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Land use and ownership and the Czech farm development

Abstract: *Characteristics of the present land usage, land ownership and the land market in the Czech Republic – the distribution of the Czech Utilised Agricultural Area (UAA) among owners and users, driving barriers on the Czech Land market. A regional view on the Czech UAA from the points of view of natural conditions, agro-environmental and rural sensitivity. Definition of policy scenarios for the 2013 horizon with the respect of coupled/decoupled direct payments, LFA payments, legislation related to the land market. Possible impacts of the scenarios on the Czech land market development, land usage and land ownership. Conclusions: main policy issues related to the agricultural/rural development in the Czech Republic.*

Key words: *agricultural land use, ownership, Czech Republic, agricultural policy, direct payments.*

Introduction

Together with the other nine acceding countries the Czech Republic entered the European Union (EU) on 1st of May 2004. The Common Agricultural Policy of the EU (CAP), adjusted according to the Accession Treaty, has been applied in the Czech agricultural sector since that day. It is expected that the new economic and policy environment may have an important impact on the structure of land use and land ownership in the Czech farm sector. Some basic assumptions about this development and related policy issues are the topics of the article.

In Part 1, the characteristics of the present land use and land ownership and the Czech land market are described. They are accompanied by regional views on the Czech Utilised Agricultural Area (UAA), with a special attention to agro-environmental sensitivity of the UAA. Part 2 is oriented on the definition of policy scenarios (policy options) for the 2013 horizon. The possible impacts of the scenarios on the Czech land use and ownership are shown in Part 3. To the conclusion, main policy issues related to the topics are presented.

Characteristics of the present land use and ownership in the Czech agriculture

Definition of the Czech Utilised Agricultural Area

The Czech UAA as the object of the land market can be defined from several points of view, resulting in the different surface area of the land in question:

- total acreage of agricultural land according to the Czech Cartographic Authority, based on the land parcels registration, amounting to about 4.3 million ha;
- total acreage of the farmland according to the 2003 structural survey of the Czech Statistical Office, amounting to about 3.6 million ha;
- total acreage of the agricultural land eligible – according to the IACS¹ criteria – for direct payments under the CAP:
 - ideal (potential) acreage amounting to about 3.7 million ha;
 - real (claimed) acreage in 2004 amounting to about 3.5 million ha.

For the article, the acreage of the Czech UAA is assumed to be approximately 3.6 million ha, close to the results of the latest statistical survey and the area estimated according to the IACS criteria. The difference related to the surface according to the Czech Cartographic Authority, amounting to 0.7 million ha, is not considered. However, further special surveys are needed to explain the difference and to assess its significance for the future Czech land market².

Categories of land users and owners and the present Czech land market

The present structure of the land use and ownership in the Czech agriculture is the consequence of restitution, privatisation and transformation processes after 1989 influenced by many path dependencies.

Users of the land under the UAA – existing or new entering farms – represent the final demand for agricultural land. For our purposes the following farm categories are defined³:

- (very) small subsistence farms (self-supplying households) or hobby farms (SF);
- family farms – full-time or part-time (FF);
- (large) individual/partnership farms or limited liability companies⁴ (IF);

¹ Integrated Administrative and Control System according to EU regulations.

² The largest differences (more than 40%) between the UAA and the acreage according to the Czech Cartographic Authority are in border districts (especially in the north-west border districts), touched with the post-war expulsion of Germans and with the following land allotment system for newcomers. Nevertheless, the difference could be explained mainly by small plots under the eligibility criteria for direct payments (0.1 ha) and by unregistered natural conversion (succession) of agricultural land into woodland, field roads, etc.

³ Based on correlations between farm structural characteristics and their economic performance/behaviour derived from the Farm Accountancy Data Network database.

⁴ Limited liability companies were mainly founded during the transformation as descendants of (transformed) coops or as farms privatising the state (non-land) assets.

- collective farms with a significant or growing ownership/decision making power in the hands of a limited number of managers (CF-M);
- other collective farms with still dominated ownership/decision making power in the hands of members/shareholders (CF-O);
- other farms (O).

