/ha of a.l. For firms of 1000 to 2000 zł/ha, the value of general liquidity index was 1.35. While the criterion of short-term obligations value per ha was used, the general liquidity index was from 0.94 to 1.52.



In 1997 the average general liquidity index was 0.92 and varied from 0.58 to 1.30. When the analysis was based on the size structure the general liquidity index ranged from 0.70 to 1.16. The minimum values were observed in the partnerships having arable land in the class 1000 to 2000 ha, the maximum in the firms with area above 2000 ha of a.l. As far as total obligations level was concerned general liquidity index varied from 0.83 to 1.15. While the criterion of short-term obligations value was used, the analysed index varied from 0.58 to 1.30.

The index of the current liquidity expresses the possibility to cover current obligations by the moveable assets and can be treated as a security indicator in the field of assets liquidity. Many authors emphasise that firms should be positively evaluated when the difference between two liquidity indexes is not too big, that means the effective management of the capital involved in the stock. It is not a proper evaluation in the agricultural sector because of a long production cycle. The average current liquidity index for the investigated population in 1996 was equal 0.27 and varied from 0.16 to 0.34 according to different type of companies. While the size structure was used as a criterion the level of this index was from 0.16 to 0.33. The minimum value of the current liquidity index (0.16) was observed in partnerships with the area over 2000 ha of a.l., but the maximal level of this index in companies in the size class 1000 to 2000 ha. The partnerships possessing an area up to 1000 ha of a.l. had an analysed index of 0.27. While the firms were distinguished by the total obligations level, the value of the current liquidity index was 0.19 in firms with the obligations level between 1000 and 2000 zl/ha. When the obligations level was above 2000 zl/ha, the analysed index was 0.27. In the firms grouped by the short-term obligations value per ha the value of current liquidity index ranged from 0.21 to 0.29.



In 1997 the average index of current liquidity was equal 0.24. This index ranged for the firms according to this size structure from 0.18 to 0.31. The minimum values of the current liquidity index were observed in the partnerships with an area up to 1000 ha. The maximum values of the current liquidity index were found in the companies with the area above 2000 ha of a.l. While total obligations were taken into account the index of current liquidity was from 0.21 to 0.31. Regarding short-term obligations burden the current liquidity index ranged from 0.13 to 0.33. The minimum level of the index was observed in firms with short-term obligations burden of more than 2000 zł/ha of a.l., the maximum in partnerships with 1000 to 2000 zł/ha of a.l.

### c. Turnover Indexes

The measurement of the capital turnover index is a relation between net sale return and total capital. A positive evaluation is based on a rising turnover value to capital. This type of trend confirms better usage of the involved capital regardless of the sources of its creation and the investment forms. In this case cost of capital is smaller and one can observe increases of liquidity, profitability and efficiency. The average index of assets turnover in examined partnerships was equal 0.96 in 1996 and varied in particular groups from 0.83 to 1.35.

Regarding the size structure of the firms, the lowest index of assets turnover (0.83) one could find in the firms from 1000 to 2000 ha of a.l., but the highest value in firms up to 1000 ha of a.l. The turnover index was equal 1 in the class above 2000 ha. As far as total obligations were concerned the analysed index varied from 0.83 to 1.23. The lowest level of this index (0.83) was observed in firms with total obligations exceeding 2000 zł/ha, but the highest one

in firms with obligations between 1000 and 2000 zł/ha. While the short-term obligations criterion was used the assets turnover index was in between 0.80 and 11.1. In this group firms with short-term obligations value above 2000 zł/ha had indexes of 0.89, but the firms with short-term obligations up to 1000 zł/ha were characterised by an index of 11.1.

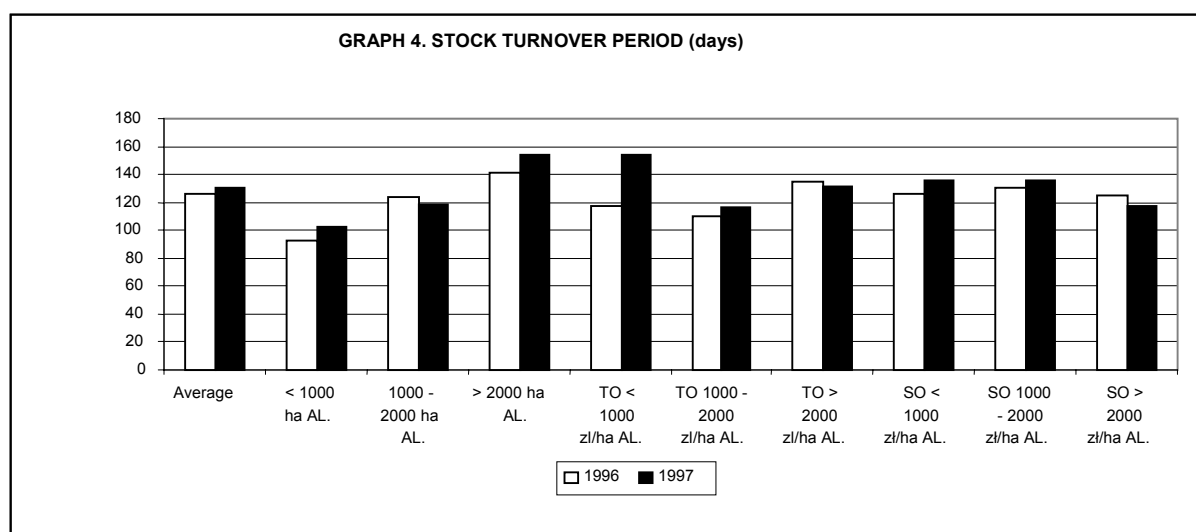
In 1997 the average index of assets turnover for the investigated firms was equal 1.28 and ranged according to different groups from 1.05 to 1.68. While the size structure was a criterion the basic assets turnover index was from 1.05 to 1.60. The minimum values of this index were observed in firms with more than 2000 ha of a.l., the maximum values could be noticed in firms from 1000 to 2000 ha. Regarding the total obligations level the assets turnover index was from 1.15 to 1.37. The minimum level of this index was observed in firms with total obligations burden above 2000 zł/ha. When short-term obligations were taken into account the index of assets turnover was from 1.14 to 1.68.

The fixed assets turnover index informs about the intensity of fixed assets usage. When this relation is getting smaller it points to a worsening of the fixed assets usage. The average index of fixed assets turnover in the examined population was 2.69 in 1996. With the use of size structure as criterion this index was in between 2.64 and 3.58. The companies up to 1000 ha were described with an index of 3.33, the firms in the class of 1000 to 2000 ha with an index of 3.58. The lowest value of this index was noticed in the firms above 2000 ha. When the firms were divided according to total obligations value the fixed assets turnover index ranged from 2.82 to 3.33. The lowest level of this index was observed in the companies with the obligations over 2000 zł/ha and the highest value was registered in the class 1000 to 2000 zł. When short-term obligations level were taken into account the index of fixed assets turnover varied from 2.4 to 3.5.

