Performance of the domestic food sector and internationalization

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Introductory remarks

We will start our paper with three very general statements about national food policy:

1. The central objective of food policy is to secure a sufficient supply of food in quantitative and qualitative terms and at prices which do not unnecessarily burden consumers.

2. An adequate food supply presupposes an agricultural production offering products in sufficient quantity and in the demanded quality.

3. In today`s world, national food security does not presuppose the existence of a respective domestic agricultural sector.

The last statement takes into account that in an integrating world the national food systems are chaining together in a rather comprehensive way (French, 1989). In consequence, national food policy should desists from the traditional view of a national food chain in favor of the consideration of an already existing and further developing international food system. The cognizance of the ongoing international amalgamation gives way to a food policy which is strictly oriented towards maximizing consumers` utility and general economic welfare (Hanf and Boeckenhoff, 1993, p. 4). In particular, this means that policies should be implemented supporting those stages of the domestic food system which have a good chance to become internationally competitive. Furthermore, the domestic system should be scrutinized for organizational structures which generate unnecessary slackness. The change of such inefficient institutions is usually not very costly with respect to the money to be allocated, but it is often politically very difficult.

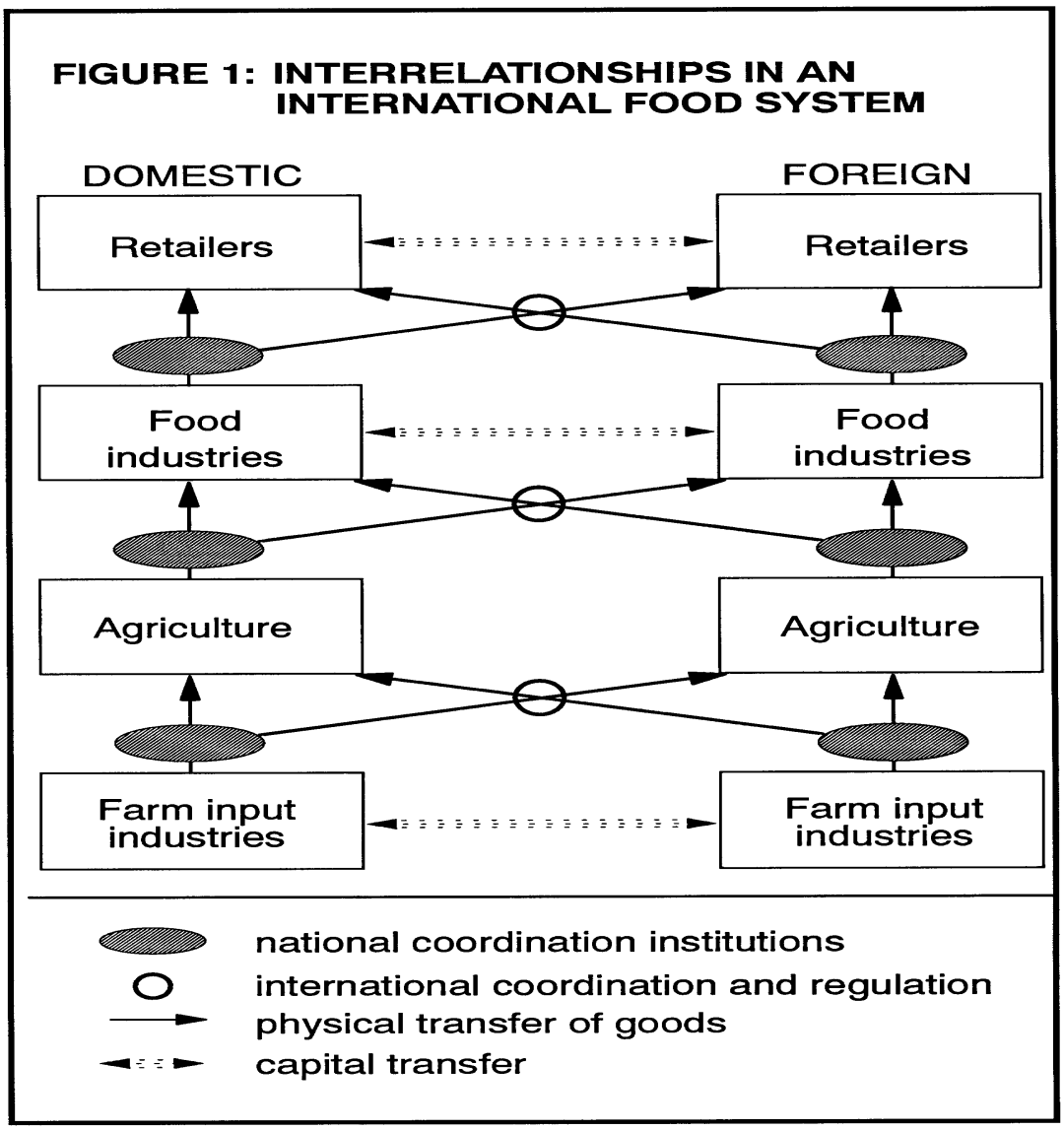
Characteristics of a food system

Before discussing the impact of specific weaknesses in the food system on economic welfare and on consumers` utility, we will briefly outline a simplified structure of a domestic food system and its international links.

The term "food chain" is more and more coming into use in order to characterize the structure of a food system (van Dalen, 1994). On the one hand, this term rather well reflects the fact that agricultural products have to go through a number of successive stages until they reach the final consumer. On the other hand, this term may be misleading in the

sense of evoking the impression that the food system is a streamlined process which runs automatically without any interruption and without turbulances from farmer to consumer.

Figure 1 gives a simplified presentation of a food system whereas only four industry stages are defined: Agricultural input industry, agriculture, food processing, and food retail. The simple graph in figure 1 already demonstrates that a food system is much more complicated and diversified as the term "food chain" suggests. There exists a large number of interrelations between the different stages of any national food system and the respective industries in foreign countries. These relations may be upstream, downstream or on the same level as well, and they appear in the whole range from physical transfer of commodities to direct investments including all other types of international business activities like joint ventures, licensing, know how transfers and money market transactions (Maurer, 1990, p. 280).