The supply of agricultural land under the UAA is provided by the following categories of landowners:

- the state: about 690 thousand ha of agricultural land (at the end of 2003) are still owned by the state and administered by the Czech Land Fund; the land is mainly destined to be privatised by a compensatory restitution, or by direct sale, respectively (GOV);
- land in the ownership of municipalities and other non-profit institutions (inasmuch as they are selling or leasing the land to farms) (MUN);
- entrepreneurs – farms:
 - physical entities – self-employed landowners (PE);
 - legal entities (LE);
- physical persons – self-employed on farms as legal entities (PP-LE);
- other physical persons (OPP):
 - living in localities, where they own the land (OPP-L);
 - living out of localities, where they own the land (OPP-O)⁵.

The present estimated shares of the individual categories of land users and landowners in the Czech UAA are shown in Table 1.

Table 1. Shares of individual subjects in the Czech UAA⁽¹⁾

Users/Owners	GOV	MUN	PE ⁽³⁾	LE	PP-LE	OPP	Total 000 ha	Total %
SF			40				40	1.1
FF	30	5	205			185	425	11.8
IF ⁽²⁾	320	10	65	60		1150	1605	44.6
CF-M	125	5		40	75	395	640	17.8
CF-O	110	5		20	180	540	855	23.7
O	35						35	1.0
Total 000 ha	620	25	310	120	255	2270	3600	100
Total %	17.2	0.7	8.6	3.3	7.1	63.1	100	X

⁽¹⁾ Utilised Agricultural Area 3.6 mil. ha, in 2004

⁽²⁾ Large individual farms and limited liability companies

⁽³⁾ Land leased by PE to other categories of farms is included in OPP

Source: Reports on Czech Agriculture 2001–2003, CSO survey 2003, survey under ACE project 2000, Agrocensus 2000 (CSO), own estimates.

⁵ It is supposed that the majority of these landowners are living in towns and cities. A part of the land is already in the ownership of non-Czech physical persons or companies.

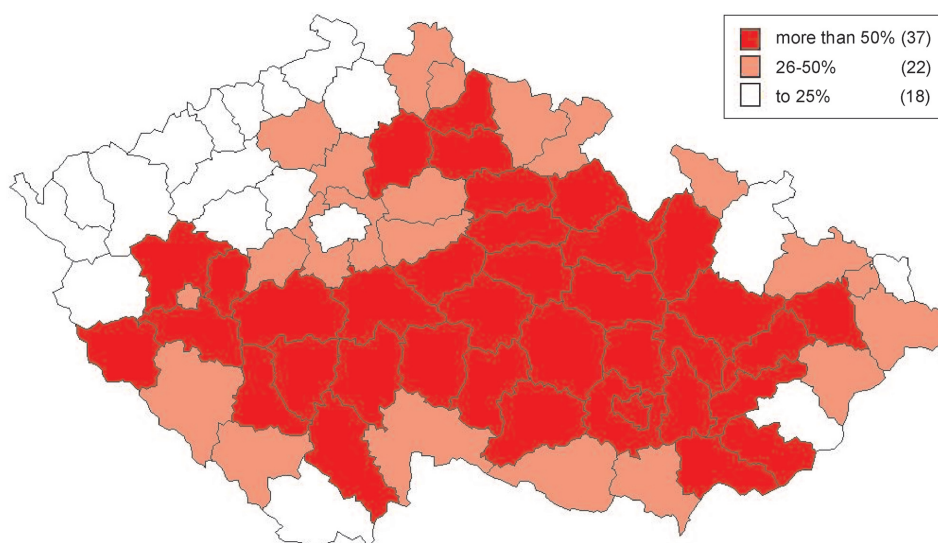


Figure 1. Share of coops and joint-stock companies in Czech Utilised Agricultural Area

What are main observations issuing from Table 1 and Figure 1?

- There is a big discrepancy between the land ownership and the land usage: almost 90% of agricultural land on farms is leased. The larger the acreage of a farm, the larger the share of leased land, as a rule.
- Besides the state land, which is under the process of privatisation (since 2003, annually approximately 70,000 ha), the main suppliers of land (more than 60% of the Czech UAA) are represented by millions of landowners living outside of agriculture and rural areas. The ownership fragmentation impedes changes in the land usage.
- Only 12–13% of the UAA is occupied by small and larger family farms. The category of large individual farming (including limited liability companies) amounts to about 45% of the UAA and has been continuously growing (by shifts of land from family farms and especially from collective/corporate farms). From the other point of view, more than 60% of the UAA is occupied by farms with a clear “profit/capital orientation”, the remaining area is occupied by farms with an “income/self-employment orientation”.
- Collective farms dominate particularly in the Czech-Moravian Highlands and in other inner regions, preserving a “traditional” structure of land usage and farm practices. Individual farming, largely originated from the privatisation of the state non-land assets⁶, dominate especially in the border regions⁷.

