

Selected problems of capital assets of Czech agriculture

Vybrané problémy kapitálové vybavenosti českého zemědělství

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Abstract: In the paper, the level of assets and long-term tangible property as well as the development of own and foreign capital, and the development of sales are evaluated in the time period 1992–2004. An analysis of internal financing resources – profit after taxation, reserves, depreciations of long-term property – was done for the years 2000–2005. The monitored items are calculated for agricultural enterprises of legal entities. Further selected factors are evaluated, which influence the property and capital structure of an enterprise.

Key words: agriculture, capital, profit, depreciations, reserves

Abstrakt: Na základě teoretického vymezení kapitálové vybavenosti podniků je posuzována výše aktiv a dlouhodobého hmotného majetku, dále vývoj vlastního a cizího kapitálu, vývoj výsledku hospodaření v období 1992–2004. Rozbor interních zdrojů financování – zisk po zdanění, rezervy, odpisy dlouhodobého majetku – za léta 2000–2005. Sledované položky jsou za zemědělské podniky právnických osob. Dále jsou hodnoceny vybrané faktory, které ovlivňují majetkovou a kapitálovou strukturu podniku.

Klíčová slova: zemědělství, kapitál, zisk, odpisy, rezervy

Capital is regarded in the classical and neo-classical theory as one of three main production factors besides land and labour. In this concept, capital consists namely of long-term assets used in production.

The main elements of capital are production facilities, buildings and reserves. It regards the concrete production facilities which in course of time create a flow of production services and are understood as the real capital (Samuelson, Nordhaus 1992). Capital differs from other inputs in the fact that other inputs are usually acquired gradually during a certain time period, while capital assets are usually directly the property of an enterprise (a firm).

From other point of view, capital is understood as a resource of financing, the term financial capital is used, which in fact means money or some other form of “paper” assets which more or less function as money.

For the entrepreneurial sphere, fundamental is the legal determination of understanding of the term capital.

The Act No. 653/1991 Col. on accounting, subsequently amended, and the public notice No. 500/2002 Col., by which some provisions of the Act on accounting are set, determine the arrangement of items of balance for accounting entities. The side of assets represents the structure of property (real capital) and the side of debts then represents the resources of its coverage (financial capital).

The concrete composition of means is marked as a property of an enterprise (a firm); its general financial expression as assets. So, the property expresses “what the enterprise owns” and the financial capital (of resource) “what belongs to whom”. The Commercial Code understands as the property of enterprise the summary of all things, money, outstanding claims and other property values which belong to an entrepreneur and serve it or which is determined for the enterprise. It is formed by two basic groups of means which differ in the period of their engagement in economic activity for which they serve in the enterprise operation before their value is returned in

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the financial form. It regards long term assets and short-term assets.

As the capital (financial) structure of an enterprise, we regard the structure of financial resources from which the property of the enterprise issues. There are own resources, i.e. capital assets belonging to the entrepreneur or the group of entrepreneurs with input in the enterprise; we talk about own capital. The own capital creates own resources of financing of the entrepreneur's property and in the balance sheet, it is shown on the side of debts. It is the capital which belongs to the owners and it is a main bearer of an entrepreneurial risk. Its share in the total capital is an indicator of financial stability and independence.

Foreign resources represent the capital of creditors, e.g. banks, but also of other investors; they can be considered foreign capital (Rosochatecká et al. 2006).

A significant form of financing of entrepreneurial needs is self-financing from internal resources. They are the means created in enterprises. The main advantage of these resources in comparison for example with bank credits, loans or obligations can be seen in wider possibilities of their purposeful use and also in their availability. Owners decide about the purposeful determination of internal resources directly or by the means of elected representative bodies and elected executives. The formation and use of internal resources has to be according to accounting standards but these standards always leave owners and management of enterprises a certain space for decision making on the ways of creation of the possibilities of these resources utilization. Internal resources are created usually continuously during the monitoring period, they can be cumulated, deposited during the period of their creation and transferred for use in the next period. Valach (1997) for example states that self-financing has generally a bigger share in financing of fix property than in financing of short-term assets. It results from a bigger risk which is brought by financing of long-term property as well as from a long time of the fix property turnover.

