Znalostný manažment sa stáva integrujúcim nástrojom všetkých podnikových aktivít. Tvorba a riadenie znalostných systémov v podniku a uplatnenie znalostných manažérov sa stávajú dôležitým predpokladom konkurencieschopnosti podnikov a ich úspešného pôsobenia v rámci globalizácie trhového prostredia.

Kľúčové slová: informácie, riadenie, informačné systémy, manažment znalostí

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TOWARD AN INSTITUTIONAL ANALYSIS OF FARM INCOME STABILIZATION

INŠTITUCIONÁLNA ANALÝZA STABILIZÁCIE VÝNOSOV POĽNOHOSPODÁRSKEHO PODNIKU

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The objective of the paper is to compare the major institutional mechanisms of farm income stabilization (market, government, civil society) in order to find out how the mutual substitution of the mechanisms can serve to overcome their limitations. The major identified limitations include: for the market mechanism - opportunism and poor insurability of systemic risks; for the government mechanism - opportunistic behavior of recipients of farm income stabilization services, agency problems in the implementation of public programs, high potential for bureaucratization and excessive complexity of insurance programs. The incentive problems of the civil society mechanism do not include mainly those that are characteristic of both markets and governments. However, this mechanism possesses problems specific to cooperative organizations. These problems have been shown to originate from high social capital-dependence of the civil society mechanism, which means that while these problems are able to significantly increase transaction costs of civil society mechanism, the actual size of these transaction costs depends on the availability of social capital in the respective communities. The economic context of transition to market has been shown to create additional constraints on market and government mechanisms and opportunities for the civil society mechanism. Therefore, the optimal role of the government is to invest in social capital in order to reduce the transaction costs of the civil society mechanism.

Key words: institutional mechanisms, farm income stabilization, insurance activity, incentive attributes, transaction costs

The fundamental characteristic of the world with positive transaction costs is that institutions matter for economic performance. The conditions of bounded rationality, opportunistic behavior, uncertainty and unpredictability of business environment dictate the need to pay significant attention to designing the appropriate incentive structures of economic interaction with the aim to attenuate the rational incentives of individuals to maximise their own welfare at the expense of downgrading the welfare of the economic system to which they belong. The task of designing the optimal incentive structures of interacting agents is particularly important for the farm income stabilization activities, which are characterized by high potential for opportunistic behavior in the face of bounded rationality and uncertainty.

Specifically, the study of incentive attributes of different institutional mechanisms of farm income stabilization is important for the following reasons. First, the incentive attributes affect the effectiveness and efficiency of such mechanisms. Although the number of factors affecting the performance of specific farm income stabilization instruments can be large, it is important to remember that ultimately the performance is determined by the extent to which the incentives of major stakeholders match together.

Second, the incentive attributes determine the feasibility of different institutional mechanisms of farm income stabilization. Although certain income stabilization instruments (such as farm income insurance contracts and forward and futures markets in the EU) may seem to be efficient and effective, they may still remain relatively unpopular with agricultural producers, unless they fully correspond to the comprehensive sets of relevant incentives.

Third, the comparative incentive characteristics of different institutional mechanisms determine the structures of their optimal combination, especially with respect to how market-based instruments, such as hedging and use of financial instruments, can be combined with the public insurance and price stabilization policies (e.g. storage policies in the EU). Particularly interesting and relatively underemphasized question relates to the role of cooperative and mutual organizations of agricultural producers in stabilizing their incomes.

Farm income stabilization is especially important for transitional economies, where agricultural incomes are low and their fluctuations, therefore, can have particularly destructive effects. This dictates the need to examine the implications of the transitional context for the performance, feasibility, and optimal combination of different institutional mechanisms of farm income stabilization, which also depends on the configuration of incentives of major stakeholders.

The paper explores the broad institutional mechanisms of farm income stabilization and is aimed at the theoretical identification and comparison of their incentive attributes, which affect their performance, feasibility and optimal combination in conditions of both well-developed and transitional economies. The paper is structured as follows. In Sec.2, the institutional mechanisms of farm income stabilization are identified and defined; Sec.3 uses the example of insurance activity to find out how their incentive attributes affect their performance, feasibility, and optimal combination; Sec.4 examines the implications of these conceptual findings for the transitional conditions; Sec.5 contains concluding remarks.

The institutional mechanisms of farm income stabilization

Just like any other type of economic activity, the farm income stabilization functions can be performed through a variety of institutional mechanisms based on different types of incentive structures. Three broad institutional mechanisms of farm income stabilization can be identified:

1. market, which presupposes that farm income is stabilized through the achievement of clearing prices between producers seeking stability of their incomes and agents offering the needed stabilization services;
2. government, which presupposes that farm income is stabilized with the help of public expenditures allocated as a result of interaction of a variety of political agents;
3. civil society, which presupposes that farm income stabilization functions are delivered by organizations, owned and operated by agricultural producers themselves.