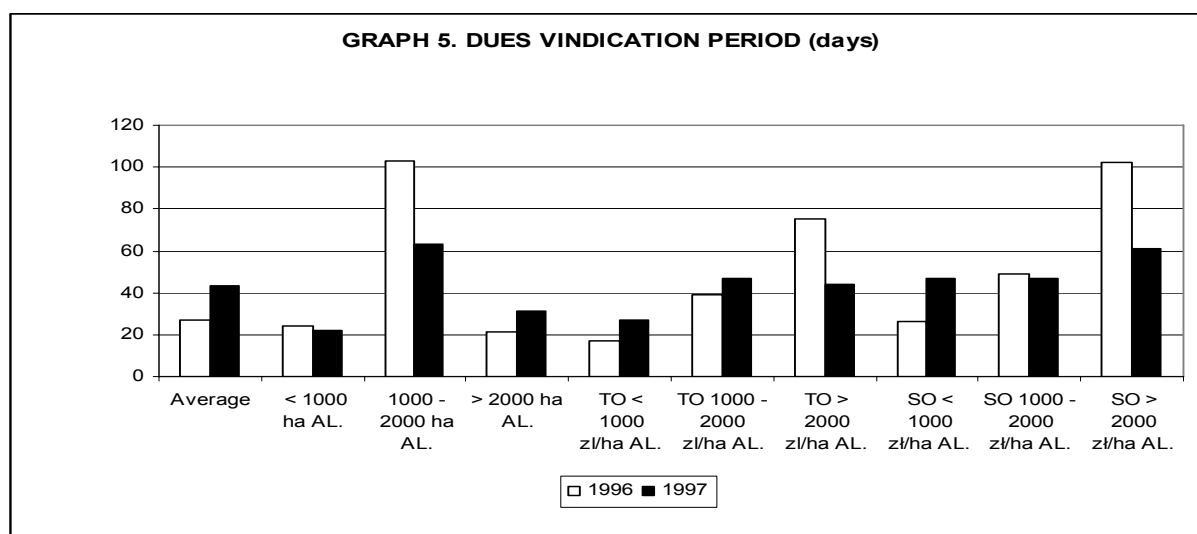
In 1997 the fixed assets turnover index for investigated companies was 3.20 and varied from 2.47 to 4.74 according to different group divisions. When the division was done by the size structure the fixed assets turnover index varied from 2.47 to 4.74. The minimum values of the index were observed in firms with area under 1000 ha of a.l. and maximum values in firms from 1000 to 2000 ha. In the total obligations level definition the index of fixed assets turnover ranged from 2.77 to 3.55. The minimum values were observed in firms with total obligations value in the class 1000 to 2000 zł/ha. The maximum values were found in firms with total obligations level over 2000 zł/ha.

While we want to estimate the efficiency of stock management we use an index of stock turnover time in days. This index indicates the period of capital immobilising in the form of stock. For all the examined populations it was 126 days in 1996. When we use the criterion of the land area this index ranged from 93 to 143 days. In the companies having up to 1000 ha we observed the minimal values and the maximal ones were found in firms bigger than 2000 ha. When the criterion of total obligations level was used the index varied from 110 to 135 days. The shortest period of stocks turnover was observed in firms with level of total obligations in class 1000 to 2000 zł/ha but the longest one in firms, where total obligations exceeded 2000 zł/ha of a.l. Regarding the short-term obligations level we observed values from 125 to 130 days. The shortest period was observed in firms with the short-term obligations level over 2000 zł/ha and the longest in the companies with obligations of 1000 to 2000 zł/ha.

In 1997 the average time of stock turnover was on 130 days in the whole population and varied according to different group from 102 to 154 days. Regarding the land area the time of stock turnover was calculated at 102 to 154 days. The minimum value of this index was observed in firms up to 1000 ha, but the maximal one in firms with land over 2000 ha. While total obligations level was taken into account the time of stock turnover was from 116 to 154 days. The minimum time was stated among the partnerships with total obligations between 1000 and 2000 zł/ha of a.l., but maximal one in firms with total obligations under 1000 zł. Regarding the short-term obligations level the time of stock turnover ranged from 117 to 136 days. The minimum time was observed in firms where obligations of short-term exceeded 2000 zł/ha, the maximum time was stated in firms where short-term obligations did not exceed 2000 zł/ha.



The credit policy of the company can be estimated on the base of the period of dues vindication in days. The short time of our partners crediting improves financial liquidity. In the examined population in 1996 this period was equal 27 days and varied (according to analysed group) from 17 to 103 days. The minimum value of this index was observed in firms with more than 2000 ha of a.l., the maximum in firms from 1000 to 2000 ha. When the total obligations were the criterion the period of dues vindication was from 17 to 75 days. The shortest period was noticed in firms with total obligations under 1000 zł/ha and the longest time was stated in firms over 2000 zł/ha.



When the short-term obligations criterion was used, vindication lasted 26 to 102 days. The shortest period was stated in partnerships with obligations under 1000 zł/ha and the longest one in firms where the short-term obligations value exceeded 2000 zł/ha of a.l.

In 1997 dues vindication in the investigated populations lasted in average 43 days and varied according to analysed group from 22 to 66 days. The shortest period of dues vindication was observed in firms, where total obligations value did not exceed 1000 zł/ha, and the longest time in firms with total obligations over 2000 zł/ha. When the firms were analysed according to short-term obligations level the dues vindication in 1997 lasted from 47 to 61 days. The shortest period was stated in partnerships with short-term obligations under 2000 zł/ha of a.l., the longest one in companies where short-term obligations level was over 2000 zł/ha of a.l.

#### d. Profitability Indexes

The cost level index is a relation of equity sale costs to sale returns and represents the share of equity sale costs in total sale value. The company is profitable when the index of cost level

does not exceed 1. In 1996 the average index of cost level was 0.98 and varied according to analysed group from 0.97 to 1.01. Regarding the land area this index was in between 0.97 and 1.01. The minimum values were observed in farms over 2000 ha, the maximum in farms up to 1000 ha of a.l. While the total obligations value was concerned the cost level index varied from 0.97 to 0.99. The minimum values of this index were observed in firms with obligations under 1000 zł/ha of a.l., the maximum in firms having total obligations higher than 2000 zł/ha of a.l. When the criterion of short-term obligations was used the cost level index ranged from 0.97 to 0.99.

In 1997 the average index of cost level in examined population was in between 0.98 and 1.21. In the group defined by the size structure the cost minimum level index were seen in the companies having more than 2000 ha of a.l., the maximum was detected in farms from 1000 to 2000 ha of a.l. While the analysis was done due to the total obligations criterion, the value of cost level index varied from 0.98 to 1.13. The minimum values were observed in companies with obligations under 1000 zł/ha, the maximum in firms where total obligations exceeded 2000 zł/ha. In the group of partnerships defined by short-term obligations level the cost level index ranged from 0.97 to 1.21. The minimum values were found in firms where short-term obligations value varied from 1000 to 2000 zł/ha of a.l., the maximum value in firms where the short-term obligations exceeded 2000 zł/ha.

The sale profitability characterises the profit volume falling on each zloty of sale return. The sale profitability index in the examined population was equal 0.04 in 1996 and ranged from 0.03 to 0.07 according to the analysed groups. When arable land was regarded this index varied from 0.04 to 0.05. The sale profitability of 4% was reached in partnerships from 1000 to 2000 ha of a.l. and above 2000 ha. According to total obligations level the analysed index varied from 0.03 to 0.07. The lowest index level was observed in firms where total obligations exceeded 2000 zł/ha and the highest in partnerships with total obligations from 1000 to 2000 zł/ha. In the firms with total obligations under 1000 zł/ha the sale profitability index was 5%. When short-term obligations level are taken into consideration the index ranged from 0.04 to 0.05. In the companies having short-term obligations in between 1000 to 2000 zł/ha and above 2000 zł/ha the sale profitability index was 0.04 but those for firms up to 1000 zł/ha - 0.05.