A precondition for the functioning of the system is that specific institutions are located between each of the successive industry stages. The term `institution` refers to the organizational framework where transactions between two parties are carried out and to the mode of transaction as well (Williamson, 1985, p. 2). Within the food sector, these institutions have the principal task to guarantee the coordination between the demand of a downstream industry and the supply of the respective upstream industry in quantitative and qualitative terms, and with respect to time and location where the exchange takes place (Perry, 1989). For this purpose a wide variety of institutional arrangements can be established and employed. In practice, all arrangements between pure market coordination and intrafirm-administrated coordination can be found including a plethora of different types of contracts and different contract governance (Schrader, 1986, p. 1161).

The number of industry levels to be differentiated and their importance within the food system vary considerably from product to product. Furthermore, the contribution of single stages to the sectoral income formation is often subject to significant changes over time. The numbers in table 1 demonstrate this for West Germany. A breakdown of consumers expenditures for food, beverages and tobacco to different industry levels shows that the economic contribution of agriculture (measured in value added) has considerably diminished from 28 percent in 1960 to a meagre 13 percent in 1990. Correspondingly, the percentage of revenues of foreign food suppliers declined. During the same period, the share of value added contributed by industries downstream of agriculture remained almost constant with about 41 percent. The minor shifting in favor of the food trade sector should not be overestimated. It is partly due to a rather crude estimation procedure being employed because of an insufficient data base. However, some indications exist that this shift has actually taken place in reality. The share of food expenditures which reached the agricultural input industries also remained more or less constant over the period from 1960 to the end of the 1980th, but dropped considerably in the last years. The main reasons are the cut back of agricultural investments and the general tendency towards extensification of farming (Hanf and Verreet, 1994, p. 206). The most remarkable increase took place in the remainder which sums up the shares for "out of home" consumption, transportation, the contribution, transportation, the contribution for purchased inputs of the food processing and retail sector, and other services. These changes in the contribution of the different levels of the food system for the formation of economic value are not specific for Germany but is to be recognized in all counties where an industry based economic development takes place.