⁶ It is very important for this farm category that only non-land assets were privatised (for long-term loans as a rule) and that the farms have to participate in the privatisation of land (which is still leased to them by the Czech Land Fund). According to the legislation, the farms have some priorities in the privatisation of the land (they are eligible for 500 ha or the half of the leased state land at maximum). Considering their average acreage (1,000 ha and more), the larger part of their used land is privatised through tenders (auctions), where non-agricultural/foreign capital often domains.

⁷ As descendants of previous state farms founded mainly on the land of expelled Germans after the World War II.

Family farms are dispersed throughout of countryside, but in some districts (e.g. in districts around Prague) completely prevail.

In general, the Czech land market is still dominated by the lease contracts. The land market is still undeveloped and imperfect, with a lot of barriers, or with high transaction costs incurred. The large number of the barriers descends from the past, as a heritage from the post-war situation (expulsion of Germans from the border regions – from the one third of the UAA) and the socialist regime (particularly the suppression of the ownership rights and the land consolidation in cadastral resulting in extremely large fields for the large scale farming; the interruption of the land ownership registration, etc.). The questions of particular importance are:

- the extreme fragmentation of the land ownership (millions of small owners with the territorially dispersed ownership);
- the discrepancies between the registration of parcels (plots) and the registration of utilised fields, or between the registration of parcels and the physical (real) appearance (utilisation) of them, respectively;
- the incomplete ownership identification of plots, especially in the border regions;
- the real local monopoly of large land-users (coops, joint-stock companies), accompanied by a low bargaining power of land-owners and their problems with the physical identification of plots (in the middle of extremely large fields as a rule) and with the physical access to them.

The basic measure to eliminate the mentioned barriers, to facilitate the land market development and to enable the restructuring in land usage, is the new land consolidation in cadastral (in reality a land re-consolidation, considering the socialist land consolidation). However, the progress in the land consolidation is very slow. The complex consolidation was completed in only about 500 cadastral while their total number was 13,000 in 2003.

The primary demand for agricultural land is increasingly stimulated by various estate agencies, which to a large extent cover some transaction costs linked with the marketing of the land and which can act for speculative and other interests on the land market.

As regards the current prices of agricultural land in the Czech Republic, they are still many times (10 to 15) lower compared with the prices in the EU-15 countries⁸. At the same time it is symptomatic that – as a rule – the Czech land prices (rents) are much higher for dynamic “demanding” farms than for farms with a „status quo“ behaviour⁹.

⁸ According to the special VUZE surveys, the average price of agricultural land (destined for farming) ranges between 40,000 and 60,000 CZK (1300–2000 €, approximately).

⁹ According to the FADN data, the rents paid by farms of the FF or IF categories are three to four times higher than the rents paid by farms of the CF category (particularly in LFA).

Regional view on the land quality and usage

The Czech UAA has regionally a very heterogeneous usage structure, or the quality for its potential usage, respectively. To demonstrate the regional heterogeneity, 78 district administrative units are applied¹⁰ as elementary territorial units.

The following criteria are applied on the level of districts:

- the share of arable land in the total acreage of agricultural land;
- livestock density – the number of livestock units (LU) of ruminants per 1 ha of agricultural land;
- agro-environmental sensitivity stemming from the currently applied environmental regulations (legislation), with the application of the factor analysis methodology (Annex 1 and Figure 2);
- the share of LFA in the total acreage of agricultural land (that is according to natural conditions – land productivity, average altitude and average sloping – plus demographic situation – Figure 3).