In 1997 the sale profitability index in the examined population was equal 0.02 and varied according to the analysed groups from 0.02 to 0.03. When arable land area was used to classify the group minimum value of the index was found in partnerships having more than

2000 ha of a.l., the maximum ones in firms with up to 1000 ha as well as in firms with 1000 to 2000 ha. When the classification has been made depending on total obligations level, the sale profitability index varied from 0.01 to 0.04. The minimum value of the index was observed in companies with total obligations level over 2000 zł/ha, the maximum value in firms having total obligations up to 1000 zł/ha and firms from 1000 to 2000 zł/ha. When the criterion of short-term obligation was used the sale profitability index ranged from 0.01 to 0.04.

The index of assets profitability is the basic measure of the economic activity of the company. It determines the profit volume falling on the unit of invested capital and expresses the profitability of capital usage. The total assets profitability index main advantage is connected with its wide consideration of all assets usage and its impact on the firm's efficiency. The index of total assets profitability in the examined population was 0.04 in 1996 and varied in explored groups from 0.03 to 0.08. In the group defined by the size structure criterion this index ranged from 0.03 to 0.07. While the total obligations value was concerned the lowest value of total assets profitability index (0.03) was observed in firms where obligations exceeded 2000 zł/ha and the highest (0.08) in firms with obligations from 1000 to 2000 zł/ha. While short-term obligations level was concerned analysed index ranged from 0.03 to 0.05.

In 1997 value of total assets profitability index was 0.03 for the whole population and varied from 0.01 to 0.05 according to the used criteria. When the land area was used this index was in between 0.02 and 0.04. The minimum values of the index were found in partnerships having more than 2000 ha of a.l., the maximum values were observed in firms up to 1000 ha of a.l. and in firms from 1000 to 2000 ha of a.l. When we used the total obligations level criterion the index varied from 0.01 to 0.05. If the short-term obligations were taken into account index of total assets profitability ranged from 0.01 to 0.05 in 1997. The minimum values were found in companies with obligations over 2000 zł/ha and maximal ones in firms, where short-term obligations varied from 1000 to 2000 zł/ha of a.l.

The average index of stock profitability in the explored populations was 0.08 and varied according to the assumed criterion from 0.06 to 0.17. While the land area was concerned this index ranged from 0.06 to 0.16. The lowest value of the index (0.06) we observed in firms from 1000 to 2000 ha and over 2000 ha of a.l. The highest value (0.16) was registered in firms up to 1000 ha of a.l. When the analysis was conducted according to total obligations the level index of stock profitability ranged from 0.05 to 0.17. The smallest value of the index (0.05) was observed in companies, where obligations value exceed 2000 zł/ha, but the biggest

one in the firms from 1000 to 2000 zł/ha of a.l. When short-term obligations were considered index ranged from 0.06 to 0.10.

In 1997 the stock profitability index was equal 0.06 and varied from 0.03 to 0.11 according to the analysed group. In the analysis of the land area level this index ranged from 0.04 to 0.09. The minimum value had firms with an area of more than 2000 ha of a.l. and the maximum in firms where the area was up to 2000 ha. When the criterion of total obligations level was used the index of stocks profitability varied from 0.04 to 0.09. The minimum values of this index were observed in firms, where total obligations exceeded 2000 zł/ha of a.l. The maximum value was noticed in firms with obligations in between 1000 and 2000 zł/ha. While the criterion was based on the short-term obligations value the index of stock profitability was from 0.03 to 0.11 in 1997.

The wages profitability was 0.28 in 1996 in the examined populations of firms in the Gorzów Voivodeship and ranging from 0.20 to 0.57 according to different criteria of division. When the size structure was taken the index of wages profitability varied from 0.20 to 0.57 and the minimum values were to be observed in the partnerships with more than 2000 ha and the maximum ones in companies from 1000 to 2000 ha of a.l. When the analysis of total obligations level per ha was concerned this index ranged from 0.26 to 0.38. The lowest value (0.26) was stated in firms, where total obligations value was under 1000 zł/ha and in firms with more than 2000 zł/ha. The highest values of wages profitability index were observed in the companies with total obligations per ha in the class 1000 to 2000 zł. The wages profitability index in the case of short-term obligations level ranged from 0.23 to 0.67. The minimum level of this index was observed in the partnerships, where total obligations did not exceed 1000 zł/ha of a.l., the maximum in the firms having more than 2000 zł per ha.

In 1997 the average index of wages profitability in the investigated population according to different group varied from 0.08 to 0.33 and was 0.16 in average. When we analyse firms according to the size structure the wages profitability index ranged from 0.08 to 0.33 in 1997. The minimum value of this index was observed in the farms having more than 2000 ha of a.l., the maximum in the farms from 1000 to 2000 ha of a.l. When we use the criterion of total obligations level the value of the wages profitability index varied from 0.09 to 0.26. The minimum values were observed in firms with total obligations burden exceeding 2000 zł/ha, maximum values in the companies having total obligations level below 1000 zł/ha. Using the criterion of the short-term obligations the value of the wages profitability index varied from 0.09 to 0.28.

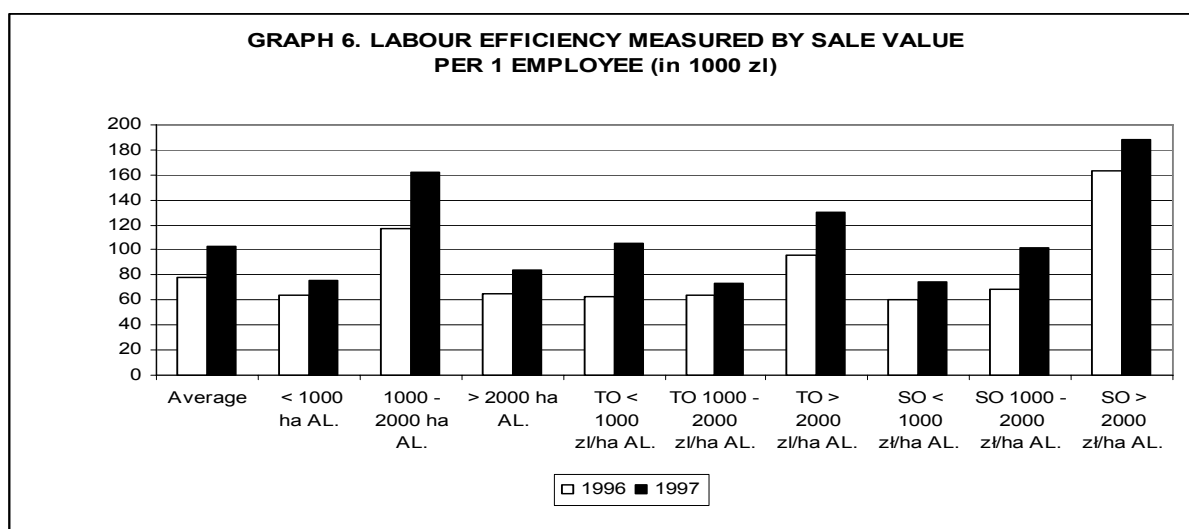
The average index of operational turnover profitability in the examined population was 0.8 in 1996 and ranged from 0.07 to 0.10 for the different groups. In 1997 the average index of operational turnover profitability was equal 0.05 and varied from 0.01 to 0.09 according to the investigated group. When the criterion of the land area was used this index ranged from 0.04 to 0.07. The minimum value of the operational turnover profitability index was observed in the firms from 1000 to 2000 ha, the maximum one in firms having more than 2000 ha of a.l. When the analysis was done on the base of total obligations level the index of operational turnover profitability ranged from 0.03 to 0.09. The minimum value of this index was observed in the partnerships where total obligations level was over 2000 zł/ha, the maximum in firms with total obligations up to 1000 zł/ha. In the analysis of the short-term obligations the operational turnover profitability index varied from 0.01 to 0.09.