MATERIAL AND METHODS

The level of assets and long-term tangible property as well as the development of own and foreign capital, and sales income development in enterprises of legal entities are evaluated on the base of theoretical determination of capital endowments of an enterprise in the time period 1992–2004. Internal resources of financing are monitored in the years 2000–2005. After the realized analysis of the background data,

only three compounds of internal resources are examined – operating results for the accounting period, depreciations and reserves.

The evaluated resources are expressed in Czech crowns per one hectare of agricultural land. The source data issue from the Reports on the State of Agriculture in the CR in the particular years. Further, the creation of own resources is evaluated for the possible investment activities, the access to foreign resources, above all to credits and subsidies, the influence of structural development of agricultural sector.

The development of the monitored items of internal resources is described by the help of the linear trend function. The function enables to find out the average rate of growth for the particular indicators and to mutually compare these rates. The calculated growth rate is in financially expressed items recorded in CZK per 1 hectare of agricultural land. The linear trend was chosen for the development characteristics because time series of the background data show a great year-to-year variance and it would not be suitable to describe the development only by the help of basic indexes. The variability is obvious from the mentioned determination coefficients. The more R^2 absents from the value 1, the bigger is the variability of the monitored indicator.

Regarding internal resources, their percent representation in the total internal resources, development and the selected ratio indicators are evaluated. The construction of ratio indicators is shown directly in the results of the paper.

RESULTS

Evaluation of capital assets in the period 1992–2004

On the base of evaluation of time series, both of the assets items and the long-term, tangible property, recorded in the Figure 1, there can be seen a low investment activity in agricultural enterprises.

The level of the monitored items in 12 years did not reached the level showed in the starting year 1992. A significant fall in the investment activity was caused by the application of restitution claims and the process of privatization and transformation. The share of agriculture in the total investment of the national economy decreased from 12.6% in 1989 to 3.2% in 1993. The decrease of the share in the total investments continued, the lowest value was reached in 2002 when it amounted to 1.63%. A revival appears in 2004, when the level of the share was 2.85% and again 4.2% in 2005.

The extent and the number of restitution claims applied in agriculture were incomparably higher than in other branches of the national economy. Prolongation of the application date of restitution claims influenced privatization of state farms. At the time when privatization projects of state farms were submitted, not all restitution claims were known yet. The gradual settling of restitution claims changed substantially the structure of property managed by state farms. The restored property was given over without liabilities, thereby the credit burden of the

remaining property fundamentally increased. Also the executed transformation of cooperative enterprises significantly impacted the property and capital structure of the enterprises. The evaluation of a cooperative property for transformation purposes was realized in depreciated accounting prices and the items with zero depreciated price were appreciated additionally. The result of this way of evaluation was that the sum which the cooperative registered exceeded highly the real price of the property determined for transformation. From the required delimitation of

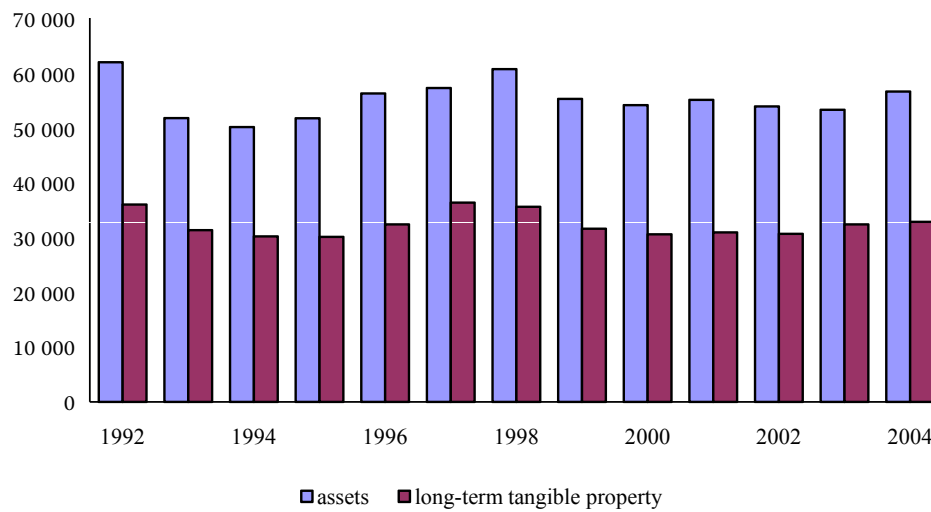


Figure 1. Development of assets and long-term tangible property in CZK/ha of agricultural land