Each of these mechanisms is represented by a variety of institutional forms (i.e. specific instruments), which can be quite heterogeneous and designed to address different functional aspects of farm income stabilization. However, all forms belonging to one mechanism share in common a number of fundamental characteristics of incentive configuration. An account of possible institutional forms within each mechanism is presented below.

The market mechanism of farm income stabilization includes: insurance markets, futures and option markets, as well as production and marketing contracts. The operation of each of these forms requires that both agricultural producers and suppliers of stabilization services should be both willing and able to work together. Although the smoothly functioning markets are able to provide the efficient allocation of resources, these restrictive conditions often preclude the achievement of efficient outcomes through the market mechanism.

In particular, the existence of insurance markets is limited only to situations where a number of conditions are fulfilled: 1) information is symmetric; 2) risks are independent; 3) the number of exposure units is large; 4) chances of loss are calculable; 5) actual losses occurring are determinable and measurable; 5) potential losses must be seen by the policy as significant, still the premia must be economically affordable (Skees and Barnett, 1999). Moreover, the operation of a market is based on a certain institutional framework, which may be not fully developed and requires a certain length of time to build, which may be particularly true for the transitional conditions.

The use of production and marketing contracts is primarily characteristic for the well-developed agri-food chains which again are often underdeveloped in transitional economies. In transition, input suppliers, agricultural producers, processors, wholesalers, retailers often view their economic interests as antagonistic rather than complementary. Significant institution building should be performed before these farm income stabilization instruments can be employed in these countries.

The functioning of futures and options markets is also based on important institutional prerequisites, such as substantial commodity price variability, a large number of potential traders and speculators, standardized grades and quality of products, limited government intervention in pricing and trade, effective protection from fraud and manipulation, well-functioning financial system, effective legal environment, political and macroeconomic stability (Sarris 1997). It is probably due to these restrictions that even in the EU Member States the use of hedging on these markets has remained low (European Commission 2001), although this could also be caused by the CAP-induced price stability for major commodities (Cordier, 1998).

The government mechanism of farm income stabilization has the following forms: involvement in insurance markets (either through offering insurance services or subsidizing insurance services of private firms), disaster aid, sanitary and phytosanitary measures, as well as CAP instruments, such as market support, direct payments, and rural development. Although these forms are quite diverse, it is possible to identify two characteristics of the governmental effects on farm income stabilization: 1) due to the inability of fine-tuning, public policy instruments often have non-desirable side-effects, the most important of which is probably the disincentives for farmers to buy insurance in the awareness that government may grant disaster aid (European Commission 2001: 36); 2) again due to the inability of fine-tuning, public policy cannot effectively address the problems of local and idiosyncratic character. Community-specific income stabilization problems, not shared by other communities, are unlikely to be effectively resolved by the government.

The civil society mechanism of farm income stabilization presupposes the operation of cooperative (mutual) organizations offering income stabilization or support services to farmers, including agricultural cooperatives operating on a pooling basis. The development of this mechanism, both in the EU Member States and in transitional economies, seems to be significantly outdistanced by the extent of application of the two other ones. Nevertheless, there are a number of successful examples of cooperative insurance in the EU. For instance, in the Netherlands mutual insurance schemes have been developed for contagious disease outbreaks both in crops and livestock (ibid: 30). The Commission has also proposed the setting up of similar organization structures in the Member States intended to stabilize revenue in the pig sector (European Commission 2000, quoted in European Commission 2001: 30).

An important role in stabilizing farm incomes may also belong to other cooperatively organized financial institutions, such as cooperative banks.

The cooperative principles in agricultural insurance may be used not only by agricultural producers but also by private insurance companies, which may choose to create the insurance pools in order to jointly provide insurance for certain risks. Insurance pools offer a number of advantages: they can cover new and unknown risks, catastrophic risks, infrequent risks (to which the law of large numbers does not apply), as well as risks which can only be covered by applying special know-how; risks can be spread more value, lowering the need for and cost of reinsurance. There are two categories of poolst: co-insurance pools (as e.g. AGROSEGURO in Spain) and co-reinsurance pools (European Commission 2001: 29).

As the cursory description of the possible institutional mechanisms of farm income stabilization suggests, each of them has powerful limitations, with the consequence that certain mechanisms are likely to be feasible only for certain specific income stabilization problems. It seems, however, that a general authoritative evaluation of what kinds of problems should be addressed by what mechanisms is not possible because the conditions in which agricultural producers find themselves are strongly embedded in regional and local institutional contexts. However, it would be possible to identify a set of incentive problems characteristic of each institutional mechanism, and associate these problems with the nature of specific farm income stabilization problems, which would give an idea of the relative benefits and costs of different mechanisms for a well-specified situation. The elaboration of the incentive problems of institutional mechanisms will be the object of the next section.