Table 1: Rough estimates of the distribution of German consumers' food expendi-tures[1] in percent to different sectors

year	value added[2]			Receipts[3]		
	agriculture	food industry	food trade	industrial imputs for agriculture	foreign food suppliers	others[4]
1960	28	30	11	10	16	5
1970	20	31	11	10	15	13
1980	15	28	13	9	12	23
1990	13	27	14	7	8	31

Source: Own calculations, data base (BML)

1 includes: food, beverages and tobacco
2 Serves to renumerate labor, capital and land input
3 Serves to renumerate labor, capital, land input and for the purchase of inputs and for capital depreciation
4 includes out of home consumption, investments and inputs for food processing and trade

Performance criteria in the food sector

The performance of an industry determines its international competitiveness (Porter, 1991, p. 30). Performance plays a crucial role in the formation of internationally interrelated systems as it destines at which level and in which shape international links evolve. If we speak about `performance of an industry` in the context of international competition and internationalization of the food sector, this term has to be understood as a compositum of different criteria. The costs involved in production and thereby the minimum supply price is certainly a very important criterion (Connor et al., 1985, p. 91). But with increasing economic wealth other characteristics like product speciality, product and service quality and reliability of the industry are equally important and become even more the point at issue.

Product and service quality was obviously not considered as a main issue in most centrally planned economies and quality also plays a rather marginal role in Western economic theory. Probably for the same reason: quality is a complicated compositum of a sometimes large number of distinct product attributes (Houthakker, 1952, Theil, 1952, Lancaster, 1966) which makes simultaneous modeling extremely complex, particularly, when varying quality preferences of the final consumers should be portrayed in sufficient accordance with reality (Brockmeier, 1993, S. 2). In opposite to that, practical business management considers quality as one of the crucial competitive factors. Existing preferences for specific product attributes often demand a considerable undercutting of the competitors price if this attribute is less distinct in the own product. Such a price deduction is necessary to compensate final consumers for lost utility and commercial buyers for higher costs which arise to upgrade the product quality.

Generally, it can be said that quality as a performance criterion becomes the more decisive the more economically developed a country is. Boehlje and Schrader (1994, p. 7) express this fact in the following simple way: "Richer consumers are more demanding consumers." However, considerable differences exist with respect to the goods traded and the

level of the food system being considered. Hence, only tentative statements can be made. We have tried to express our personal appraisal of the relative importance of the different performance criteria in table 2. The number of stars attributed to the different criteria shall indicate which level of importance we appoint to them. Certainly production costs still dominate as performance criteria at the farming level. That is particularly true for the relatively homogeneous mass products like grain, milk and meat, whereas most vegetables and fruits are much more quality dependent. Product quality is at least as important as the supply price on the level of food processing. On the other hand, processed products which include a high added value like susages etc. gain their competitive advantages mainly by their quality, and price plays a minor role. Service quality is in those industries which handle perishable goods most important (Hanf and von Wersebe, 1994). In the mean time, offered quality of services is the decisive factor in retail, i.e., the variety of products supplied, the comfort and the atmosphere of the establishment, the friendliness of service and a favorable location.

Reliability has a similar effect on competitiveness (Rogerson, 1983, p. 509). Besides flexibility it is certainly the most important performance criterion for organizations, which carry out the necessary coordination functions between the different stages in the food-system. Reliability in trade comprehends many facets of business rules like accurate delivery in time and observance of negotiated terms, solidity and honesty in financial transactions, cooperative and non opportunistic behavior (Katz, 1989, p. 656). Considering these attributes, it becomes obvious that reliability can only be established in the course of time if the institutions involved proof evidence that they are flexible and always responsibly acting. In other words, reliability is a typical experience quality which is time consuming and difficult to gain, and is very easy to lose. The existence of well functioning and trustworthy co-operating institutions is an important presupposition for intensifying international business relations, as reliable partnership may reduce costs of physical transactions (storing, monitoring, maintenance etc.), and above all, it facilitates contractual relations.

Table 2: Importance of different performance criteria (personal evaluation)

criteria	system level		
	agriculture production	food industry	retail sector
production costs product quality service quality	* * * * * * *	* * * * * * *	* * * * * * *
	standard products		
production costs product quality	* * * * * * *		
	vegetables & fruits		
production costs product quality	* * * * * * *		

Consequences for food policy in the transformation process

As already mentioned at the beginning of the paper, the natural and central objective of a national food policy is to ascertain that consumers are served with high quality products at low prices. In general, the two components of this objective are contradictory. In common, measures enforcing higher quality standards are only to be realized at the expense of higher prices, and regulations aiming at lower price level usually are accompanied by a quality deterioration. However, in a strict sense this applies only if all industries in the food system are performing "optimally" and if all institutions being involved ensure that transactions among firms within the system can be carried out with minimum frictions and distortions. Real world experiences give evidence that most economic systems are far from being perfect. Hence, there are always a couple of political decisions which can improve the situation with respect to both components. A few examples may illustrate this fact: stimulating investments in improved technology, reducing legal uncertainties, lowering entry barriers, promoting research and development, driving back monopolistic and monopsonistic structures, simplifying administrative regulations, and enhancing flexibility in business coordination.

