

An impact of direct payments on production decisions in agriculture

Vliv přímých plateb na rozhodování v zemědělské výrobě

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Abstract: The paper deals with the employment of decoupled direct payments as the model of targeted lump-sum financial transfers to the farmers. It considers whether decoupled payments may alter producers' resource allocation over time and lead to effects on production. Decisive topics of influence through which decoupled payments as an instrument of income redistribution could affect production through recipient' decisions in both short and long time horizons are bringing to the attention as follows: wealth and investment effects, sector consolidation and payment basis effects in the framework of agricultural policy.

Key words: agricultural policy, competitiveness, economic costs, decoupled payments, income redistribution, investment, wealth

Abstrakt: Příspěvek se zabývá uplatněním přímých plateb jako dotace typu cíleného transferu celkové finanční částky do důchodu zemědělců. Zkoumá, zda platby oddělené od produkce mohou ovlivnit rozhodování příjemců o alokaci zdrojů a volbu struktury a rozsahu produkce v čase. Vymezuje rozhodující oblasti potenciálního vlivu tohoto nástroje redistribuce důchodu na rozhodování příjemců o výrobě v krátkém i dlouhém časovém horizontu a hodnotí jeho efekty z hlediska působení na blahobyt a jím ovlivněné investiční rozhodování, působení na konsolidaci v sektoru a důsledky výběru základny pro poskytování tohoto typu dotací v rámci agrární politiky.

Klíčová slova: zemědělská politika, konkurenceschopnost, ekonomické náklady, platby oddělené od produkce, redistribuce důchodu, investice, blahobyt

The movement from the price support to the direct payments, linked increasingly to non-agricultural objectives, highlights the welfare nature of the current Common Agricultural Policy of the EU (hereafter CAP) which may be evaluated as "liberal state regime", in which programmes are funded through taxation rather than high prices, and are directed more as welfare subsidies for low-income farmers. However, the reasons why the policy reform has to take place are much wider and complicated and are concerned with the turning point of the environment and model of market conditions for the prosperous production agriculture.

Increased integration of the world agrarian market and the rapid growth has acted as a major stimulus to trade between and within regions and has resulted

in major shifts in the geographical and commodity distribution. Moreover, today's agriculture has become a part of a considerably wide-ranging complex that determines not only the conditions of its success in selling products on the ultimate markets but also the nature and dimension of agriculture production firms in specific areas. An entrepreneurial environment formed in this way has a considerable effect on the process of decision-making of agricultural producers concerning the structure and parameters of their production and collides frequently with the central constraints, regulations and limits of the historically conceived agrarian policies.

The changing economic environment raises a large number of issues in the context of forthcoming reforms that bring about quite new problems of

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development for the old as well as the new member states. Even though our agricultural companies still adopt relatively strong regulation mechanisms within the existing CAP together with a comparably lower financial support, they cannot act merely as passive recipients of the currently available subsidies because the environment is changing rapidly. In fact, right now they have a rare opportunity to participate actively in this change, realising competitive advantages and using their unique knowledge and available resources. This does not apply solely to the corporate sphere but also to the selection of adequate instruments that can be exploited within the rules determined by the common agricultural policy.

The generalisation of all current processes, especially of the changes resulting from the transformation of supply-orientated food production model into a model distinctively oriented toward demand, affords the opportunity to anticipate the new conditions of successful basic agricultural production in the context of global food production networks and their development that have been gradually becoming an important factor affecting the development and efficiency of modern agrarian policies, the EU Common Agricultural Policy included, which cannot be omitted.

REVIEW OF LITERATURE

To the contemporary entrepreneurial environment for the prosperous farming

In spite of the recognition of non-productive agricultural functions and to a certain extent also the specific position of agricultural companies within the food production industry, the sector's further development depends heavily on the efficiency of its commercial activities. As discussed in the last reports (Bečvářová 2002, 2005), the position of agricultural enterprises is changing from a relatively independent farms to one of the components more tightly aligned to food (and non food, actually) production and distribution chains.