Comparing the institutional mechanisms

The objective of this section is to analyze the major incentive problems of the market, government, and civil society institutional mechanisms in order to find out how the mutual substitution of the mechanisms can serve to overcome these problems.

The incentive problems of the institutional mechanisms: the case of insurance

The insurance area of farm income stabilization provides a particularly appropriate field for studying the incentive problems, since informational asymmetries leading to opportunistic behavior in the form of adverse selection and moral hazard are particularly well expressed here. Different stakeholders of farm income stabilization, such as agricultural producers, private insurance companies, and public officials, have specific vested interests in the organization of the agricultural insurance system. Depending on particular configurations of rights and responsibilities in the system, their interests may exhibit various degrees of harmony and convergence, affecting the overall effectiveness of farm income stabilization activity.

An example of the suboptimal configuration of incentives is provided by the recent experience (1995-1998) of the CAT programme in the US agricultural insurance system. The efficiency of the program was questioned on the grounds that it has failed in providing the intended safety net, while it has produced significant underwriting profits for the insurance industry (OIG 1999a, quoted in European Commission 2001: 67). With this program more money went to the insurance companies than to producers helping them to recover from insured losses (OIG 1999c, quoted in European Commission 2001: 68). Since the public reinsurance left only minimal risks to the involved private companies, they had little reason to effectively monitor risky policyholders, to deny claims of questionable losses, as well as to improve their own practices and performance (OIG 1999a, 1999b, 1999c, quoted in European Commission 2001: 68).

The market mechanism

A major incentive problem constraining the development of insurance industry, well-described in the literature, is **the significant potential for opportunistic behavior in the form of adverse selection and moral hazard.** In his classic 1970 paper, Akerlof identified the destructive effects of the information asymmetry problems on the efficiency of markets in second-hand cars. The inability of buyers to determine ex ante the true attributes of proposed cars and the respective risk of acquiring lemons, coupled with the motivation of sellers to sell poor quality cars, resulted in the demise of the market itself. The problem of moral hazard exists when the probability of occurrence of a given state of the world is influenced by one of the parties to a contract but when the behavior of this contractor cannot be observed (Ricketts 2002: 34). Therefore, the potential for opportunistic behavior limits the extent to which the market mechanism can be used to deliver the insurance services needed by agricultural producers.

Another challenge for the insurance area of farm income stabilization is created by the incentive problems emerging due to **poor insurability of systemic risks.** Mahul (2001) proposes that crop risks should be decomposed into systemic and idiosyncratic components, only the latter of which should be covered by insurance. Goodwin and Smith (1995) (quoted in Bokuschewa and Heidelbach, 2004) suggest that systemic risks can be covered by means of reinsurance in the global insurance market. Many researchers, however, adhere to the view that neither reinsurance nor capital markets can effectively deal with systemic risk and public policy interference is therefore necessary (e.g. Skees et al., 1997; Cutler and Zeckhauser, 1997; Miranda and Glaubner, 1997, quoted in Bokuschewa and Heidelbach, 2004).

The government mechanism

The following three incentive problems of organization of agricultural insurance programs occur only within the public sector – agency, rent seeking, and motivational side-effects of disaster aid. Accordingly, these problems only serve to deepen the disadvantages of the government institutional mechanism with respect to those of markets and civil society.

The effectiveness of public involvement in agricultural insurance is essentially determined by the fact that public officials hold no residual claims in the overall performance of the insurance programs, thus giving rise to the emergence of **principal-agent relationship in the implementation of public programs**. Consequently, the incentives of public official to search for economically optimal insurance contract configurations as well as to maximise the efficiency of administering the respective programs must be limited; at least more limited than is the case with private suppliers of insurance. Although there are important disciplining mechanisms, such as possibilities for promotion and dismissal, the salaries of public officials are only very loosely, if at all, related to the efficiency of transactions that they conduct or mediate, which creates for them a significant margin of work efforts on which they can safely economize without subjecting themselves to the risk of sanctions.

The agency character of public involvement in agricultural insurance is evidently not unrelated to the fact that the public supply of insurance (as well as other income stabilization) services may be also guided by political rather than economic considerations. Such products may be insufficiently tested and may undermine the soundness of the insurance system. To give an example, the US Risk Management Agency has been recently accused of insufficient research before implementing crop insurance policies, which resulted in unreasonably high yield figures in certain programmes, such as cotton and corn, as well as poorly written policies for some specialty crops (OIG 1999b, quoted in European Commission 2001: 70).