### e. Labour Efficiency Indexes

For the labour efficiency measurement we have used the following indexes:

- ⇒ labour efficiency evaluated by the sale value per employee,
- ⇒ stock (equipment) value per employee,
- ⇒ average labour cost.

In 1996 the labour efficiency measured as the sale value per one employee was in the average of the investigated populations 78.3 th. zł. Regarding the land area the partnerships had the highest labour efficiency (116.6 th. zł/employee) in the firms within 1000 to 2000 ha of a.l. The other size classes had a level of labour efficiency which was about 64 thousand zł per employee.



When the total obligations level was used as a criterion the highest labour efficiency (96.31 th. zł/employee) was observed in the firms with total obligations exceeded 2000 zł. The two remaining classes of this group represented a labour efficiency of 63 th. zł/employee. When the criterion of the short-term obligation value was used the labour efficiency ranged from 60.9 to 163 th. zł/employee. The lowest value was observed in the firms with short-term obligations up to 1000 zł/ha and the highest one in the companies where short-term obligations level exceeded 2000 zł/ha of a.l.

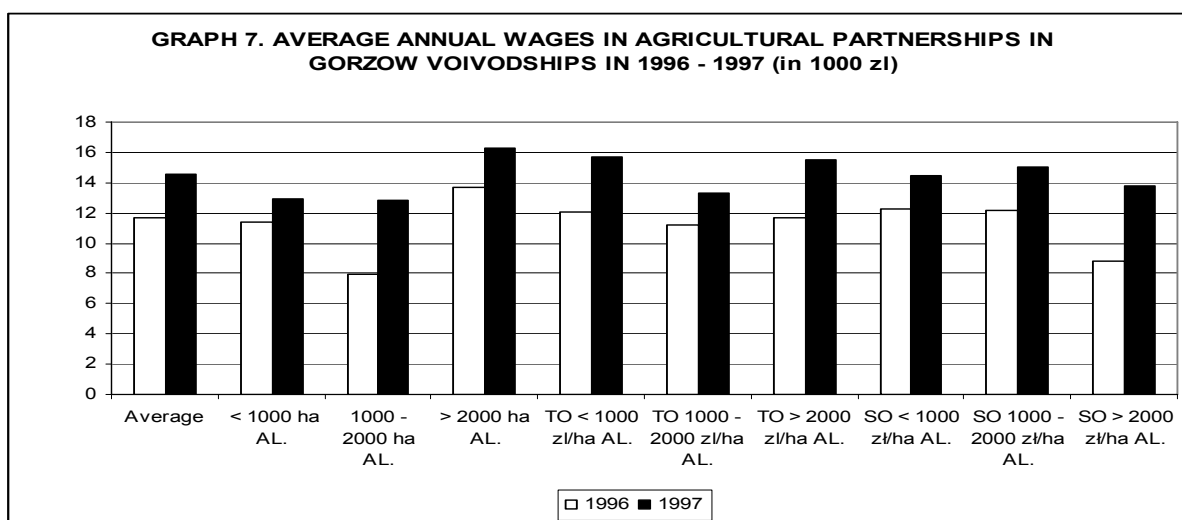
In 1997 average labour efficiency was 103.4 th. zł/employee and ranged from 75.3 to 187.7 th. zł/employee. In the group analysed by size structure, labour efficiency varied from 75.7 to 162.2 th. zł/employee. The minimum level of this index was observed in the partnerships with up to 1000 ha of a.l., the maximum in firms from 1000 to 2000 ha of a.l. When the total obligations level in 1997 was concerned the labour efficiency varied from 73.5 to 129.6 th. zł/employee. The lowest efficiency was represented by firms which total obligations level was in between 1000 to 2000 zł/ha of a.l., the highest one in the companies where total obligations value was over 2000 zł/ha. While the short-term obligations value was the criterion of analysis, in 1997 the labour efficiency varied from 74.8 to 187.7 th zł/employee.

The stock value per employee was in the average of the investigated population 78.25 th. zł in 1996. While the analysis was done according to land area the highest value of stock per employee (more than 141 th. zł) had the firms with 1000 to 2000 ha of a.l. The index was 47.01 th. zł/employee in the partnerships up to 1000 ha of a.l., and 64.88 th. zł/employee in the companies having more than 2000 ha of a.l. While the total obligations level was concerned the highest value of the stock value index (115.47) was observed in the firms with total obligations exceeding 2000 zł/ha of a.l. In the firms with total obligations under 1000 zł/ha of a.l. the index was 54.53 th. zł/employee and in firms within 1000 to 2000 zł/ha of a.l. 51.92 th. zł/emp. In the case of the short-term obligations level the lowest stock value (55.0 th. zł/emp.) was observed in firms where these obligations were worth less than 1000 zł/ha of a.l. and the highest one (204.5 th. zł/emp.) in partnerships where the short-term obligations level was over 2000 zł/ha of a.l.

In 1997 the stock value falling on one employee was in average 87.3 th zł and varied from 42.9 to 153.7 zł depending on the examined groups. While the analysis was based on the size structure the value of the stock ranged from 42.9 to 111.4 zł/employee. The minimum values were observed in the partnerships having less than 1000 ha of a.l., the maximum ones in firms with 1000 to 2000 ha of a.l. While analysis was made according to total obligations level the

index ranged from 58.6 to 112.6 th zl/emp. The minimum value of this index had the firms with total obligations under 1000 zl/ha of a.l., and the maximum firms with obligation burdens over 2000 zl/ha. When short-term obligations level was taken into consideration the stock value index ranged from 66.0 to 153.7 zl/employee.

The average labour cost in the analysed partnerships was 11.68 th. zl in 1996 and ranged according to the analysed groups from 7.96 to 13.65 th. zl. In the analysis of land area this index varied from 7.96 to 13.65 th. zl. The minimum values of the index were stated in the companies within the area of 1000 to 2000 ha of a.l., the maximum ones in the firms having more than 2000 ha of a.l. While the total obligations level was the base of analysis average labour cost ranged from 11.18 to 12.08 th. zl. The minimum values of this index were registered in firms having total obligations of 1000 to 2000 zl/ha of a.l., and the maximum ones in firms where total obligations level was up to 1000 zl/ha of a.l. If the short-term obligations were concerned average labour cost varied from 8.82 to 12.23 th. zl.

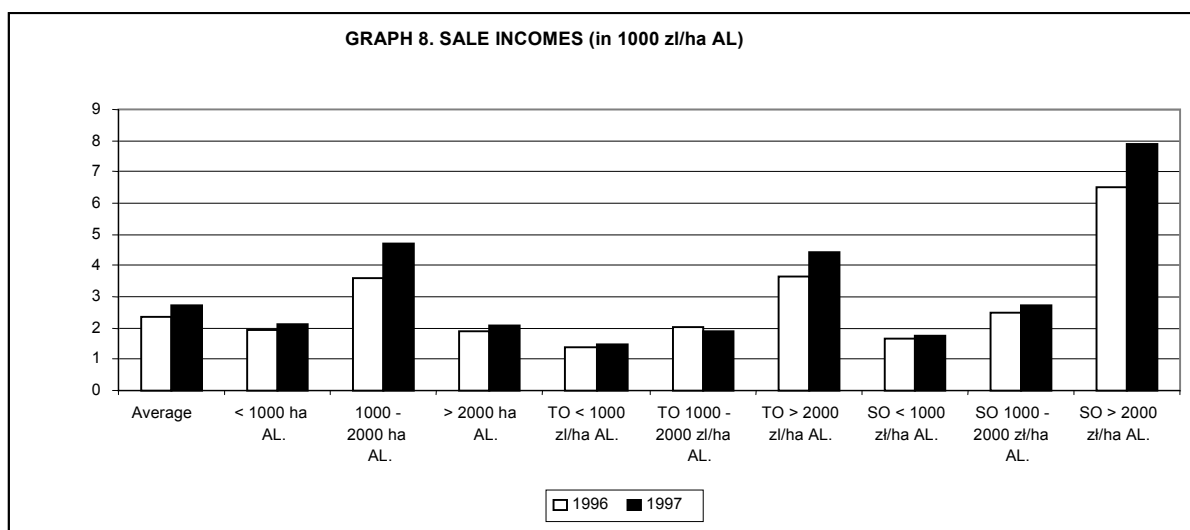


In 1997 the average labour cost in the examined partnerships was 14.58 th. zl and varied from 12.8 to 16.3 th. zl according to the group under investigation. With regard to the size structure the average labour cost ranged from 12.8 to 16.3 th. zl. When total obligations are used as criterion the average labour cost varied from 13.3 to 15.7 th. zl. Stressing on the short-term obligations the average labour cost ranged from 13.8 to 15.0 th. zl.