This implies that agriculture as an industry in reality no longer exists and functions separately, having many important interactions with other parts of the national and global economic system that are subject to complicated economic relations within a much broader complex of mutually interconnected agribusiness sectors.

Contemporary agricultural enterprises confront a substantially different economic climate and competitive environment that could be characterised by

- increasing global competition,
- adoption of new technology and industrialisation of primary production, processing and distribution,
- precision farming with more relevant information and the necessity of using R&D results,
- persistent changes in the demand for food products with a high product differentiation,
- systems of food (and non food) production chains and world distribution nets increasing consolidation at all levels of agribusiness and carrying market power exhibit and control.

The changes of the internal and external economic and social environment are so important that they are even becoming the driving forces of development within agri-business as a whole. Agriculture de facto became a part of a considerably broader economic segment that includes not only various pre-production stages, but also a wide range of other activities focusing on the processing, distribution and sales of agricultural products. This applies not only to the productivity of individual factors (land, labour, capital and management level), in terms exceeding the original narrow definition of agriculture as the specific determining department of the food production industry, but also to the involvement of basic production elements in the entire food production complex.

When the *supply-orientated approach has been employed*, the decision-making process has been based above all on production efficiency parameters. These determine all the other key features of product management (production, cost and profit monitoring, maximisation of sales and acquisition of customers) important for the future corporate development. Essentially the same parameters are included in the proclaimed *enhancement of consumer dimension* presented as *domination* of the agrarian market's *demand aspect*. The current CAP EU focuses above all on the role of qualitative criteria in the area of food production and processing, and on the implementation of new regulations and limits concerning production conditions. It is possible to agree that the said criteria should be included in the agrarian policy conceived for sustainable and demand-orientated agriculture. Nevertheless, the latter approach is much more complicated: in order to be successful, each element of the vertical structure, farmers included, must be engaged in the structure in a certain form, must receive information and be able to use it to assess the market situation regularly, be capable of a relatively detailed anticipation of demand and, if possible, modify its supply accordingly.

For a discussion let us note some economic principles: competitiveness deals with the notions of whether

one product (and thus its supply or marketing chain) can compete in the market place and sustain, if not improve, its share of the total market and the total value, it can add to the raw materials as the products move through the chain (Harvey 2005).

The demand driven model and agricultural policy

Although the principle of comparative advantage based upon the effectiveness of agricultural raw materials production still operates, the extent of competition and the demand driven competitiveness involves rather more than simply how good we are at making this product compared with our ability to make other products. Inclusion of the key elements of products, as opposed to commodities, suggests that competitiveness will depend on being distinctive from the competition in ways, which are, and will continue to be, regarded as *valuable* by the user. This implies that the product (or the resources which are needed for its production) are relatively *rare*, otherwise the consumer or user can turn to other sources than ours. It also implies that there should be few, ideally *no imitations or substitutes* available, since the existence of either good imitations or substitutes for our product will reduce the amounts consumers and users are willing to pay for the product¹. An interface in the framework of the whole sector move agricultural production firms from one of perfect competition to one of imperfect competition to participate in the advantage of earning extra profit, e.g.

- *by adopting technology* when farmers are no longer using identical information about production practices and they have chosen a better competitive position among a large number of producers or groups of them,
- *by contractual arrangements* which provide farmers with production technology that is available to only a limited number of producers eliminates equal access to information and offers an advantage to those who possess and control it,
- *by unequal access to market information* and market opportunities,
- *by interface* with value added processing firms² that eliminates the characteristic of homogenous products; farmers involved in processing their com-

modities are no longer limited to selling that in an open market filled with ready substitutes.

The marketing activity of food industry enterprises related to finding and keeping the best place on the market shelves contrasts sharply with those of the agricultural firms selling into a relative static agricultural market protected by the specific tools of agricultural policy. Considerations of size and scale as well as who is to manage, control and finance farming and agribusiness operations resembles mono(bi)poly in the processing stages and retail rather than originally pure competition in primary agricultural production.