Another incentive problem of public involvement in agricultural insurance, also not unrelated to its agency character, is **high potential for bureaucratization and excessive complexity of insurance programs, leading to the emergence of rent-seeking activities** (Skees, 1999b, 2000, quoted in European Commission 2001: 70). Rent seeking activities are possible in part of farmers (trying to manipulate the insurance program tools to cover unjustifiably high risks), private insurance companies (trying to obtain a bigger share of public funds intended as support for agricultural producers), as well as political actors seeking to increase their political weight by promoting the public delivery of insurance services, meeting certain political demand but not necessarily well-tested and substantiated.

An incentive problem inherent in the disaster aid delivered by the government is that awareness of the possibility of disaster aid might reduce sensitivity of farmers towards risks and crowd out the private initiatives (European Commission 2001: 36). The private initiatives adversely affected by ad-hoc aids include both private suppliers of insurance and cooperative organizations. Although a need for disaster aid could be minimized if the private insurance system (including both these categories) would work efficiently, in reality this is evidently not the case.

The civil society mechanism

In most developed and transitional economies, the civil society mechanism of insurance and, more generally, farm income stabilization so far remains significantly underrepresented in comparison to the market and government mechanisms. Evidently this must be explained with the major limitations of this mechanism, possibly outweighing the limitations of its institutional alternatives. In fact, cooperative organizations are known to have a number of incentive problems. Whereas these incentive problems are largely independent of the specific area of business activities, they are able to affect the effectiveness and efficiency of any activities as long as they are organized on the basis of the cooperative principles.

The incentive problems of cooperation include: common property problem (the members' equity contribution may not be proportional to the distribution of resulting benefits); horizon problem (members can capture benefits from their investment only over the time horizons of their expected membership in the organization, which causes bias toward a short-term investment and/or underinvestment); monitoring problem (decision management is allocated to decision specialists who are not residual claimants); influence cost problem (some groups of members may have opposing interests and engage in costly lobbying activities); decision problem (large number and heterogeneity of members complicate the reaching of a consensual decision) (Borgen, 2003). These incentive problems give grounds to consider the civil society mechanism as relatively 'expensive' in terms of transaction costs in comparison to the market and government mechanisms.

However, it has to be emphasized that in contrast to the incentive problems of the market and government institutional mechanisms, the above mentioned problems of cooperatives are not necessarily present in every organization based on the cooperative principles. Whereas the severity of the incentive problems may vary across the institutional mechanisms, the specific functions that they perform as well as space and time coordinates, this variation seems to be particularly pronounced for the civil society mechanism. As a result, the incentive problems of cooperatives by themselves still provide an insufficient basis for evaluating the feasibility the civil society mechanism in comparison to the other ones.

The substitutability of institutional mechanisms

As shown above, different institutional mechanisms of farm income stabilization exhibit diverse sets of incentive problems, which limit the possibilities for their effective realization. The mechanisms, however, are characterized by non-identical sets of problems, the actual acuteness of which may also vary on the situational basis. This gives rise to the theoretical possibility of mutual substitution of institutional mechanisms, since certain functions of farm income stabilization which are infeasible within the framework of one institutional mechanisms due to significant incentive problems may well be feasible through the other mechanisms, which is not in the given context constrained by major incentive or other limitations. The theoretical possibility of this substitutability can be identified by considering the extent to which the above-mentioned incentive problems of each institutional mechanism are or are not characteristic of the remaining mechanisms. To be sure, this possibility is only theoretical; its actual feasibility depends significantly on the political, economic, and institutional contexts. Nevertheless, the theoretical possibility is an important prerequisite of the practical feasibility.

The first identified problem, relating to significant potential for opportunistic behavior in the form of adverse selection and moral hazard, is ultimately based on the non-identity between buyers and sellers of insurance. Whenever these agents are not represented by the same persons, the combination of antagonism of interests and information asymmetries will result in the high probability of opportunism. However, although this problem has been mainly discussed as characteristic of insurance markets, it should be equally characteristic of insurance services undertaken by public agencies, because their suppliers and recipients will be again represented by different groups of individuals.

The fundamental characteristic of civil society mechanism is the mutual self-help orientation, which presupposes that individuals who need a certain service organize its production and/or delivery to themselves. Suppliers and recipients are therefore identical, which reduces the incentives for opportunistic behavior. Although the civil society mechanism is also subject to limitations of its own, discussed in Sec.3.1.3, it can be used to provide insurance services where the danger of opportunism makes markets and governments infeasible or less effective (unless its own limitations in a given context are weaker than the opportunism problem).