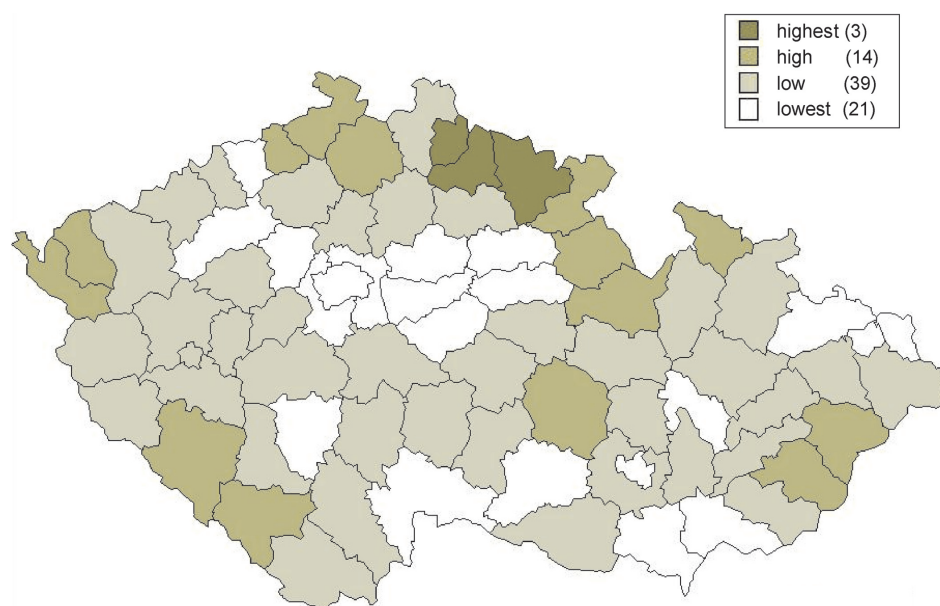


Figure 2. Agro-environmental sensitivity

Considering the LFA payments paid only on grassland since 2004, what are the main issues from the regional point of view?

- The average share of arable land in the Czech UAA is about 72%, much higher than in EU countries with similar natural and climatic conditions. It is symptomatic that this share has decreased only by 3 percentage points after

¹⁰ There have been 78 district units in the Czech Republic on the level of NUTS 4, from which it is possible to obtain data. However, the administrative structure of the Czech Republic has changed before EU accession and the district units have been abolished.

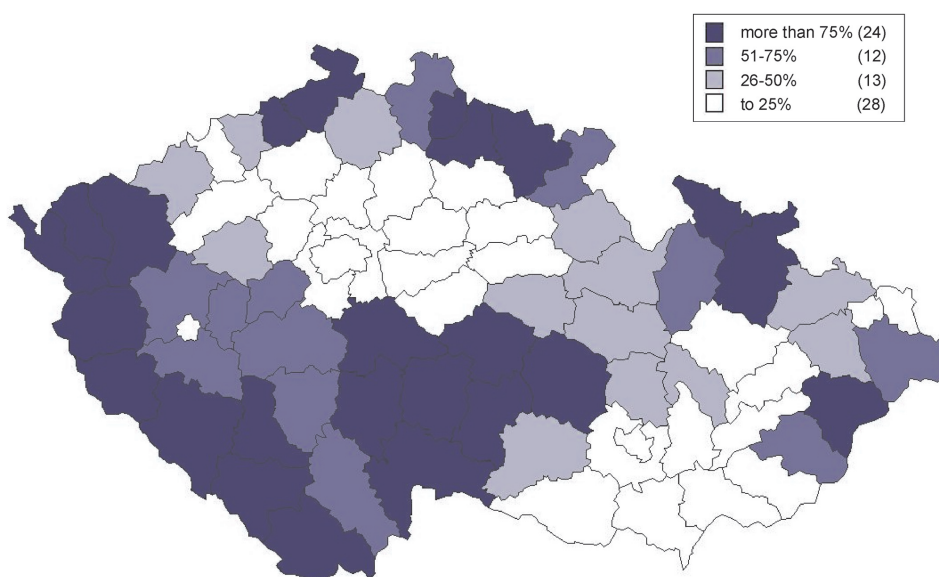


Figure 3. Share of Less Favoured Areas (LFA) in Czech Utilised Agricultural Area

1989. The share of arable land still prevails even in some hilly regions. At the same time, the number of ruminants (cattle, sheep, goats) is about 40% compared with the 1989 situation; livestock density decreased especially in LFAs.