Three main incentives for chains/market coordination of systems formation are indicated (Boehlje, Doering 2000):

- capturing efficiencies and controlling costs (including standardised technology and management),
- reducing or managing and allocating risk (reducing risk related to prices fluctuation of inputs by contracting for suppliers and outputs – contracting product sales as well as quantity and/or quality features and safety/health risk in food production,
- responding to consumers (as a reaction on change and diversity in consumer demand and consumers expectations).

Since technologies are frequently easily copied and most resources are fairly commonly available, the distinctiveness must rely on more intangible aspects of business organisation, four key elements to firms (or marketing chains) distinctiveness are identified:

- *the network of relationships (architecture)* the firm has with its suppliers and customers, as well as the internal networks the firm uses to keep its parts and people working together,
- *the reputation* of the firm or chain, which is clearly of vital importance in signalling to the customer the quality and reliability of products, especially for search products – which customers buy infrequently and so have a limited personal experience of the actual quality, value for money and reliability of the product,
- *innovative capacity*, reflecting the extent to which the firm is able to identify new customer requirements and new niches and invent or discover new, different and valuable ways of meeting these emerging and growing requirements,

¹ These attributes of competitive products (valuable, rare, inimitable, unsubstitutable) can be labeled as the products competitive advantage (which is obviously rather different from and more sophisticated than comparative advantage).

² Besides the role of processing and distribution, and their associated costs, has become more important as the consumer's demand. In this type of market, food processors and retailers brand and advertise their wares as they try to maximize the share of the consumer's food spending.

– *strategic assets* – the extent to which the firm has control over a limited resource (such as a gold mine) or have a naturally or legally restricted market, and can thus trade on a degree of monopoly power.

Competitiveness involves farm's distinctive capabilities to the competitive advantage of the actual and potential products (and their underlying resources), with the primary objective of adding value to the product (as a combination of inputs and resources), since it is the added value, which provides the income and profit to the firm (Saxovsky, Duncan 1998; Boehlje 2002; Bečvářová 2005; Harvey 2005).

It is this combination of competitive advantage and distinctive capability, which determines the accomplishment of the farm and its position within the food producing commodity chain. In terms of this new model of agriculture determined by agribusiness development, the agrarian market liberalization requirements has increased dramatically and came to be depicted as the one of main reasons for reforming of agricultural policy and its regulatory and support systems.

METHODS

The objective of the article is to evaluate the potentialities of decoupled payments to induce the recipients production determination and so influence the size as well as the structure of their (agricultural) production activities accordant with the postulates of a new model of competitive production agriculture. As a crucial instrument of incoming agricultural policy, which – if it is to be effective in a long-term strategy should gradually eliminate all quasi-market and (maybe) later also only income-supporting instruments and turn to new instruments motivating individual agricultural companies to restructure their activities effectively instead. "Single farm payments" imply that the predominant flow from public funding to agriculture is paid independently from the volume of the present production (its amount and structure) and make it possible to choose the best structure of farm activities.

Four topics of influence through which the decoupled payments could affect production are evaluated, are namely the wealth and investment effects, sector consolidation effects, payment basis effects, and producer risk and expectations effects.

RESULTS AND DISCUSSION

Decoupled payments as a measure of support for agriculture

New conditions and criteria of modern prosperous agriculture discussed above influence the aims, function and further development of European agriculture as well. These ought to determine the general concept of agricultural policy in the some ways as their main competitors on the world agrarian markets. Allow me to ask a question: is the current CAP as a system ready for a confrontation with the global economic reality and the real competition environment in a new model of production agriculture? Offers decoupled payments a chance to decide about competitiveness and production prosperity in the mid- and long-time horizons?

"Decoupling" has become one of the key issues in agricultural policies both at the national and international levels in general. The need to minimise international trade distortions associated with support to the agricultural sector was a substantive element of that solution.

Since adoption of the Uruguay Round Agreement on Agriculture of the GATT in 1994, policy makers have studied to adopt the instruments of policy having no or minimal effects on production and trade. As a result, policies have been providing a growing and total support to agriculture (OECD 2001).