The possible incentive problems of civil society mechanism are particularly attenuated in those cases where members of cooperative organizations are personally familiar with each other. This knowledge is an important asset which is unavailable to other alternative suppliers of insurance and which creates a possibility for distinct economic advantages of cooperative organization. Namely, whereas uncertainty about the future behavior of business partners may give rise to higher prices for the products and services rendered, a reduction in this uncertainty due to the mutual knowledge of each other will make the high prices unnecessary.

This point was demonstrated by Bonus (1986) in his transaction cost analysis of local credit cooperatives in rural areas of Germany at the time of Raiffeisen. The author argued that the urban banks did not possess the required information about the creditworthiness of the small-scale farmers, merchants, and businessmen living there, and therefore could not offer them the required loans. A supply of loans was therefore monopolized by the local usurers, who invested significant resources in acquiring (learning) this information. The inhabitants of these areas, however, managed to internalise the loan supply transactions by creating local credit cooperatives, which effectively utilized the pool of local information and the intimate knowledge that members had of each other and charged acceptable interest rates on this basis. Essentially, the same logic was used to explain the emergence of central cooperative banks – local cooperative banks required a reliable partner, for which role the urban banks were poorly suited. Local banks, again on the basis of pool of local information available to them, internalised these transactions by creating a central bank, owned by the local banks themselves. The basic argument of Bonus (1986: 335) is that 'the main benefits of collective organization derived by cooperatives are achieved by internalising crucial transactions into a firm jointly owned by the holders of transaction-specific resources, who thereby avoid potential threats to the quasi-rent of their investment by outside opportunists'. Accordingly, agricultural producers requiring income stabilization services can also internalise the required transactions and in this way protect themselves from potential opportunism which is unavoidable in both market and government institutional mechanisms.

The second incentive problem of the market mechanism, which dictates the need to use other mechanisms, is poor insurability of systemic risks. While with respect to the systemic risk problem the government institutional mechanism has advantages over market, the role of civil society seems to be more uncertain. For a local-based civil society organization, e.g. small mutual insurance company, systemic risks certainly present a major problem. But this problem can be overcome by cooperatively organized co-insurance and co-reinsurance pools. Since such pools are organized by insurance companies (i.e. not by actors who demand insurance, but rather supply it), they represent an interesting mixture between the market and civil society mechanisms. It is theoretically possible that systemic risk problem can also be addressed by the civil society mechanism in its pure form, i.e. avoiding the participation of insurance suppliers and including only agricultural producers, by means of creating federative cooperative insurance organizations. The membership of federative insurance cooperative would be represented by local-based centralized cooperatives ('centralized' here means that their members are only agricultural producers, but not lower-level cooperatives). In contrast to centralized cooperatives, the federative ones are able to diversify risks across a number of regions.

To be sure, federative cooperatives like this are rarely empirically observed. In most countries, the existing agricultural insurance cooperatives are mainly local-based rather than federative and importantly supplemented (in many cases outdistanced) by the market and government institutional mechanisms. Nevertheless, they do represent at least a theoretically possible method of dealing with systemic risks. Consequently, with respect to ability to address this problem the civil society mechanism can be believed to occupy an intermediate place between markets and governments.

As shown above, the limitations of the government mechanisms include agency problems in the implementation of public programs and high potential for bureaucratization of insurance programs, leading to the emergence of rent-seeking activities as well as motivational side-effects of governmental disaster aid. The first two of them are caused by the fact that public officials do not have residual interests in the quality of fulfilment of their functions, since their salaries are within a significant margin independent of it. Since similar absence of residual interests is evidently not characteristic of the market and civil society mechanisms, they can be believed to be able to substitute the government mechanism, when these incentive problems present the major bottleneck. The third problem of the government mechanism is also evidently not relevant for markets and civil society.

To summarize the discussion of substitutability, civil society seems to be a mechanism most equipped to deal with the problems of markets and governments. The reason why civil society does not become the dominant mechanism of farm income stabilization evidently lies in the fact that its own incentive problems grow prohibitively large as it is applied to a growing number of tasks. The naturally emerging questions are: 1) what conditions do these problems emerge under ?; 2) can government prevent their formation? These questions are considered in the following sections.

Some organizational attributes of the institutional mechanisms

The general reason for the existence of incentive problems of the civil society mechanism consists in the fact that its operation needs to be supported by large amounts of social capital, i.e. this mechanism, in contrast to other ones, exhibits high social capital-dependence. As a result, the limitations of the civil society mechanism emerge as a consequence of insufficient availability of social capital to match its high social capital-dependence (Valentinov, 2004 forthcoming). Arguably, if the right amount of social capital would be always there, civil society would represent the dominant mechanism of farm income stabilization. A shortage of social capital can be caused, for example, by the expansion of membership base, which technically complicates the required communication processes, and the emergence of heterogeneities between members, which might hamper the process of collective decision-making.