- A large number of districts, particularly in the Czech-Moravian Highlands (in the middle Bohemia), are characterised by a higher LU density in LFA regions, but with a lower share of grassland. It is a typical heritage from the past regime and a typical example of the slow restructuring processes in Czech agriculture.
- At the same time, those districts are affected by a higher agro-environmental sensitivity and are prevailing occupied by collective farms (Figure 1). It means that the future changes in the structure of land usage shall be provided by these categories of farms. With the regard of their “conservative” behaviour and the extreme gap between land usage and ownership in their area¹¹, the restructuring will encounter many obstacles.
- On the other hand, a large number of the border districts are characterised by a low LU density in the LFA regions, though with a higher share of grassland. In these districts, very large individual farms (up to 16,000 ha and more, including limited liability companies) prevail. Considering their “capital/profit” orientation, the leakage of agricultural supports from farms and rural employment are the main problems in these districts.

¹¹ For example, any conversion of arable land into grassland as a part of agro-environmental schemes should be approved by land-owners. In practice, the foundation of a grassland belt as a protection against the water erosion requires the approval of tens owners.

Policy scenarios related to the allocation of direct payments and the land market

The Czech farmers will receive in the period of 2004–2013 the following five categories of support: direct payments, structural supports under the Horizontal Rural Development Plan (half of which represents payments for the Less Favoured Areas – LFA) and under the Operational Programme for Agriculture¹², state aid, and market price supports.

Besides the support mentioned the Czech farms will be influenced by other measures like cross compliance (environmental and other conditions for direct payments) and other general conditions for farming, particularly:

- privatisation of the state land according to the latest legislation;
- support for purchasing of private land by farmers through the Support and Guarantee Farm and Forestry Fund (SGFFF) in the form of interest subsidies for long-term bank credits;
- restrictions for foreigners to acquire Czech land according to the latest legislation;
- land taxes according to the latest tax legislation (since 2005 the land taxes for farm land are paid by land-owners, if the land is under the digital system);
- possibility of receiving direct payments on the land without production (but keeping with the Good Farming Practices conditions);
- conditions for new entrants in the farm sector according to the Agricultural Law;
- enforcement of a law implementing a compulsory leasing of land for a long-term period, including the level of rents (under discussion in the government and the Parliament).

It is supposed that the main influence on the future land market would have:

- the way of the distribution of direct payments (coupled/decoupled payments);
- the way of the distribution of LFA payments (on grassland/on all eligible agricultural land);
- a political decision on land leasing legislation (there is a pressure from the side of some political parties to “conserve” the present land usage situation for a longer time¹³).

¹² Since 2007 the structural support would be concentrated in the EAFRD fund.

¹³ During 2003–2004 the government prepared a draft for the law enabling to conserve land usage rights for the leased land for 5 + 5 years (the latter years as an option right). At the same time, the left wing political parties worked out a similar draft for the law with 7 + 7 years and with a clause to increase rents only by the rate of inflation at maximum. The both drafts did not pass through the Parliament, especially due to a strict opposition particularly from the side of the right wing political parties, the Association of Private Landowners and the Association of Private Farming. However, the idea is still living. From this point of view, it is also important that any complex land consolidation in cadastres is accompanied by cancelling of all land tenancy contracts and by founding quite new contracts.

Based on this, the following scenarios and sub-scenarios of future Czech agricultural policies are defined:

Scenario A – Partial or full decoupling of direct payments on all eligible agricultural land and LFA payments only on grassland¹⁴:

A1 – Without enforcement of the law on land leasing and rents;

A2 – With enforcement of the law on land leasing and rents.

Scenario B – Full decoupling of direct payments on all eligible agricultural land and LFA payments on all eligible agricultural land:

B1 – Without enforcement of the law on land leasing and rents;

B2 – With enforcement of the law on land leasing and rents.