Source: Report on the State of Agriculture 1994–2004, MoA CR

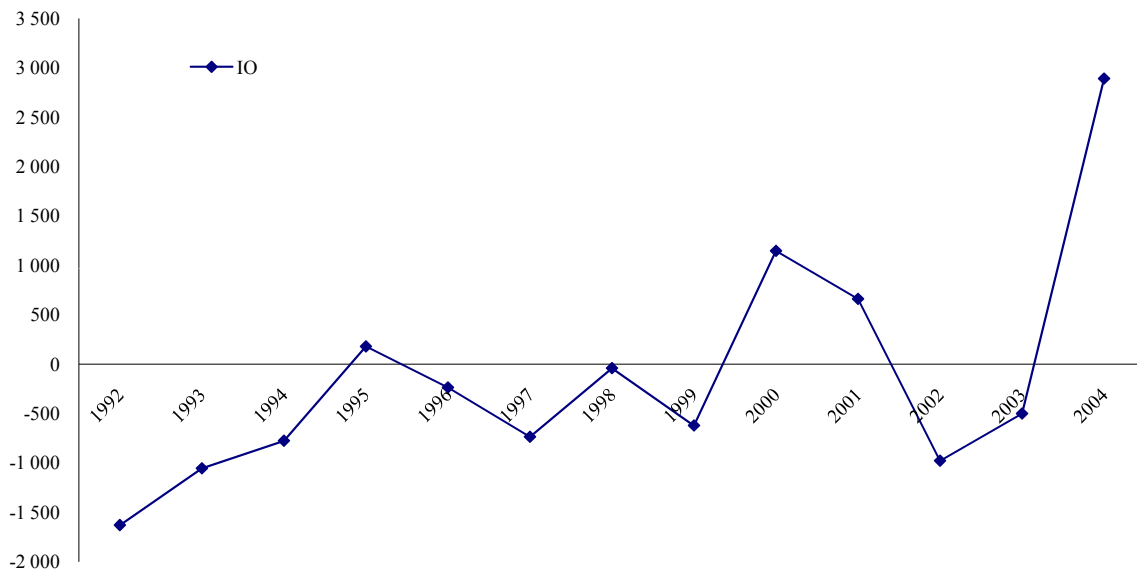


Figure 2. Income from operations in CZK/ha of agricultural land

IO = income from operations

Source: Report on the State of Agriculture 1994–2004, MoA CR

net capital, it resulted that in transformation not only restitution compensations but also the share in the newly created property was divided among the entitled persons. Only cooperatives were burdened with this obligation. Because the property was not “real”, the performed appreciation did not correspond to the real market conditions and agricultural cooperative enterprises were significantly economically weakened. Other important phenomenon which did not enable a quality reproduction of the enterprises’ property was the disproportion between the development of incomes and expenditures of agricultural producers. In consequence of market liberalization, there was a faster growth of input prices when these prices e.g. in 1996 reached the level of 301% in comparison with the year 1989, and on the other hand, the prices of agricultural products reached the level 147%. The disproportion in disfavor of agriculture has decreased in the recent years but still there is a significant difference. The recorded inflation rate in 1991 reached the level 56.6% and in 1993 20.8%; by the year 1998 it approached, with slight variations, 10%. The influence of decreasing inflation in the following years can be evaluated positively; the inflation rate moved in the range 4.7–0.1.

This development of inflation in fact depreciated the savings of enterprises, the same as depreciations. Investment activity, which would have positively influenced the enterprise and the necessary changes in the property structure, was under these conditions unreal.