Furthermore, it has to be taken into account that food policy is certainly an important policy but it is only a part of the national general economic policy. Hence, food policy should be oriented in a way that it contributes to the general welfare as much as possible, and it should not unduly shield its own client industries.

Considering the outlined goals, the increasing share of value added being produced downstream of agriculture and the indisputable significance of the coordination systems conduct for the performance of the whole food system urge upon concentrating political activities on the improvement of the performance of food processing industries and on the reorganization of the institutions being responsible for sectoral coordination. However, the mere statement of importance is surely not sufficient to utter any policy recommendation. At least, there should be a strong evidence that something is in a bad way.

We must confess that we are not sufficiently familiar with the situation in the Czech food sector to give any specific recommendation. However, our department has gained a certain expertise with respect to the status of the food system in other transformation countries, e.g. empirical studies have been carried out in Poland, the Baltic States, Ukraine, Hungary and Slovenia. The following, not very surprising picture of the performance of the food system in most of the states in transition derived from our own studies, countless publications from other research institutes, reports of business men and the experiences with the former GDR:

1) All stages within the food chain are more or less lagging behind the Western states and that with respect to productivity, to horizontal and vertical product differentiation and to quality standards.

2) These differences seem to be more accentuated in the food processing industry than in agriculture. This probably results from the fact that the market value of processed food products is much more dependent on quality is generally more important in food processing than in agriculture.

3) Another stage which is remarkably weak in most transition countries is the food retail level. This certainly has its roots in the traditional under valuation of services and of consumers demands in the former central planning system. In addition, we have the impression that most of the present governments do not see and urgent nessecity to support reforms in this sector heavily. Therefore, new developments in retail are either induced by individuals operating very small scale firms, or by big multinational retailers.

4) Finally, we have to consider that many institutions which have the task to coordinate the activities between the different stages are not adjusted well enough to a market oriented system. To administrate coordination in the central planning regimes, state institutions were employed, or the coordination was internalized by vertical integration in the agri-food-complexes. Unfortunately, many of the new institutions are not behaving much differently form their predecessors. Strong and stream-lined contracts replaced full integration, and monopsonic power replaced administrative regulations. The foundation of new, flexible and opportunity searching organizations are still more the exception than the rule, and where they are established they often suffer under the lack of marketing experience.

This portrait of the food system is admittedly not very gratifying and does certainly not apply in all cases. Nevertheless, we are convinced that the key for a positive development of the domestic food sector lies

i) in the improvement of food processing performance,

ii) in the support of the adjustment of domestic retail firms to consumers pretensions and

iii) in the establishment of viable, vital and variable institutions which can coordinate the different stages with minimum transaction costs.

The most efficient way to improve performance of the food processing industry is doubtless to animate foreign firms to cooperate with the domestic industries. They can provide the necessary capital for investment in modern technologies, and thereby they also can transfer the indispensable technical know-how and management skills. G. Ames recently emphatically underlined the importance of capital transfer to processing industries in transition countries: "If the West wants to play a constructive role in the transition process, providing access to capital in the food processing sector should be a viable long-term investment." (Ames, 1994, p. 42).

The vitalization of the food retail system should be regarded first and foremost as a domestic task. Surely, foreign investors should not be excluded as they can quickly provide domestic consumers with a rich assortment of cheap products of reasonable quality. However, it has to be taken into account that a massive and fast penetration by multinational food chains may cause serious difficulties for the development of the domestic food processing sector. This is particularly to expect if the essential and necessary marketing and distribution channels in the domestic system are not sufficiently developed. Considering the wanted product differentiation and quality standards, the entering food retailers certainly prefer to import the majority of their products as the procurement of the whole assortment within the country of entrance would be very time consuming and cause high transaction costs. By this, the domestic food industry may be cut off from consumers demand. Furthermore, if a considerable share of food supply is based on imports, this also reduces the incentive for foreign food industries to invest in the improvement of the domestic industry. On the other hand, the market entry of foreign food retailers offers new challenges for the domestic food industry. If they succeed in contributing to the foreign retailers assortment, this might open new possibilities for export.