Possible impacts of various policy scenarios on Czech agriculture

Land users – farms – are getting into relations with landowners on the land market. The impacts of the policy scenarios are based on the following suppositions:

- Land users express demand for (additional) land, if the marginal annual value of production (or of total incomes including direct payments per hectare) from each additional leased (bought) land unit at least equals the annual rent (or the equivalent of the annual rent in the case of a purchase of land), increased by transaction costs incurred to realize a lease (purchasing) contract on the land unit.
- In the case to the contrary, if land users behave rationally, they should get rid of the land.
- Land price (or rent) reflects supply/demand relations, but with many specific factors involved (scarcity of land, potential for non-agricultural utilisation – the vicinity to larger housing, industrial or recreational localities, legislative limits for utilisation of land, etc.). Nevertheless, the level and the way of distribution of direct payment (including LFA payments) have strong influence on land prices.
- There is an equal approach to direct payments. It means that all farm categories, even the smallest ones, are able to cope with administrative requirements linked with direct payments, including *cross compliance* conditions. However, transaction costs to receive direct payments (which decrease the supports in reality) can significantly differ.

In these relations – and especially in transitive economies – other factors can play an important role. Besides the legislation and barriers on the land market there is a particular question of the „future expectations” factor (which can be considered as all above mentioned suppositions, transferred to the future).

¹⁴ From the point of view of their eligibility and final effects the LFA payments are similar to the category of direct payments (being paid only in the defined Czech territories, of course).

The following assessment of the scenarios is presented in the qualitative way, as hypotheses concerning possible/expected changes in the land usage and ownership.

Scenario A1

- A larger part of direct payments would flow to the landowners. Under a perfect land market and with no transaction costs on the market all direct payments could be transferred to the landowners. Because the Czech land market is not perfect, the share of direct payments leakage to the landowners can be estimated at about 30–50%, but with a growing tendency accompanying gradual improvements of the market.
- This process would be realised through a gradual growth of rents and land prices. The value of assets would increase for the land-users with their own land.
- The land market would get significantly activated, supported by the functioning of various estate agencies. The interest in land (in the enlargement of leased land or ownership, or – inversely – in maintaining of the present leased land, respectively), stimulated by the SGFFF supports, would show up for all farm categories (with a possible exception in the case of the SF category).
- Non-agricultural and foreign capital (companies, intermediaries, physical person according to the Foreign-exchange Law) would enter the Czech land market to a larger extent.
- In spite of the barriers for the entry into farming (according to the Agricultural Law Nr. 85/2004) it would be also possible to expect a growing interest of landowners from the OPP-L category to cancel actual lease contracts and to start an own farming activity (probably in the SF or FF categories).
- As a whole, one could expect the enlargement of the land acreage in the ownership of farms (from the present about 10%, particularly to the detriment of landowners in the GOV and OPP categories), and the increase of the share of large farms with more than 1,000 ha (especially in the IF and CF-M categories) in the UAA (from the present about 61%, particularly to the detriment of farms in the CF-O category). The number of farms in the SF category could increase, accompanied by a very moderate growth of their total acreage.
- In LFA regions, the orientation of farms towards the enlargement of the acreage of grasslands would sharpen. The present share of grasslands in LFA is about 41%. The potential of respective support is therefore not fully utilised (however, an enlargement of grassland area would lead to lower per ha payments). This orientation would be limited by the expected unwillingness of landowners to convert arable land into grassland.
- Potentials for an extensive farming and for the utilisation of agro-environmental programmes, reaching to about 2.5 million ha, would be realised starting from regions with the highest agro-environmental sensitivity (on some 900 thousand ha).

Scenario A2

- The conservation of the present land usage structure of the UAA and a limited development of land prices/rents without links to direct payments would follow. As a consequence, the leakage of direct support to landowners would significantly decrease.
- Under these conditions, “passive” farms that do not want to enlarge their own or leased land would gain profits. Similar effects could be gained on farms (and for their managers), whose land is mainly in the ownership of physical persons of the OPP category (the lower level of rents for farms, or better conditions for purchase of land from the OPP landowners, respectively).
- In any case, the transfers of land among individual categories of farms and the continuation of the much needed restructuring of the Czech agriculture would encounter worse conditions. The dynamics of changes in the farm structure would significantly slow down, but with the possible continuation of transformations from the CF-O farms to the CF-M farms, or from the CF-M farms to IF farms.
- The land usage structure of the UAA would be similar as in the scenario A1.