#### f. Additional Indexes

The sale return per ha of arable land was 2.35 th. zl and varied (according to the analysed groups) from 1.54 to 4.27 th. zl/ha of a.l. As far as the land area was concerned the highest sale income (3.58 th. zl/ha of a.l.) was observed in the partnerships within 1000 to 2000 ha

and the lowest one in firms having more than 2000 ha of a.l. (1.9 th zl/ha). When the criterion of analysis was the total obligations level per ha of a.l. the highest income (3.65 th. zl) was found in the firms with obligations burden over 2000 zl/ha, the lowest in firms with total obligations under 1000 zl/ha of a.l. (1.38 th. zl/ha). When the short-term obligations level are taken into consideration the highest sale return was made by firms having more than 2000 zl/ha obligations (6.49), the lowest by firms where the obligations level was under 1000 zl/ha.



In 1997 an the average sale return per ha was 2.74 th. zl and varied from 1.47 to 7.91 th. zl/ha of a.l. When the firms were divided by the land area returns from sale ranged from 2.07 to 4.71 th. zl/ha. When the total obligations level were taken, the sale income ranged from 1.47 to 4.44 th. zl/ha. While the criterion was the short-term obligations sale return varied from 1.74 to 7.91 th. zl/ha of a.l.

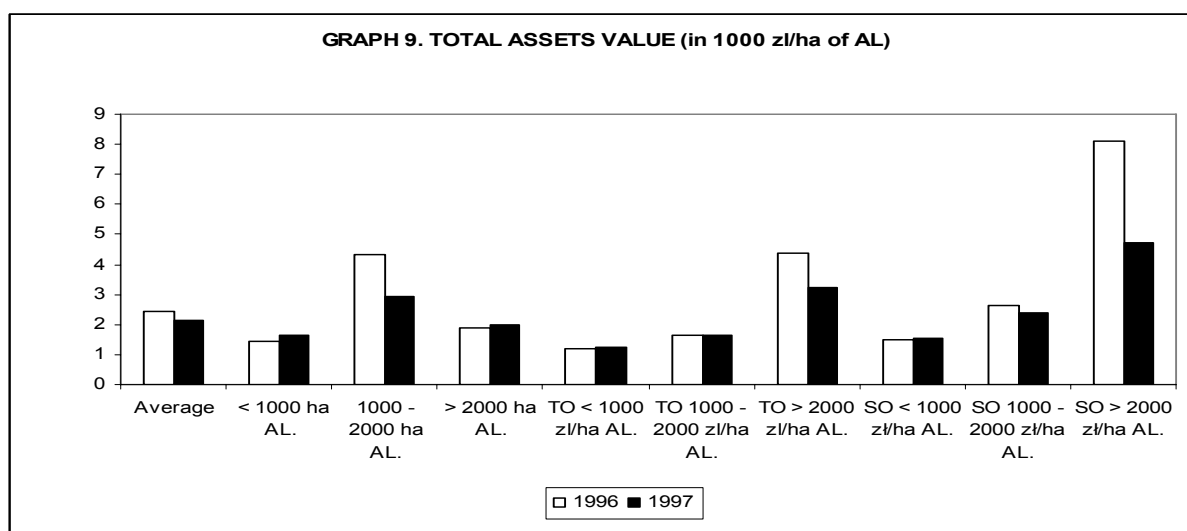
The value of costs according to types per ha of a.l. was in the average 2.07 th. zl in 1996 and varied from 1.30 to 4.89 th. zl/ha according to the analysed groups. When the size structure was taken as a base the figure varied from 1.75 to 2.85 th. zl/ha of a.l. The highest costs level was observed in the companies from class 1000 to 2000 ha of a.l. and the lowest in the firms having more than 2000 ha of a.l. When the estimation was made on the base of total obligations level costs by types per ha ranged from 1.3 to 3.03 th. zl/ha of a.l. The highest costs in this group were observed in the firms over 2000 zl/ha of a.l., the lowest in the companies with total obligations worth less than 1000 zl/ha. In the group of short-term obligations the analysed costs ranged from 1.58 to 4.89 zl/ha. The lowest costs were observed in the partnerships with 1000 zl/ha of a.l., and the highest in the firms having more than 2000 zl/ha of short-term obligations.

Analysing the particular costs groups it has to be noticed that the predominant role in the costs structure played the material and energy usage expenses, external services costs, labour costs and additional fees. If we compare the cost levels according to types of the sale return from 1 ha of a.l. and sale returns from 1 employee (independently from the analysed group) it is obvious that the partnerships with high sale return levels usually had high costs levels. The most interesting value of the total labour costs is observed in the size group 1000 to 2000 ha of a.l. compared to the others size groups. It is smaller than the maximum value of 40% in this class.

In 1997 the costs value according to different criterion varied from 1.30 to 4.68 th. zł/ha. While the size structure was taken as base costs ranged from 1.82 to 3.18 th. zł. When total obligations level was concerned the costs varied from 1.30 to 3.23. When the short-term obligations were regarded costs ranged from 1.69 to 4.68.

The financial operation costs per ha of arable land in the examined population were 0.14 th. zł and varied according to analysed group from 0.07 to 0.36 th. zł/ha of a.l. In the size structure group the value of this index ranged from 0.08 to 0.20 th. zł/ha. The two remaining groups of analysis had the highest costs of financial operations per ha among the partnerships from the highest classes.

In 1997 financial operation costs have increased to 0.23 th. zł/ha of a.l. in the examined population. Depending on the analysed group of partnerships they varied from 0.09 to 0.91 th. zł/ha of a.l. In the case of the size structure the financial operation costs ranged from 0.12 to 0.45. The minimum levels of these costs was observed in the firms up to 1000 ha of a.l., the maximum in companies from 1000 to 2000 ha of a.l. While the total obligations level was used the operations costs varied from 0.09 to 0.43. If the short-term obligations were taken the financial operation costs varied from 0.13 to 0.91.



The average value of the total assets per ha of arable land was 2.45 th. zł/ha in 1996. When firms according to the land area assets were the the value ranged from 1.45 to 4.32 zł per ha. If short-term obligations level was a criterion analysed index varied from 1.50 to 8.11 th. zł/ha and maximal values of the index were observed in the firms with these obligations worth of more than 2000 zł/ha. We should emphasise that about 50% of total asset values are connected with the stock values in the examined companies.

In 1997 the total assets value was in average 2.14 th. zł/ha of a.l. and varied depending on the used criterion from 1.24 to 4.70 th. zł/ha of a.l. When the size structure was taken the total asset values ranged from 1.64 to 2.94 th. zł/ha. In the total obligations level group total asset values varied from 1.24 to 3.25 th. zł/ha of a.l. The minimum value of this index was observed in the partnerships having short-term obligation burdens less than 1000 but the maximal one in the firms with obligations worth more then 2000 zł/ha of a.l.