The idea of policies not affecting marginal prices faced by producers has led to the Harvey's proposal to establish Production Entitlement Guarantees in 1989.³ However, changing world and domestic market conditions could result in the payments becoming relevant at the margin, thus making the above proposal difficult to manage.

In the early 1990s policy instruments, which redistributed income to farmers without affecting the allocation of resources, have been defined as a lump sum transfers.

The OECD (1994) generally characterises the *direct income payments that they should be directly financed by taxpayers; the size of direct income payment should either be fixed or, related to an agricultural production variable, be outside the farmers control; the size of direct income payment should not be determined by the volume of current or future production of specific agricultural commodities or the level of specific inputs used.*

³ The idea was to limit the volume of production eligible for support issuing these tradable, government financed guarantees. The maximum supported quantity should be less than what would be produced at the world price.

Those imply in theory:

1. avoid the existence of consumption effects,
2. prevent the farmer from being able to affect the payment by production decisions,
3. specifically rule out the use of measures that raise prices above international levels.

Decoupled direct payments scheme in general means that the predominant flow from public funding to agriculture will be paid independently from the volume of the present production (its amount and structure) and ought to make possible to choose the best structure of farm activities. They have moved away from product support to measures that seem to be production neutral and from more trade distorting measures to far less trade distorting measures in primary agriculture and have enforced an integrated approach towards agriculture and food processing. In addition, they respect broader social pressures such as promoting sustainable resource use and effective environmental controls at the lowest possible cost which may involve the use of market mechanism.

The last reform of the CAP starting in Luxembourg (June 2003) is an evidence of the above. The transition from the system based upon the market prices support to the system of structural support is undoubtedly a positive element, in the short run allowing individual countries to decide on the resolution of their specific agricultural problems and to use a larger proportion of budget resources for this concrete purpose. On the other hand, it *may increase the risk of consequences of non-conceptual regulation interventions in the long term*.

It concerns *two problems*:

- the selection of allocation criteria, i.e. the *suitability of subsidies*, in this case mainly in terms of conceptual promotion of restructuring, as a necessary condition for further growth of competitiveness in the European and global markets, which is the key strategic problem of modern productive agriculture, and
- the *efficiency of subsidies* related to the determination of transfer forms/instruments and their economic cost (Bečvářová 2006a).

As far as the development of the Union's agricultural policy is concerned, it is impossible to rule out scenarios reacting to requests for a further reduction of subsidies also in the area of production restructuring. That is why it is necessary to try to obtain the highest possible amount from the specified sum of financial means provided by the Union and at the same time, to look for other alternatives of their most effective and maximum utilization.

The problem for decision-making should be the share of the value of direct payments and of the actual income the farmer gets from farming activity. This could be a sensible question relating to the future of the European agriculture products efficiency and competitiveness.

In theory, a *fully decoupled measure would not have any current condition or current parameter related to agricultural production or factor of production. A fully decoupled measure would not create any expectation that current production decisions could affect future payments*.

Potentialities for decoupled payments to affect production

Under these circumstances and leaving aside investment effects, payments would be fully decoupled and no production impact would occur, making the level of support also un-important. Often, however, the real programmes do not reflect all the characteristics of this theoretical, fully decoupled payment.

Decoupled payments are defined as the transfers to farm operators independent of their current production and commodity prices. In principle, this type of lump-sum income transfers redistributes income from urban to rural households, and may result in sector changes in resource allocation within the economy; consequently, they increase the income and thus the wealth of the recipient households.

Three potentialities for decoupled payments to affect production decision-making process based upon recipients' wealth increasing was indicated (Wescott, Young 2005):

- a direct wealth effect,
- a wealth-facilitated increased investment effect,
- a wealth effect resulting from the increase in investment.

The first fundamental question from the effects on production point of view is *whether decoupled payments may alter the producers' resource allocation over time*.

The main link between decoupled payments and agricultural production in this framework is *through recipient households' decisions to invest in agricultural assets*. The dynamic dimension is necessary because a stream of annual payments can be expected to influence the recipients' decisions about how much to consume versus save over a long-term time horizon. In response, over time, these households are likely to consume more goods and to increase savings. However, whether these individual enterprises deci-

sions affect resource allocation, the aggregate levels of agricultural production depend on the behaviour of recipients utilising the possible consumption and investment effects of the payments.