The probably most difficult task in the transformation process of the food sector is the adjustment of the coordinating institutions according to the requirements of a dynamic market economy. But it is a very important one and may be crucial for the whole development. Bromley 1993, p. 8) wrote: "The naive promise of privatization and decollectivization of agriculture, without careful thought given to the accompanying institutional changes beyond the farm gate, will retard rather than revitalize the Russian economy." The difficulties arising mainly result form the fact that the effectiveness of any marketing institution considerably depends on the managerial capability and the willingness of the people running the organization. The necessary know-how cannot easily be accrued and, first of all, it cannot be gained in short time as this type of know-how is primarily based on individual experience, learning by doing and close familiarity with the business conventions in use. On the other hand, institutional know-how can also not simply be imported as institutional settings have to be carefully adjusted to the respective social environment. Human behavior, conventional business rules, language, manners and customs of a country have to be considered as well as the realities of the infrastructure in the respective country (Robinson, 1986, p. 4).

Impact of alternative policy strategies

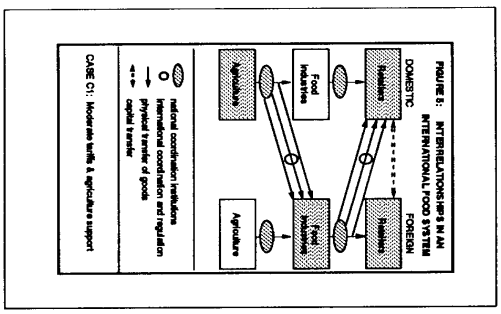
In the following we would like to illustrate how different food policy strategies may influence the development of the domestic food system in a transition country. The rather simplified model of an international food system presented in figure 1 serves as a framework of reference where we renounce to include the farm input industries. According to

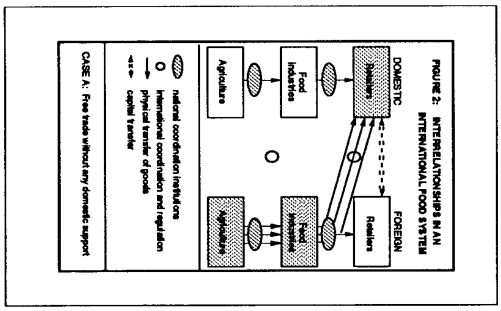
that, the discussion of the different scenarios will be a rather coarse and generalizing approach and can only highlight some very general tendencies.

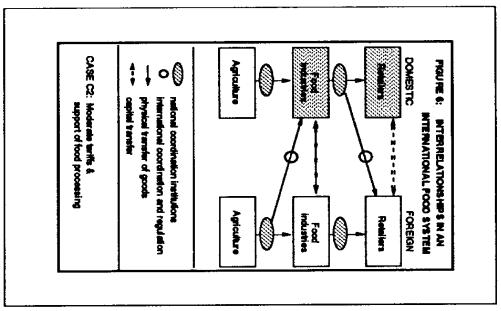
Our basic model assumption is that the performance of all stages in the food system is somewhat weaker than the performance of the respective stages in the Western countries. Furthermore, we assume that the transition country is relatively small in comparison to a "foreign" country and transport distances are not creating serious trade barriers. The policy strategies to be discussed are also extremely simply designed. A perfect liberalization of trade on all levels is chosen as the starting point.

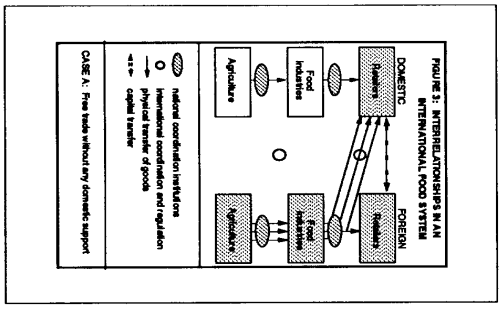
Case A (liberalization)