Scenario B1

- Regardless of the land (soil) quality, direct payments would be spared on farms (but only in the relation to landowners). However, if new entrants are eligible for direct payments under the SFP system (by applying, e.g., the national reserve system), a part of direct payments would flow to landowners. Nevertheless, this leaking would not be so intensive as in scenario A1.
- The SFP payments could slow down the restructuring inside farms and hence also might impair their effectiveness. However, this hypothesis would not be valid, if also new entrants are eligible for direct payments.
- Similar effects could be expected with respect to a lower dynamics in the farm structure development. However, the dynamics could approach the development envisaged under scenario A1, if also new entrants are eligible for direct payments.
- The release of LFA payments over all eligible agricultural land could slow down the enlargement of grassland areas in the regions with the worse natural conditions.

Scenario B2

In summary, the implementation of the B2 scenario would lead to the least leaking of direct payments from land-users to landowners, but at the same time further restructuring of the Czech agriculture would be slowed down.

Conclusions

The decisions about the future Czech agricultural policy under EU conditions, particularly as regards the ways of distribution of direct payments and the legislation related to the land market, can significantly influence the farm and land

usage structure and the further restructuring of the Czech agriculture. If it is necessary to apply the distribution of direct payments through the SFP system, it would be reasonable to enable also new entrants to the UAA to receive the payments. This, however, would also amount to conceding that the expected positive effects could be accompanied by a higher leakage of direct payments from land-users to landowners and with a more rapid increase of land prices.

The restructuring, not the conservation (stabilisation) of the present farm and production structure of the Czech agriculture, should be one of the highest priorities of the agricultural policy. The needed restructuring is conditioned by the more perfect land market and by the reduction of transaction costs on the market. For these reasons, Czech agricultural policy should be oriented more towards the removal of barriers on the land market, or it should resist temptations to create new impediments and bottlenecks on the market. To speed up the land consolidation in cadastres is evidently one of the main tasks for the government in this field. These conclusions are in compliance with more EU analytical studies – e.g. Ciaian, Swinnen (2003), Swinnen, Frankem (2003), Lerman (2001) and others.

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Annex 1

Agro-environmental sensitivity of the Czech districts – Factor Analysis (FA)

Each of 78 Czech districts is characterised by the following indicators:

- 1 share of grassland in agricultural land;
- 2 average sloping of agricultural land;
- 3 share of agricultural land in national parks;
- 4 share of grassland in national parks;
- 5 share of agricultural land in landscape protected areas;
- 6 share of grassland in landscape protected areas;
- 7 share of agricultural land in small nature protected localities;
- 8 share of agricultural land in water accumulation protected areas;
- 9 share of agricultural land in water protected zones;

10 share of grassland in landscape water protected zones;
11 share of agricultural land in nitrate sensitive areas.

FA leads to the reduction of 11 indicators to 5 linearly independent factors (F1–F5) explaining up to 87% of the variability.

Rotated Factor Matrix

Indicator/Factor	F1	F2	F3	F4	F5
1	0,43	0,74	0,20	0,16	-0,05
2	0,38	0,70	0,32	0,01	-0,14
3	-0,01	0,13	0,97	0,12	0,05
4	-0,03	0,05	0,98	0,10	-0,02
5	0,84	0,35	-0,02	-0,11	0,14
6	0,90	0,06	-0,04	-0,08	0,22
7	0,12	-0,04	0,03	-0,06	0,97
8	0,70	0,21	-0,01	0,32	-0,21
9	0,04	0,05	0,12	0,97	-0,07
10	-0,02	0,06	0,10	0,97	-0,01
11	-0,04	-0,92	0,07	-0,04	-0,04
Explained variance ⁽¹⁾	2,36	2,08	2,07	2,06	1,08
Weights	1,54	1,44	1,44	1,44	1,04

(1) The value 9,65 from 11.

The coordinates (figures) in the matrix represent correlations of a given factor F with original indicators and how each of the new factors is “saturated” by the original indicators (e.g. Factor 1 is mainly “saturated” by indicators 5 and 6). Using the FA methodology, the exact weights (“influential power”) for each factors are calculated (which is not possible for original indicators). The weights are calculated as square roots of the sums of the coordinates in the columns (the sums represent the total variance quantifying the given factor).

Using the matrix of the factor scores the weighted total factor score for each district is calculated and the districts can be clustered into categories by their total weighted scores.