The high social capital-dependence of the civil society mechanism has a number of implications for comparing the organizational attributes of the three institutional mechanisms. First, the performance of the civil society mechanism will be more sensitive to the type of inter-personal relations between people involved than would be the case with the other mechanisms. This is a source of both strengths and limitations in comparison to performance of markets and governments. Second, the mutual knowledge of each other by members of cooperative (i.e. civil society-based) organizations gives rise to the reputation effects, which reduce the incentives for opportunistic behavior. Third, the objectives of individual actors acting within the civil society mechanism are directed not at individual gain, as is the case with markets and governments (respectively in the forms of profit and career reward), but at the mutual self-help.

To summarize, the major limitations of the three mechanisms can therefore be formulated as high social capital-dependence for civil society, high bureaucratic costs for governments, and high danger of opportunism for markets (Table 1). Where one of these limitations presents the major bottleneck, other institutional mechanism should be used.

Implications for transition

The objective of this section is to show that the economic context of transition has a number of characteristics which importantly affect the feasibility of different institutional mechanisms of farm income stabilization.

Characteristics of transitional situation

Whereas the current states and evolutionary paths of transitional economies are rather diverse, several principal characteristics of the transitional situation, broadly relevant for Central and East European countries, can be identified.

The first characteristic is that a number of markets are institutionally underdeveloped and therefore function imperfectly, if at all. This may be caused by the absence of the required legislation or any other formal institutional structures. But even in the case that the required formal institutions are in place, the development of markets may be hindered by the lacking informal institutions, which are known to require relatively a longer time to change. Even in the Western European countries (in contrast to the USA) such market-based farm income stabilization instruments as futures and forward markets are considered to operate far below their capacity. In transitional economies, however, even the traditional insurance markets are far being institutionally complete to say nothing of such instruments as production and marketing contracts.

The further characteristic of transitional situation is the presence of important differences between the levels of profitability of agriculture and the rest of the economy. Since the opportunities to make profits in agriculture are more limited than in other sectors, agricultural producers are relatively more limited in their ability to pay insurance premiums. This circumstance will reduce the motivation of private suppliers of farm income stabilization services to deal with agriculture. This may additionally constrain the operation of private insurance systems based on the market institutional mechanism.

These two characteristics suggest that the use of market instruments of farm income stabilization in transitional conditions is more complicated than in the case of developed market economies. Theoretically, these limitations can be overcome by means of substituting markets by the remaining institutional mechanisms of government and civil society.

Another important characteristic of transition, however, is the significant scarcity of governmental budgets, which also limits the feasibility of the government mechanism. In transition, the government cannot assume the performance of important farm income stabilization services not only and not so much because of potential bureaucratic inefficiencies but rather due to sheer financial limitations. The use of government mechanism, therefore, will be also more limited in transitional than in developed market economies.

Is the feasibility of civil society mechanism in transition limited by certain transition-specific factors as well ? One general limitation seems to be relevant: the system of central planning did not promote the development of trust among people, and can be considered to have generated more bonding than bridging social capital; for example, Paldam and Svendsen (2001) point out the negative effects of 'grey/black' networks of communist origin on the effectiveness of the transitional process. This would also reduce the feasibility of the civil society institutions in their diverse forms. However, the civil society mechanism has a number of transition-specific advantages, which are explored in the following section.

The advantages of the civil society mechanism

The objective of this section is to show that although the development of civil society institutions in transitional conditions is constrained by the above-mentioned incentive problems, the transitional context also facilitates the development of these institutions in a number of ways.

First, producer-owned organizations aimed at stabilizing farm incomes will provide the income stabilization services at cost, in contrast to alternative private suppliers who will be interested in charging a certain margin, which in effect explains their motivation to offer these services. The economic possibility of avoiding the extra costs of farm income stabilization services by means of excluding the profit component is created by the fact that such civil society-based organizations have an important informational asset not available to outsiders – mutual familiarity of members with each other. As shown in Sec.3.3, the existence

Table 1 Comparative analysis of institutional mechanisms

Criterion (1)	Institutional mechanism (2)		
	Civil society (7)	Government (8)	Market (9)
Basic motive (3)	Mutual self-help (10)	Career reward (14)	Profit (18)
Importance of inter-personal relations (4)	Critical (11)	Non-critical (15)	Non-critical (15)
Incentives for opportunism (5)	Eliminated (12)	Exist (16)	Exist (16)
Major limitation (6)	High requirements of social capital (13)	High bureaucratic costs (17)	Opportunism (19)