The total obligations level per ha was 2.15 th. zł in 1996 and varied according to the group from 0.86 to 7.92 th. zł/ha. When the total obligations criterion was used, the maximum value of the index was registered where the total financial burden was bigger than 2000 zł/ha, and in the short-term obligations group in firms where these kinds of obligations were worth more than 2000 zł/ha of a.l.

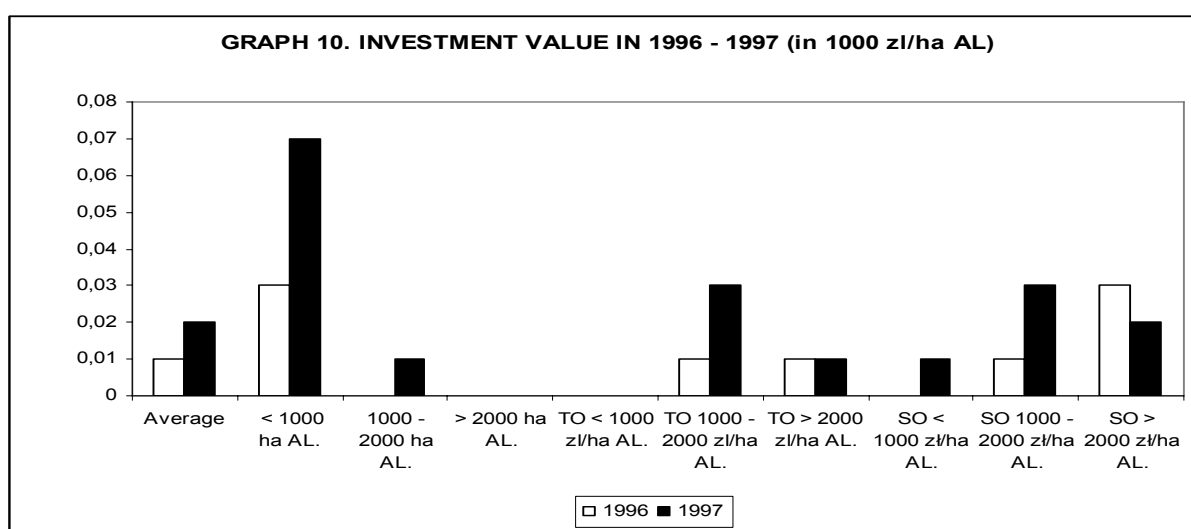
In 1997 the total obligations value was 2.07 th. zł/ha of a.l. and varied according to the analysed group from 0.83 to 6.05 th. zł/ha. When we used the criterion of the land area the level of total obligations ranged from 1.58 to 3.50 th. zł/ha. In the total obligations group these obligations were in between 0.83 and 3.54 th. zł/ha of a.l. When the short-term obligations value was a base total obligations value ranged from 1.34 to 6.05 th. zł/ha.

The average value of the net obligations in the examined population was 1.80 th. zł/ha in 1996 and varied (depending on the analysed group) from 0.79 to 6.09 th. zł/ha of a.l. In the group of partnerships analysed by the size structure the maximum value of this index was observed in firms with 1000 to 2000 ha. When the criterion was the total obligations level the maximum value of the index was found in firms having total obligations worth more than 2000 zł/ha but in case of the short-term obligations criterion in the firms with a financial burden exceeding 2000 zł/ha of a.l.

In 1997 the average value of the net obligations was 1.78 th. zł/ha and ranged from 0.67 to 5.33 th. In the analysis according to the land area net obligations value varied from 1.33 to

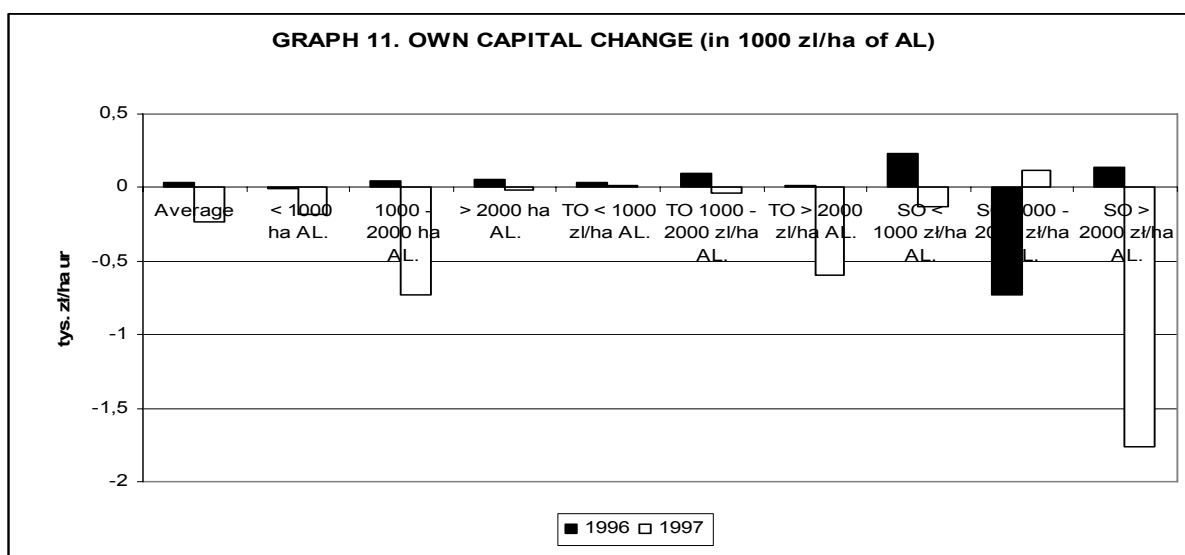
2.97 th. zł/ha of a.l. In the total obligations group net obligations value varied from 0.67 to 3.15 th. zł/ha.

The average investment inputs were low and equal 0.01 th. zł/ha of a.l. in 1996. In the size structure group investment value was only registered in the partnerships having less than 1000 ha of a.l. For the remaining firms the investment purpose in 1996. In the partnerships group estimated by total obligations in the total investment value was 0.01 th. zł/ha in the firms with 1000 to 2000 zł/ha and over 2000 zł/ha of obligations altogether. When the short-term obligations were a criterion, investment inputs of 0.03 th. zł/ha of a.l. were observed in the firms where short-term obligations value exceeded 2000 zł/ha.



In 1997 the average investment inputs in the investigated partnerships were equal 0.02 th. zł/ha and varied according to analysed group from 0.01 to 0.07 th. zł/ha. In the partnerships analysed by land area the investment value varied from 0.01 to 0.07 th. zł/ha. While the analysis was made on the base of the total obligations level it ranged from 0.01 to 0.03. If the criterion of short-term obligations was used investment inputs varied from 0.01 to 0.03 th. zł/ha.

The average change of equity capital in the examined partnerships of Gorzów Voivodeship was 0.04 th. zł/ha in 1996 and ranged from -0.01 to 0.10 th. zł/ha. When land area is taken a negative change of the capital was found in the firms having up to 1000 ha of a.l. When the criterion was the short-term obligations level the highest change of equity capital we observed in firms with obligations under 1000 zł/ha.



In 1997 the change of equity capital was -0.23 th./ha of a.l. and varied from -1.76 to 0.12 th. zł/ha according to the analysed group. In the land area analysis equity capital varied from -0.02 to -0.73 th. zł/ha of arable land. When the total obligations value was a base of exploring equity capital ranged from -0.59 to 0.01 th. zł/ha of a.l. In the short-term obligations analysis equity capital value varied from -1.76 to 0.12 thousand zł per ha of arable land.