The insufficiency of resources for the investment activity can be documented by the development of income from operations when in the monitored period

a negative income per one hectare of agricultural land prevails. Since 1995, a positive trend was shown in stabilization of some enterprises, more than half of which reached positive income from operations.

Insufficient creation of own resources was caused also by the gradual dampening of agricultural production. Gross agricultural production in constant prices decreased by more than 30%. In 1989, it reached the volume 109 bil. CZK; the lowest value was 67.2 bil. CZK in 2003, and in 2005 the recorded gross agricultural production was 73.6 bil. CZK. The decrease of production was the result of the drop of some branches of agricultural production (reduction of the numbers of cattle, sheep) and the reduction of intensity in plant production. The negative development in creation of own resources was reflected in the growing indebtedness of enterprises. The development of capital structure, i.e. the share of own and foreign capital, is shown in the Figure 3. Since 2000, the situation has improved; the share of own capital prevails. Creation of own capital did not return to the level of 1992 through the whole period.

For agricultural enterprises, there was not and is not a simple access to foreign resources of financing, above all to credits. Especially a low efficiency of agricultural enterprises, their total indebtedness, in cooperative enterprises also high transformation debts were added, which together were the reason for banks not to provide the necessary resources for restructuring of enterprises. Banks as entrepreneurial subjects in ownership of foreign capital have set criteria for providing credits which agricultural enterprises are not always able to fulfil. The high interest rates deepened

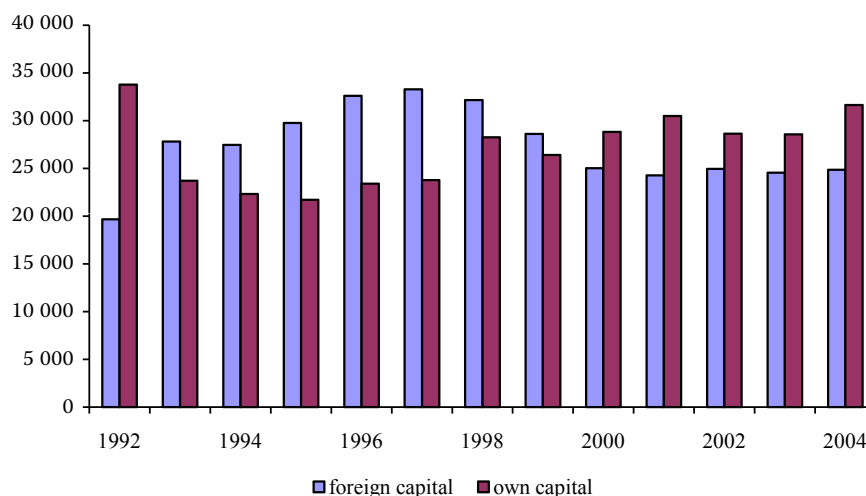


Figure 3. Development of own and foreign capital in CZK/ha of agricultural land

Source: Report on the State of Agriculture 1994–2004, MoA CR

the unfavourable situation of enterprises. Only since 1999, the interest rates below 10% have been shown. Despite that, during the monitored period interest rates were several times higher than the reached rate of profit of agricultural enterprises. The evaluation of the influence of the subsidy policy on the investment activity of enterprises and thereby improvement of the property structure is reflected also in the relation of the state to agriculture. Since 1989, the supports to agriculture in total have decreased significantly. According to the international comparison of the EPS development, for example the share of support in 1989 represented 51% and in 1996 it was 10%. At the beginning of 90's, supports were provided for dampening of agricultural production. Establishing of the Support and Guarantee Farm and Forestry Fund in 1994 helped to support investment activities and competitiveness of enterprises. The guaranteed credits and the subsidies to interests started to influence positively the investment activity of agricultural enterprises. Businesses with a progressive management used fully these possibilities and secured the necessary technological equipment. Other positive shift in the area of the subsidies policy occurred in the period before the accession to the EU when the program SAPARD included in its first priority the measure "Investment into Agricultural Property". This form of support can, from the point of view of real restructuring of agricultural enterprises, be evaluated positively. A very good level of preparedness of applicants was proved; the prevailing majority of receivers of the support from the program SAPARD were legal entities.