***Source*:** Own presentation
Zdroj: vlastná prezentácia

Tabulka 1 Komparatívna analýza inštitucionálnych mechanizmov
(1) kritérium, (2) inštitucionálny mechanizmus, (3) základný motív, (4) význam medzipersonálnych vzťahov, (5) stimuly pre oportunizmus, 6) hlavné obmedzenie, (7) štátna spoločnosť, (8) vláda, (9) trh, (10) vzájomná svojpomoc, (11) kritické, (12) odstránené, (13) vysoké požiadavky na spoločenský kapitál, (14) odmena v zamestnaní, (15) nie kritické, (16) existujú, (17) vysoké náklady na administratívu, (18) zisk. (19) oportunizmus

of the reputation effects will motivate members not to behave opportunistically, and the higher probability of the expected positive behavior can be capitalized into lower prices for farm income stabilization services. By minimizing costs to producers in this way, the civil society mechanism has an advantage over the market mechanism.

Second, agricultural producers are better informed about the idiosyncratic details of their situation than any outside stakeholders. Whereas private suppliers of income stabilization services may undertake some efforts to become better informed about the nature of demand that they have to satisfy, the same is not to the same extent true of public officials. Public officials are imperfectly informed about the details of the situations in which agricultural producers find themselves and in view of the absence of residual interests will undertake only limited efforts to fill in these information gaps. Therefore, when the knowledge of idiosyncratic details is important for the successful delivery of farm income stabilization functions, the civil society mechanism has advantages over both government and market mechanisms (the latter may be able to overcome this information problem, but only at extra costs to producers in the form of the enhanced profit margins to compensate for the risk emerging due to the lack of the required information).

Third, an important advantage of the civil society mechanism is that the undertaking of activities within its framework depends more on the efforts of producer themselves than on the actions of public officials or initiatives of private suppliers of farm income stabilization services. This means that the producers do not have to wait until public officials or private suppliers acknowledge the importance of a certain problem to the extent of expending resources in the attempt to contribute to its solution. Since the required civil society institutions are created and maintained by producers themselves, in using these institutions the producers enjoy a significant amount of independence, which would be unachievable for them within the framework of the other institutional mechanisms.

The role of public policy

Such advantages of the civil society mechanism as the presence of residual interests of key stakeholders in high performance of the respective organizations, first hand information about specific farm income stabilization opportunities, coupled with minimization of costs to producers make it preferable, from the viewpoint of maximizing producers' welfare, that every farm income stabilization task is solved by means of the civil society instruments. However, the incentive problems of the civil society mechanism give rise to its prohibitively high transaction costs, which would result in the optimality of a certain mix of mechanisms, rather than the overarching use of only one of them.

In this connection it is important to remember the argument in Sec.3.3, pointing to significant variability of negative effects of the incentive problems of the civil society mechanism, depending on the availability of social capital. In the cases when the amount of actually available social capital is sufficient, the transaction costs of the civil society mechanism would stay in reasonable limits. It means that although the government cannot change the underlying incentive problems of the civil society mechanism, it can lower its transaction costs by means of investing in social capital in the communities concerned. Such a role of the government can be realized in the following ways:

1) Maximum delegation of decision-making responsibilities to the grass-roots level, as the growing recognition of individual responsibility encourages the grass-roots social capital-based activities. Such policy attitude forms the logical basis for the development of the civil society mechanism, since agricultural producers will expend efforts for it only in the case when the respective organizations are treated seriously and respectfully by governmental policy-making bodies.

2) Dissemination of information about the civil society mechanism and its potential role in farm income stabilization. Being based only on bottom-up actions, the operation of this mechanism critically depends on the way that the rank-and-file people understand its role. Eliminating cultural path-dependency effects, educating agricultural producers in the principles of market economy, and transforming their patterns of self-perception (from more passive to more active) are important tasks of governmental and also non-governmental advisory, consulting and extension structures.

3) Creating an effective infrastructure, whereby agricultural producers and other stakeholders of farm income stabilization have better chances of reaching consensual positions through an access to a favorable interaction environment. Promoting formal and informal communication is an effective way to invest in social capital.

4) Finally, an important issue is developing trust in the governmental policy itself. Opportunistic or inconsistent behavior on the part of government can compromise the idea of civil society, which requires not only trust among individual economic agents, but also trust in the government as a reliable partner. Agricultural producers should be well-educated as to the current policy objectives and the strategies used to achieve them. Partnerships established by the civil society-based organizations with ministries of agriculture might play a crucial role in motivating the producers to create and join such structures. In general, governmental departments, responsible for agriculture, and the civil society-based organizations should position each other as strategic partners.