In general, because decoupled payments typically are not crop specific, their influences tend to be more at the aggregate level, such as on the total land use or on the overall productivity gains⁴.

Such instrument can increase the overall level of agricultural production through its direct influence on the wealth of landowners and/or producers/tenants. It reflects gains in agricultural sector equity that result from the capitalization of the expected future benefits into the value of agricultural land and decreases their risk aversion. Greater wealth does not affect the relative returns between the alternative crops.

In general, the allocation of any increase in acreage among competing uses (without any production constraints) would be determined by market signals. Furthermore, if the lump-sum payment raises producers' wealth and lowers their risk aversion, it *may entail a producer's choice to increase the overall production and may also change the mix of production*, perhaps switching to demanded riskier crops with higher expected returns.

Unexceptionable effect is identified from the investment possibility and its acceleration result in the agricultural production point of view. Increased cash flow provided by decoupled payments and higher wealth through capitalization of future benefits into land values may also facilitate an additional production through increases in agricultural investment funding by the (banking) loans because of higher guaranteed incomes and lower risk of default. Greater loan availability facilitates an additional agricultural production by allowing farmers to more easily invest in their farm operation. In this context, it might be interesting to look at another solution related to the utilization of subsidies on agrarian loans provided by the Support and Guarantee Fund for Czech agricultural producers (Bečvářová 2006b).

The second fundamental question from the possible effects on production is how decoupled payments may affect consolidation in the sector.

Even if the consolidation in the European agricultural sector has been a long-term trend, reflecting

not only increased productivity movement to the non-farm economy in the sector, but also a very different size and production structures of agricultural enterprises within the EU member states, two diverse trends regarding the potential effects of decoupled payments on consolidation could be identified in general:

(1) *Influence on deceleration of sector consolidation* if the payments keep marginally viable, inefficient, often smaller enterprises in business longer than otherwise. Such farms may be able to cover short-term variable expenses associated with the yearly decision to produce, but these farms may not be able to cover longer-run total economic costs, remaining in the sector only because of equity gains related to capitalization of benefits into rising land values. Area-based direct payment can influence output by preventing farmers from exiting the market. According to Chau and De Gorter (2001), area payments may induce an inefficient farmer, who is not able to cover his fixed cost and who, without the payment, would exit the market in the long run to keep on producing. This is because the payments cover the losses from farming. However, the impact of area payments on total sectoral production is ambiguous: if a farmer exits the market it does not mean that the land will be idle and that production will fall. In the analysis by the mentioned authors, it is assumed that the farmer loses the payment if he stops incurring the fixed cost, and that land cannot be taken over. However, fixed costs can differ for different land uses and the relevant incentives are created by the linkage between the payments and the costs incurred, regardless of whether they can be characterised as fixed or variable costs. In general, these farms tend to be less efficient in production operations, so at the margin, keeping them in the sector would be expected to lower the aggregate production if the land alternatively would be used by more-efficient, larger producers with higher yields.

(2) *Influence on acceleration of sector consolidation* if larger operations use the payments to purchase smaller units or to rent more acreage. Additionally land can be sold or rented and farms can potentially be taken over by other farmers. An inefficient farmer or some of his land can be taken over by a more effi-

⁴ Compared to coupled, crop-specific subsidies (e.g. price support), decoupled payments in theory have less effect on the mix of crops planted. That is, an aggregate decoupled subsidy may increase the aggregate resource use and production, but the allocation of the resulting increase in acreage to different crops will reflect the expected market returns across competing uses rather than the decoupled subsidy. Additionally, lower prices that result from any production increases can moderate the initial production effects and other market impacts. Decoupled payments may create incentives to increase the aggregate production, although the mix of crops planted should be based on market signals (because decoupled payments benefits do not depend on market conditions or the farmer's production).

cient producer, or by a producer of other commodities with better returns. This would be expected to raise the aggregate production because larger producers typically are more efficient due to better management and other economies of size. Larger operations tend to more readily adopt new technology and use production practices precision farming that raise yields in the course of sustainable development of agriculture and rural areas.