Evaluation of the structure and development of internal financing resources in enterprises of legal entities in years 2000 to 2005

After the year 2000, the creation of own resources has improved, with the exception of the years 2002 and 2003.

The absolute values of the created particular kinds of internal resources and internal resources in total are introduced in the Table 1.

The development trend of internal resources is growing. The average yearly increment was 309.3 CZK per 1 ha. As a positive phenomenon, there can be considered the fact that the total value of the monitored internal financing resources increased in the evaluated period. Depreciations and reserves have always positive values, the values of income over the accounting period values were negative in the years 2002 and 2003. It was caused by the operating income getting into red numbers. The creation of income from operations improved more significantly in 2004 and 2005.

The most important part of internal resources from the point of view of its volume and also the share in the total internal resources were depreciations of tangible and intangible property during the whole period. Their growth is not too significant – their increment was in the average annually only 25.4 CZK per 1 hectare ($R^2 = 0.20$); from the view-point of their share in the total accrual of internal resources they are on the second place after reserves created from the operation income, but is it a steady – certain resource of financing. The low increase of the

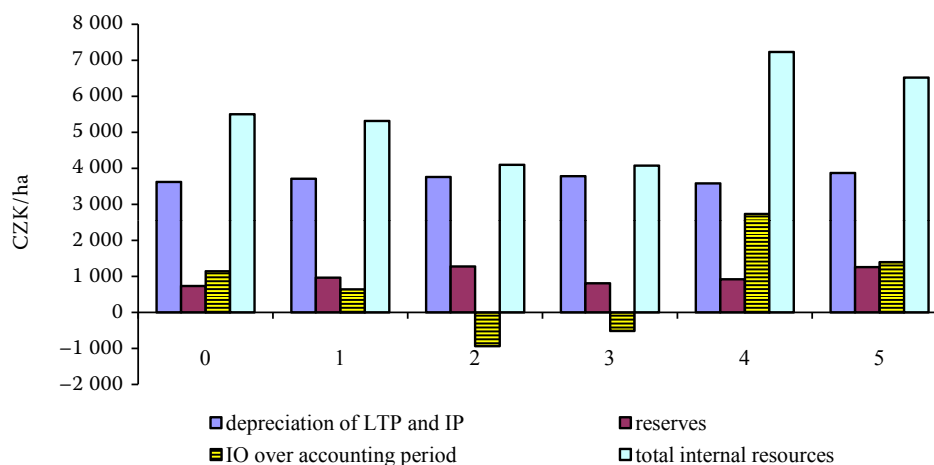


Figure 4. Structure of internal financing resources in the LE enterprises in 2000–2005

LTP = long-term tangible property; IP = intangible property; LE = legal entity; IO = income from operations

Source: Elaborated according to the FADN

depreciations value is connected with the stabilization of the structure of activities in these enterprises and from the hitherto resulting lower needs of long-term assets for new production. Further, it is connected with a higher degree of use of the already depreciated long-term assets, and, last but not least, it is connected with functioning of subsidies and supports provided to agricultural enterprises for purchasing long-term property, especially machines, means of transport, and other machinery for agricultural production. If the enterprise got a subsidy for the purchase of selected kinds of property, the purchasing price of such property in its books is decreased by the subsidy provided for the purchase of the property and by the subsidy to the connected interests included into the appreciation of the property. This adjustment results partly in a lower gross value of the assets than their real purchasing price, and partly it leads to creation of a lower value of depreciations, thereby it works further upon increasing economic results from operational activities. (A reference to the Public notice No. 500/2002). At the same time, it is neces-

sary to mention that in the evaluated period, the use of leasing increased slightly in the CR agriculture in consequence of which the need of capital assets for production is partly secured. The incidence of this influence in the evaluated collection of enterprises cannot be documented in numbers from the available data but it can be derived e.g. from the results of the CSO (www.czso.cz).