Taking into account the above-mentioned characteristics of the transitional situation, it can be concluded that whereas the choice in Western conditions might be between various institutional mechanisms of farm income stabilization, the respective choice for the transitional conditions can often be between civil society-based performance or non-performance.

Conclusions

Farm income stabilization functions can be performed through the following institutional mechanisms: 1) market, including insurance markets, futures and options markets, as well as production and marketing contracts; 2) government, in the form of involvement in insurance markets (either through offering insurance services or subsidizing insurance services of private firms), disaster aid, sanitary and phytosanitary measures, as well as CAP instruments, such as market support, direct payments, and rural development; and 3) civil society, which presupposes the operation of cooperative (mutual) organizations offering income stabilization or support services to farmers, including agricultural cooperatives operating on a pooling basis.

Each institutional mechanism of farm income stabilization exhibits a number of incentive problems. In particular, the use market mechanism is limited by opportunism problems and poor insurability of systemic risks; the government mechanism, while having better ability to deal with the systemic risks, cannot solve the problem of opportunistic behavior on the part of recipients of farm income stabilization services. In addition, it is beset with agency problems in the implementation of public programs; high potential for bureaucratization and excessive complexity of insurance programs, leading to the emergence of rent-seeking activities; as well as negative motivational side-effects of disaster aid.

The incentive problems of the civil society mechanism mainly do not include those that are characteristic of both markets and governments. However, this mechanism possesses problems specific to cooperative organizations, such as common property problem, horizon problem, monitoring problem, influence cost problem, as well as decision-making problems. These problems have been shown to originate from high social capital-dependence of the civil society mechanism, which means that while these problems are able to significantly increase transaction costs of civil society mechanism, the actual size of these transaction costs depends on the availability of social capital in the respective communities.

The economic context of transition to market has a number of characteristics having important implications for the feasibility of different institutional mechanisms of farm income stabilization. The use of the market mechanism for farm income stabilization is limited by their frequently observed institutional underdevelopment and insignificant opportunities of making profits on agriculture; the use of the government is also limited by budget constraints. The civil society mechanism, on the other hand, has important advantages, such as the presence of residual interests of agricultural producers in high performance of the respective organizations, limited incentives for opportunism, first-hand information about specific farm income stabilization opportunities, minimization of costs to producers, as well as the fact that the undertaking of activities within its framework depends more on the efforts of producer themselves than on the actions of public officials or initiatives of private suppliers of farm income stabilization services.

The optimal role of the government, therefore, is to invest in social capital in order to reduce the transaction costs of the civil society mechanism. The investment in social capital can be performed in the following general forms: maximal delegation of decision making responsibilities; information, educational and advisory work; developing a communication infrastructure for agricultural producers and related stakeholders; and building trust in governmental policy itself.

Súhrn

Cieľom práce je porovnať hlavné inštitucionálne mechanizmy stabilizácie výnosov poľnohospodárskeho podniku (trh, vláda, civilná spoločnosť) a zistiť, ako vzájomná substitúcia týchto mechanizmov môže poslúžiť na prekonanie ich nedostatkov. K hlavným obmedzeniam u trhového mechanizmu patrí oportunizmus a slabá poistiteľnosť systémových rizík a v prípade vládneho mechanizmu je to oportunistické chovanie sa príjemcov služieb na stabilizáciu výnosov poľnohospodárskeho podniku, problémy agentúry pri implementácii verejných programov, vysoký potenciál byrokratizmu a nadmerná zložitosť poistných programov. Motivačné problémy mechanizmu civilnej spoločnosti nezahrňajú najmä tie, ktoré sú charakteristiké pre trhy i vlády. Tento mechanizmus však má problémy, ktoré sú špecifické pre družstevné organizácie. Zistilo sa, že tieto problémy sú spôsobené závislosťou mechanizmu civilnej spoločnosti od vysokého kapitálu. To znamená, že zatiaľčo tieto problémy dokážu značne zvýšiť transakčné náklady mechanizmu civilnej spoločnosti, skutočná veľkosť týchto transakčných nákladov závisí od dostupnosti spoločenského kapitálu v príslušných komunitách. Ukázalo sa, že ekonomický kontext prechodu na trhový mechanizmus vytvára dodatočné nátlaky na trhový a vládny mechanizmus a príležitosti pre mechanizmus civilnej spoločnosti. Preto optimálnou úlohou vlády je investovať do spoločenského kapitálu, aby sa znížili transakčné náklady na mechanizus civilnej spoločnosti.

Kľúčové slová: inštitucionálne mechanizmy, stabilizácia tržieb poľnohospodárskeho podniku, motivácia, motivačné atribúty, transakčné náklady

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