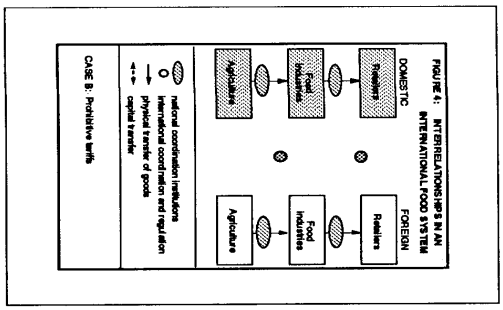
If a country which has competitive disadvantages at all levels of the food system from one day to the other allows for an unhampered free trade without any support of the domestic industries, it is to expect, that the domestic consumers will be supplied with imported food to a large extent. Agricultural production and food processing will break down (see figure 2). As retail business cannot be externalized, foreign retailers will probably overtake the











domestic retailers either by mergers and aquisition or by crowding them out (see figure 3), as it was the case in the former GDR after unification.

The advantage of such a policy is that consumers are immediately served with a broad assortment of high quality food items at reasonable price. The obvious disadvantage is that working opportunities in agriculture and food processing are lost and any contribution to national income disappears. Whether such a drastic treatment has to be valued positively or negatively from the viewpoint of national economic welfare like the potential to improve performance and to reach competitiveness from own resources, and the potential of the other domestic sectors to provide work and sufficient purchasing power to consumers to keep the trade balance poised in long term. In any case, a rebuilding of a crashed industry demands a tremendous capital inflow.

Case B (complete isolation)

The most manifest means to shield domestic agriculture and food processing from foreign competition is the introduction of an insurmountable tariff system. This certainly keeps agriculture and food processing in business (see figure 4), however, on the expense of the consumers who have to bear the higher cost of domestic production and the utility loss due to low quality. Many protectionist systems have been introduced as temporary measures in order to give the domestic industry sufficient time to adjust to changes in the socio-economic environment. However, the experience of many countries gives evidence that the goal of improving performance usually fails as protection takes away the incentives for sectoral adjustment. In addition, it should be emphasized that prohibitive tariffs in the food sector would probably cause serious difficulties in other sector where international trade is aspired.

Case C (Moderate tariffs and adjustment support in the domestic food sector)

Considering the two extreme cases discussed above and the risk of failure which they carry, food policies in a state of transition should obviously be based on a combination of internal support for improving sectoral performance and a border protection which does not completely ban competitive pressure from outside. We will briefly discuss two options. In case C1 all efforts are concentrated on the improvement of the agricultural sector, in case C2 the efforts are focused on the food processing industry.

C1: It is very difficult to attract foreign capital for investment in agriculture. Hence, technological changes and the therewith related investments have to be more or less completely financed form domestic sources, essentially, by governmental resources.

Most agricultural products are commodities which have to be processed before they reach the consumer. As the costs of processing often distinctly surmount the value of the agricultural commodity, an internationally competitive agriculture does not guarantee that domestic food products are competitive at consumer markets. If the food system downstream form agriculture does not perform competitively, there exist a certain possibility that the food system with its international trade relations circumvents the domestic processing level (see figure 5). By this, that stage within the food system is externalized which promises the highest contribution to national income.

C2: Putting the emphasis of domestic food policy on the improvement of the performance of the processing sector provides two advantages. Firstly, the necessary investment capital can be attracted from foreign investors who simultaneously bring in technical know-how and managerial capacities. Secondly, if the food processing industry reaches a performance standard which makes the industry competitive at international level, it

ties up, a large share of consumers` expenditure within the country. Moreover, it also opens the possibilty of export earnings from products which include a relatively large contribution to domestic value added. In the worst case, a competitive processing industry may partly procure its raw material form imports (see figure 6), but there is a great chance, that spillover effects will also enhance performance in upstream agricultural enterprises.

A final remark

Considering the tremendous problem evolving in the transition of a former centrally planned economy to a market economy, such a short paper can only touch a few points and try to draw attention to some basic interrelationships. At least, we hope that our statements have a little bit contributed to the recognition that modern industrial economics with its dynamic consideration of "basic conditions, structure, conduct and performance" offers a tool to investigate and to improve the understanding of the transition process. Certainly, generalizing model discussions cannot solve practical problems, rather they demand very specific and cumbersome evaluations. But theory based system approaches provide a powerful framework and may facilitate to elaborate efficient policy alternatives.

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