The second place according to the share in the total increase of internal resources was taken by reserves. Their value increased in average annually by 57.57 CZK. However, neither the reasons for creation of reserves, nor the reasons of their use can be analyzed in more details from the available sources. The development of the monitored internal resources was most significantly influenced by the development of economic result after taxation. Because the yields grew in the monitored period (Table 2) in average annually by 424.71 CZK, while the costs only by 198.4 CZK, a growing trend showed also in the income from operations. From the data, it is possible to presume a more significant improvement in the

Table 1. Structure and development of internal financing resources in the LE enterprises (CZK/ha)

Item/Year	2000	2001	2002	2003	2004	2005	Growth rate
Depreciation of LTP and IP*	3 622	3 710	3 761	3 782	3 581	3 873	25.4
Reserves	732	965	1 276	807	918	1 257	57.57
Income over accounting period	1 147	639	-938	-513	2 731	1 391	226.31
Internal resources in total	5 501	5 314	4 099	4 076	7 230	6 521	309.29

*LTP = long-term tangible property, IP = intangible property, LE enterprises = enterprises of legal entities

Source: Elaborated according to the FADN

Table 2. Structure of returns in the LE enterprises in CZK/ha

Item/Year	2000	2001	2002	2003	2004	2005	Growth rate	R ²
Returns in total	38 463	40 908	40 168	38 074	42 256	41 046	424.71x	0.243
Sales of goods	1 592	1 791	1 817	1 591	1 184	980	-145.91x	0.651
Outputs	29 922	33 385	32 277	30 271	33 006	30 894	49.057x	0.004
Sales of own products and services	27 782	30 514	30 214	28 755	30 062	29 191	120.86x	0.047
Sales of LTP and material	2 254	1 970	1 931	1 942	1 917	1 918	-52.229x	0.553
Other operational returns	3 157	2 185	2 445	3 487	5 392	6 670	806.51x	0.726
Operational returns in total	36 925	39 331	38 470	37 291	41 499	40 462	657.43x	0.473
Share of operational return from return in total	96.00	96.15	95.77	97.94	98.21	98.58		

LE = legal entity; LTP = long-term tangible property

Source: Elaborated according to the FADN

creation of yields in 2004 and 2005 in comparison with the foregoing years which transferred positively into the income from operation over the accounting period and also in the return of sales.

The average annual growth of income from operations after taxation was 226.6 CZK which is the highest among the monitored kinds of internal resources and also a mark of positive development, however, the variation of this item of internal resources was the biggest. In this variation, other two components share their variations – depreciations and reserves, because in calculation of this results, they are subtracted items from returns (depreciations are costs of the common period, reserves are costs of the next periods) (Table 3).

The structure of income from operations over the accounting period is shown in the following table.

Components of income from operations developed differently (Table 4).

The value of the extraordinary income from operations decreased, but the situation in the financial area improved and since 2003, it has improved also in the operational area. Operational and financial returns contributed positively to the growth of income from operation. A still negative value of IO from financial operation decreased owing to the decreasing burden of credit interests. This phenomenon, confirmed by the data in the following table, is obvious. The average interest rates in the monitored area decreased in the national economy as well as in agriculture (Table 5).

The importance of internal resources of financing is obvious also from their share in the value of long-

Table 3. Development of incomes from operations over the accounting period in the LE enterprises

Item/Year	u.m.	2000	2001	2002	2003	2004	2005
Costs in total	CZK/ha	37 316	40 269	41 106	38 587	39 525	39 655
Returns in total	CZK/ha	38 463	40 908	40 168	38 074	42 256	41 046
IO after taxation	CZK/ha	1 147	639	-938	-513	2 731	1 391
Rate of cost profitability	%	3.1	1.6	-2.3	-1.3	6.9	3.5
Rate of returns profitability	%	3.0	1.6	-2.3	-1.3	6.5	3.4

IO = income from operations; LE = legal entity; u.m. = unit of measurement

Source: Elaborated according to the FADN

Table 4. Structure of income from operations in CZK/ha

	2000	2001	2002	2003	2004	2005	Growth rate	R ²
Operational IO	1 330	732	-879	-252	3 143	1 841	297.57	0.1465
Financial IO	-576	-547	-407	-471	-347	-393	41.457	0.7309
IO over common activity	723	141	-1286	-719	2 639	1 285	310.6	0.1682
Extraordinary IO	424	498	344	200	91	111	-83.71	0.8575
IO over accounting period	1 147	639	-938	-513	2 731	1 391	226.31	0.1002