### 3. Conclusions

On the base of the presented results the following conclusions can be drawn:

1. In spite of the undertaken adjustment process due to the worsening of the external economic conditions (increase of raw materials prices, decrease of agricultural products prices), the economic standing of the analysed partnerships has deteriorated in 1997 in comparison with 1996.
2. The financial support indexes have been worsened in 1997 in all examined groups of indexes. The equity capital usage index come down from 0.34 in 1996 to 0.05 in 1997, the external capital usage index increased from 1.31 in 1996 to 1.62 in 1997. The index of capital structure went down from 0.13 in 1996 to 0.02 in 1997, while the assets structure index increased from 0.48 in 1996 to 0.67 in 1997. The value of the general financial standing index decreased from 0.23 in 1996 to 0.03 in 1997, the index of total debt went up from 0.88 in 1996 to 0.96 in 1997. The level of long-term debtiness increased from 2.5 in 1996 to 15.2 in 1997 and the value of the interest cover index decreased from 5.59

in 1996 to 3.4 in 1997. The index of credit certainty was low in both analysed periods and equalled 0.1, but the debt payment time was about 10 years.

3. The general liquidity index went down from 1.12 in 1996 to 0.92 in 1997, and the current liquidity index decreased from 0.27 in 1996 to 0.24 in 1997.
4. The indexes of the turnover, equity capital, and fixed assets got better in 1997. The indexes of stock turnover and time of dues vindication have worsened in 1997. The index of the assets turnover increased from 0.96 in 1996 to 1.28 in 1997, the index of the equity capital turnover went up from 9.38 in 1996 to 17.1 in 1997 and the fixed assets turnover index increased from 2.96 in 1996 to 3.20 in 1997. The stocks turnover index has increased in 1997 by 4 days and the period of dues vindication got longer from 27 days in 1996 to 43 days in 1997.
5. In 1997 profitability indexes also got worse. The index of the cost levels increased from 0.98 in 1996 to 1.08 in 1997, the sale profitability index decreased from 0.04 in 1996 to 0.02 in 1997. The index of total assets profitability got down from 0.04 in 1996 to 0.03 in 1997. Stock profitability decreased from 0.08 in 1996 to 0.06 in 1997 and labour costs (wages) profitability went down from 0.28 in 1996 to 0.16 in 1997. Operational turnover profitability dropped from 0.08 in 1996 to 0.05 in 1997.
6. The assets stock value per employee decreased from 81.53 thousand zł in 1996 to 87.3 th. zł in 1997.
7. The average value of the annual wages increased to 14.58 th. zł in 1997 from 11.68 th. zł in 1996.
8. The labour efficiency calculated as sale value per employee increased from 78.3 th. zł in 1996 to 103.4 th. zł in 1997.
9. The average value of sale returns calculated per ha of arable land was 2.35 th. zł in 1996 and 2.74 th. zł in 1997. The average cost values according to the types calculated per ha of arable land was 2.07 th. zł in 1996 and 2.24 th. zł in 1997.
10. The total assets value per ha of a.l. decreased from 2.45 th. zł in 1996 to 2.14 th. zł in 1997. This decrease was caused by diminishing stock values.
11. The total obligations value per ha of arable land has decreased from 2.15 th. zł in 1996 to 2.07 th. zł in 1997. The short-term obligations level per ha went down from 1.47 th. zł in

1996 to 1.39 th. zł in 1997 and net obligations value per ha of a.l. decreased from 1.80 th. zł in 1996 to 1.78 th. zł in 1997.

12. The change of the equity capital in the examined partnerships was 0.04 th. zł/ha of a.l. in 1996 and -0.23 th. zł/ha in 1997.

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## **S U P P L E M E N T**

**Table 1. Financial support indexes**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
<b>Financial support indexes</b>																				
Own capital usage index	0,34	0,05	0,22	-0,07	0,11	-0,60	0,53	0,45	0,73	0,80	0,53	0,26	0,13	-0,24	0,53	0,26	0,19	0,37	0,10	-0,77
External capital usage index	1,31	1,62	1,54	1,86	1,27	1,84	1,30	1,39	1,17	1,14	1,24	1,49	1,36	1,80	1,27	1,57	1,50	1,33	1,28	2,14
Capital structure index	0,13	0,02	0,10	-0,03	0,03	-0,17	0,27	0,24	0,39	0,50	0,25	0,12	0,04	-0,09	0,26	0,13	0,09	0,16	0,02	-0,23
Assets structure index	0,48	0,67	0,69	0,83	0,30	0,52	0,68	0,73	0,62	0,71	0,59	0,71	0,42	0,64	0,62	0,78	0,66	0,64	0,30	0,64
General financial standing index	0,26	0,03	0,14	-0,04	0,09	-0,33	0,40	0,33	0,63	0,70	0,43	0,17	0,10	-0,14	0,42	0,28	0,13	-0,36	0,07	-0,36
Total debt index	0,88	0,96	0,90	1,01	0,97	1,19	0,77	0,79	0,71	0,66	0,77	0,86	0,95	1,1	0,78	0,87	0,90	0,84	0,98	1,28
Long-term debt index	2,5	15,2	4,5	-14,5	8,0	-1,31	1,54	1,56	1,04	0,47	1,58	2,74	6,79	-3,79	1,87	3,90	3,67	1,54	7,38	-0,81
Interest cover index	5,6	3,4	9,1	3,8	9,0	6,8	3,8	2,1	4,6	1,97	10,2	5,74	4,9	3,22	5,3	2,13	3,6	8,02	10,4	2,59
Credit certainty index	0,10	0,10	0,19	0,11	0,06	0,09	0,12	0,12	0,17	0,16	0,19	0,12	0,06	0,09	0,15	0,11	0,08	0,15	0,06	0,05
Debt payment period	10,1	9,8	5,3	8,7	15,4	11,7	8,5	8,7	5,8	6,3	5,3	8,7	15,6	11,2	6,5	8,8	11,8	6,7	17,9	21

**Table 2. Indexes of the liquidity and turnover**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
<b>Liquidity indexes</b>																				
General liquidity	1,12	0,92	1,19	0,99	1,00	0,70	1,34	1,16	1,46	1,15	1,35	1,02	1,02	0,83	1,52	1,30	0,98	1,00	0,94	0,58
Current liquidity	0,27	0,24	0,27	0,18	0,33	0,20	0,16	0,31	0,19	0,26	0,34	0,31	0,27	0,20	0,26	0,27	0,21	0,33	0,29	0,13
<b>Turnover indexes</b>																				
Assets turnover	0,96	1,28	1,35	1,29	0,83	1,60	1,00	1,05	1,15	1,18	1,23	1,15	0,83	1,37	1,11	1,14	0,93	1,15	0,80	1,68
Own capital turnover	9,38	17,1	14,51	56,4	42,42	-20,0	5,09	5,31	4,40	3,62	7,54	9,73	21,73	- 459,1	8,8	7,30	4,3	10,5	58	- 15,21
Fixed assets turnover	2,96	3,20	3,33	2,86	3,58	4,74	2,46	2,47	3,00	2,86	3,33	2,77	2,82	3,55	2,91	2,61	2,4	3,2	3,5	4,36
Stocks turnover period	126	130	93	102	124	119	141	154	118	154	110	116	135	132	126	136	130	136	125	117
Dues vindication	27	43	24	22	103	63	21	31	17	27	39	47	75	44	26	47	49	47	102	61