The basis for the distribution of decoupled payments may also affect producers' expectations of how future benefits will be disbursed. Payments that are linked to past production may lead to expectations that benefits in the future will be linked to the past, but now-current, production. Such expectations could affect current production decisions as well. Direct payments based exclusively on fixed, historical parameters do not create price incentives that affect the allocation of land. If there are current conditions or restrictions imposed on land use and/or cross-compliance, the payments can directly affect the production decision, including both which commodities to produce and the choice not to produce at all (exiting the sector).

If such payments were based exclusively on historical parameters with no relation to any current activity of the recipient, their effects on production would be limited to farm household resource allocation decisions. However, the movement towards more decoupled payments has been articulated through payments that are based on area. These payments require that each per hectare payment be associated with a current hectare of land. They also require that recipients carry out (or do not carry out) some activity on the land. In order to receive payment, the beneficiary must ensure that certain current "conditions" are met for an identifiable hectare of land, even though no production of any particular commodity is required.

For either case, *updating acreage bases or updating payment yields*, economic efficiency in production is reduced because producers would not be fully responding to the signals from the market, but instead would be responding to market signals augmented by the expected benefits of future payments base and the condition changes. Those refer to decisions as to keep the land in agriculture and not to convert it to a permanent non-agricultural use, to produce on that land if expected revenues exceed production costs. Imposing conditions on maintaining land in agricultural use may generate costs that make the "set aside" option less attractive than other alternative activities. This condition may have no production inducing impact on some hectares of land, but it may create incentives to produce on some other hectares

where "set-aside" can be less profitable. Even if the land is permitted to be idle, it is more readily available to return to agricultural production if economic conditions warrant.

Additional impacts may reflect increased production incentives and competitiveness due to *reductions in unit production costs resulting from the higher efficiency* and the appropriate utilisation of inputs. If our agricultural producers are to compete successfully in a business environment whose conditions are increasingly affected by the customers, they will have to *reduce their production cost*, while focusing only on products that can be sold on the relevant markets at adequate prices.

CONCLUSION

One of the core themes in the contemporary (and not only European) agriculture is the paradox that agricultural policy is "less about agriculture". Policy involves the incorporation of national, local and regional entities, many non-agricultural, in a more decentralised policy process. Often this is designed to find national or even local solutions for the factual problems that are about much more than knowledge of the basic "central" rules and their elaboration at the national regulations. It has to enable the individual producer to decide about his activity, share and the position in the framework of the modern agribusiness as well as rural infrastructure environment. Decoupled payments are a suitable element in the CAP reform not only because they move towards a more market oriented policy, but also by offering the possibility of implementation of economic growth stimulated by the support of meaningful production structural changes at present through usage their static (wealth) effect, dynamic (investment) effect and risk-related effects. Their efficient exploitation, however, requires a stronger self-reliance and qualified employees not only on the corporate level. It also requires a better central conceptual work and economic services in order to make structural decisions, it is necessary to have enough undistorted information on production and supply optimisation based on real market development predictions as well as on demand development. At the same time, information must be more detailed, dynamic and structured differently. Aggregate indicators, price averages or indices are no longer sufficient.

In order to analyse the efficiency of the distribution function of the instruments of agrarian policy and the efficiency (and suitability!) of the financing of individual processes and to assess their impact on

the competitiveness of particular producers within the given region, it is necessary to produce a micro-economic analysis on the relevant resolution level indicating all important relations within production, distribution and social networks. It is, therefore, obvious that the necessary *increase of the technical-economic efficiency* affecting above all cost competitiveness *cannot be achieved without additional structural changes*. Essentially only one effective way should be adopted in this respect – to utilise very quickly and reasonably the contemporary decoupled payments to improve the orientation of agricultural produce enterprises on the demanded agricultural production structures and their effectiveness as a fundamental precondition of competitiveness in the globalised agrarian markets.

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