IO = income from operations

Source: Elaborated according to the FADN

Table 5. Burdening with bank credits and aids regarding the LE enterprises

Indicator/Year	2000	2001	2002	2003	2004	2005
Debts in total	54 563	55 198	55 100	5 3907	5 5103	57 400
Bank credits and aids	5 478	5 373	6 230	5 930	5 958	6 619
Share of credits and aids in %	10.04	9.73	11.31	11.00	10.81	11.53

LE = legal entity

Source: Elaborated according to the FADN

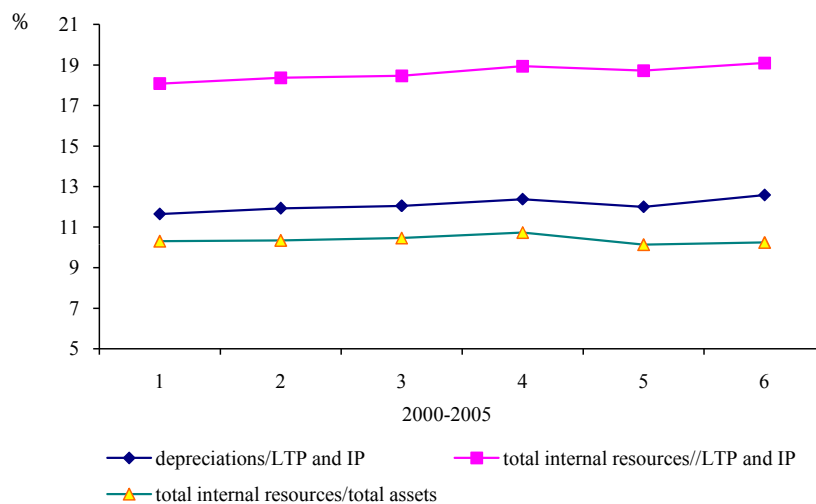


Figure 5. Significance of the total internal resources in financing of the LE enterprises development

LTP = long-term tangible property; IP = intangible property; LE = legal entity

Source: Elaborated according to the FADN

term tangible and intangible assets (see the Figure 4). The share of depreciation reached 11.65% from the net value of long-term tangible and intangible assets in 2000 and gradually it increased to 12.58%, however, it increased in average annually only by 0.1489%. It means that it would be annually possible to finance always a higher part of these assets from depreciations created in the given accounting period. The result appears to be favourable, but it is not completely favorable because the value of long-term tangible and intangible assets decreased by 171.4 CZK yearly.

Also, neither the development of the per cent share of internal resources in the value of long-term tangible and intangible assets nor in the values of assets in total can be considered as quite favourable. The share of internal resources in the mentioned long-term assets increased in average annually by 0.1887%, however, the same as regarding depreciation, it was reached at the decrease of total their value. The total value of assets in CZK per 1 ha increased in this period – annually by 363 CZK per 1 ha; it grew faster than the internal resources and therefore the significance of internal resources for the possible financing of their enlargement slightly decreased – by the average yearly rate of -0.019% .

DISCUSSION AND CONCLUSION

The evaluation of the structure of property of agricultural enterprises of legal entities and the re-

sources of its coverage, including the influencing factors, does not during the followed time period document sufficient conditions for the increase of competitiveness of enterprises based on restructuring and modernization of the production base. A certain positive development in the gradual decrease of indebtedness of enterprises is not sufficient for the necessary development of enterprises.

In the pre-accession period 2000–2005, the provision of enterprises of legal entities with property and capital increased – the value of assets in total grew. The value of long-term tangible and intangible assets and their share in the total assets decreased. The creation of income from operations over the accounting period, the creation of depreciation and reserves, i.e. of all components of internal resources, improved. The improvement of values of income from operations after taxation was one of the factors of the growth of own capital in these enterprises and consequently also of the decrease of indebtedness. Depreciations grew partly owing to the prices of the purchased kinds of property and also owing to the changes in the depreciation state policy. However, the significance of internal financing resources has already slightly decreased.

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