**Table 3. Profitability indexes and labour efficiency indexes**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
<b>Profitability indexes</b>																				
Cost level index	0,98	1,08	1,01	1,08	0,98	1,15	0,97	1,01	0,97	0,98	0,97	1,02	0,99	1,13	0,98	1,07	0,99	0,97	0,97	1,21
Sale profitability	0,04	0,02	0,05	0,03	0,04	0,03	0,04	0,02	0,05	0,04	0,07	0,04	0,03	0,01	0,05	0,02	0,05	0,04	0,04	0,01
Total assets profitability	0,04	0,03	0,07	0,04	0,03	0,04	0,04	0,02	0,06	0,05	0,08	0,04	0,03	0,01	0,05	0,02	0,04	0,05	0,03	0,01
Own capital profitability	0,37	1,36	0,81	-1,19	1,27	-0,20	0,20	0,08	0,20	0,14	0,42	0,42	0,66	-0,16	0,25	0,18	0,55	0,35	1,30	-0,05
Stocks profitability	0,08	0,06	0,16	0,09	0,06	0,09	0,08	0,04	0,11	0,10	0,17	0,11	0,05	0,03	0,10	0,05	0,09	0,11	0,06	0,03
Wages profitability	0,28	0,16	0,30	0,17	0,57	0,33	0,20	0,08	0,26	0,26	0,38	0,21	0,26	0,09	0,23	0,09	0,26	0,28	0,67	0,11
Operational turnover profitability	0,08	0,05	0,07	0,05	0,09	0,04	0,08	0,07	0,08	0,09	0,08	0,08	0,09	0,03	0,08	0,05	0,10	0,09	0,09	0,01
<b>Labour efficiency indexes</b>																				
Stocks per 1 employee (th. zł)	81,53	87,3	47,01	42,9	141,0	111,4	64,88	63,6	54,36	88,7	51,92	58,6	115,5	112,6	55,0	66,0	73,0	83,9	204,5	153,7
Average wages (th. zł)	11,68	14,58	11,4	12,93	7,96	12,84	13,65	16,26	12,08	15,72	11,18	13,28	11,69	15,50	12,23	14,54	12,12	15,07	8,82	13,84
Labour efficiency (th. zł)	78,3	103,4	63,65	75,70	116,6	162,2	64,57	83,81	62,64	105,7	63,87	73,48	96,31	129,6	60,9	74,84	68,1	101,5	163,4	187,7

**Table 4. Sale incomes and costs according to the types per 1 ha of a.l. (in 1000 zł)**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
Sale incomes	2,35	2,74	1,96	2,12	3,58	4,71	1,90	2,07	1,38	1,47	2,02	1,87	3,65	4,44	1,66	1,74	2,48	2,73	6,49	7,91
Cost according to the types	2,07	2,24	1,92	2,21	2,85	3,18	1,75	1,82	1,30	1,30	1,92	1,83	3,03	3,23	1,58	1,69	2,26	2,37	4,89	4,68
including: amortization	0,06	0,10	0,07	0,08	0,05	0,13	0,06	0,09	0,05	0,06	0,06	0,07	0,08	0,15	0,06	0,08	0,08	0,09	0,07	0,21
materials and energy usage	1,05	1,24	1,20	1,35	1,26	1,92	0,89	0,90	0,68	0,66	1,09	1,03	1,42	1,81	0,85	0,90	1,12	1,25	2,19	2,98
external services	0,13	0,21	0,13	0,17	0,13	0,22	0,12	0,23	0,08	0,08	0,19	0,19	0,14	0,32	0,11	0,15	0,10	0,30	0,26	0,29
Wages total with additions	0,35	0,39	0,35	0,36	0,24	0,37	0,40	0,40	0,27	0,22	0,35	0,34	0,44	0,53	0,33	0,34	0,44	0,40	0,35	0,58
Financial operations costs	0,14	0,23	0,08	0,12	0,20	0,45	0,13	0,17	0,07	0,09	0,10	0,12	0,25	0,43	0,10	0,13	0,17	0,16	0,36	0,91
including: interests of credits and loans	0,02	0,03	0,01	0,02	0,02	0,02	0,03	0,03	0,02	0,06	0,01	0,02	0,03	0,02	0,02	0,03	0,04	0,02	0,03	0,04

**Table 5. Assets value in th. zł/ha of a.l.**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
Total assets value	2,45	2,14	1,45	1,64	4,32	2,94	1,91	1,98	1,20	1,24	1,64	1,63	4,38	3,25	1,50	1,52	2,65	2,37	8,11	4,70
Including: arable land and sites	0,00	0,00	0,00	0,00	0,01	0,01	0,00	0,00	0,00	0,00	0,01	0,01	0,00	0,00	0,00	0,00	0,00	0,01	0,00	0,00
Buildings and constructions	0,04	0,04	0,04	0,03	0,06	0,07	0,04	0,04	0,03	0,04	0,04	0,03	0,06	0,06	0,02	0,02	0,09	0,05	0,12	0,13
Technical equipment	0,48	0,51	0,31	0,39	0,62	0,67	0,47	0,48	0,27	0,31	0,36	0,40	0,79	0,75	0,36	0,40	0,61	0,50	1,05	1,12
Transport means	0,13	0,13	0,12	0,09	0,19	0,17	0,11	0,13	0,09	0,11	0,11	0,08	0,19	0,21	0,10	0,12	0,14	0,10	0,31	0,32
Stocks	1,24	0,93	0,66	0,73	2,20	1,32	1,00	0,84	0,64	0,55	0,77	0,66	2,23	1,47	0,76	0,67	1,25	1,00	4,22	2,10

**Table 6. Obligations value, investment value and own capital change per 1 ha of a.l.(in 1000 zł)**

Specification	Average		Size group in ha a.l.						Total obligations zł/ha a.l.						Short-term obligations zł/ha a.l.					
			< 1000		1000 - 2000		>2000		<1000		1000 – 2000		>2000		<1000		1000 - 2000		>2000	
	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97	96	97
Total obligations	2,15	2,07	1,31	1,67	4,18	3,50	1,48	1,58	0,86	0,83	1,28	1,41	4,18	3,54	1,18	1,34	2,40	2,01	7,92	6,05
Including: credits and long-term loans	0,68	0,67	0,59	0,76	0,87	0,79	0,62	0,59	0,35	0,19	0,51	0,47	1,17	1,16	0,56	0,68	0,75	0,50	1,33	1,14
Including: credits and short-term loans	0,74	0,63	0,27	0,32	1,81	1,24	0,40	0,47	0,27	0,39	0,37	0,43	1,52	0,99	0,33	0,36	0,53	0,52	3,58	2,31
Short-term obligations	1,47	1,39	0,72	0,90	3,31	2,71	0,85	0,98	0,50	0,63	0,76	0,93	3,01	2,36	0,61	0,65	1,64	1,50	6,59	4,89
Including: supply obligations, works and service obligations	0,59	0,62	0,32	0,50	1,38	1,38	0,30	0,33	0,16	0,21	0,30	0,39	1,25	1,12	0,20	0,23	0,71	0,69	2,83	2,47
Net obligations	1,80	1,78	1,18	1,54	3,16	2,97	1,37	1,33	0,79	0,67	1,06	1,14	3,42	3,15	1,06	1,20	2,06	1,59	6,09	5,33
Investment	0,01	0,02	0,03	0,07	0,00	0,01	0,00	0,00	0,00	0,00	0,01	0,03	0,01	0,01	0,00	0,01	0,01	0,03	0,03	0,02
Own capital change	0,04	-0,23	-0,01	-0,18	0,05	-0,73	0,06	-0,02	0,04	0,01	0,10	-0,04	0,01	-0,59	0,23	-0,13	-0,73	0,12	0,14	-1,76

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