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Micro-Economic Institutions and the Transformation of Agribusiness: Evidence from the Czech Republic

1. Introduction: issues and data

In recent research on the economics of agriculture in transition, the main focus has been the impact of size and organization on technical efficiency. Complementary to those factors, the contribution of this paper is in highlighting both the relevance of the economic environment and the pervasive influence of the quality of institutions. Institutions, in this paper, are taken to be the rules that govern economic behaviour. Importantly, these are both restrictive and favourable (North, 1990: 3–4). In transitional agriculture, the relevance of the favourable function of institutions has become particularly clear. Rules of behaviour are often embodied in particular organizational structures, which imply specific incentive structures and thus, in turn, enforce or prohibit behaviour — witness the relevance of the cooperative versus the private farm in primary production, the producer-owned versus the independent processing plant in down-stream industry, or the agricultural bank versus the credit cooperative in credit markets. Such organizations and the rules they imply have important repercussions on key economic performance measures such as product selection, output volume, profitability and profit distribution over the agribusiness chain. The aim of this paper is to demonstrate this relevance empirically and trace some of its implications.

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The data collection method for this study was the structured interview. With respect to the type of information that it provides, the structured-interview method is positioned between surveys and case studies. A survey is best suited for the study of one or a few variables, in a situation where the environment can be assumed to be stable or irrelevant. It yields results that are statistically generalizable, though at the cost of contextual information and knowledge about the single case. A case-study, on the other hand, is best used in situations where the relevance of environmental factors is unclear, allowing for a comprehensive study of one unit in its context at the cost of statistical generalizability. A structured interview allows the researcher to expand his or her scope beyond the single unit without being able to claim statistical generalizability; to the study of detail and context without exhaustive description in any single unit. Given the lack of information on the relevant micro-institutional changes in transitional agribusiness, such a focused overview seems appropriate to direct further research.

Issues to be discussed were identified on the basis of secondary literature, while topics brought up by interviewees were pursued if relevant to the pre-selected issues. Interviews were conducted in southern and central Moravia (the eastern part of the Czech Republic) during October and November 1997. Interviewees included individual farmers, managers of cooperative or corporate farms, representatives of farmer organizations, processing firm managers, wholesale traders, bankers, consultants, and academic economists, 30 individuals in total. They were selected so as to collect information on the various organizational modes of agribusiness within the constraints that time and existing contacts posed.

In the following sections, I discuss interview findings with respect to the structure of farms (of various types) in transformation, land reforms and land markets, the structure of the agribusiness chain, and the credit system. Discussion and conclusions from these findings conclude the paper. The scope of this paper does not allow for a discussion of the wider reform setting, nor of available information from the various statistical records (see Kalina, 1997; Kraus et al., 1998; Ratinger & Rabinowicz, 1997; Swinnen, 1996; Ministry, 1997; OECD, 1997; EBRD, 1998; and CSO, 1995).

2. Corporate and individual farms in transformation

Contrary to initial expectations concerning the outcome of reforms, the majority of farms have retained their traditional organization. Although, from a legal point of view, farms are now either cooperatives or farming companies (joint-stock or limited liability structures), in practice they can all be termed 'corporate' farms. There are few practical differences, the main one being the governance structure: the management of cooperative farms have to deal with owner-workers, member-workers, non-worker owners and non-owner members; and in addition, with all the individuals who own the farm land and rent it to the farm, numbering 700 compared to a 400 member population in one typical case. One interviewee remarked that the complexity of this governance structure and the recent changes in it make the system hard to understand for those directly involved, and incomprehensible for others. It is especially hard to keep up with the actual governance structure because of the ongoing changes in ownership shares resulting from the restitution process.

The transformational corporate farm, a successor organization to the former state or collective farm, is still quite large in terms of acreage, has a large number of employees in relation to land and livestock, and has diversified produce. After division, corporate farms typically loose little acreage to claimants, or even manage to increase it. Labour decreased considerably during the transformation (since 1990), for example from 430 to 170 on one visited farm and from 519 to 216 on another. Few people were fired; the decrease was among pensioners and people who left the farm to seek alternative employment, both in farming and non-farming sectors. Management of one farm reported that of their 430 workers, 260 left and 170 stayed. Of those 260, 100 left voluntarily, the rest (160) consisted of pensioners. Another manager reported problems with finding employees: workers are on average old, younger locals have mostly moved out of the villages, and they cannot find additional workers because of the unattractive working conditions and low wages that they offer. Monthly wages are 11,000 KCs (Czech Crowns) in the Czech Republic (8000 in agriculture), but KCs 7000 in that particular region (near the Austrian border), while this farm could only offer 6500 KCs.

The product mix was invariably diverse, comprising both livestock (dairy and meat production) and crops of various sorts. On all farms, the acreage under crops had been expanded, while the amount of (mostly dairy) cattle had been reduced during transformation, due to the difficult situation on the milk market. None, however, had completely abandoned livestock, although that part of production is decidedly loss-making. One manager justified present dairy losses through diversification by risk spreading, another by hopes for better times (EU-entrance).

Individually managed, or (for short) individual farms are farms which are owned and managed by one person or a single family. There are two types of individual farms. Many farms are small: not more than 20 hectares, frequently around ten. They are farmed in addition to a job or social security income. Produce is largely for private consumption and for the local (barter) market of neighbours, friends and relatives. The farm specializes in labour-intensive produce such as fruit and vegetables, and is often quite diversified: a few animals, and several small plots with various crops. It is typically started by a former cooperative farm worker or an urban landowner. The other type of individual farm is the market-oriented, large farm, covering, as a rule, at least 200 hectares with crops or a few dozen animals. It is specialized, out-sources many activities (such as harvesting or accounting), and operates capital-intensively. It is usually set up by a former manager of a cooperative farm. Its success is often due to the fact that it is large enough to realize economies of scale, and also because operators are experienced farm managers.

The larger farms profit from their size by fitting into the upstream and downstream industry's channels. The smaller ones have to find alternative ways of acquiring input and marketing opportunities. One solution is niche marketing, as was practised by one interviewee. This business was started in 1990, and is a small, diversified farm on mountainous land. The operator owns a 22 hectare plot, and an additional 10 hectares is rented. The land use is diverse: meadows for about 20 dairy cows and meat calves, some fields where potatoes and cereals are grown, as well as fruit and vegetables gardens and some forestry. The farm produces its cereals and vegetables without fertilizer for a firm selling bio-organic foodstuffs; this means a lower yield but a better price (15–20 per cent above the average) and stable purchases, while inputs are lower. The milk, though, has to be sold on the regular market, which is very hard because of the general dismal circumstances and, in addition, the fact that he is a small supplier. He also accommodates tourists, via an organization promoting camping on 'organic' farms, which added an annual 30,000 KCs to the farm's non-tourist 100,000 KCs annual turnover.

The other individual farmer interviewed operated a farm at the other end of the spectrum. He is a former manager and then director (in total for 24 years) of a cooperative farm, who started his own farm in 1993. The farm cultivates 300 hectares and produces sugar beet, spring barley, oats, poppy seed and peas, and is thus one of the rare farms specialized in crops. Its success is ascribed by the interviewee to the following factors: it is large enough to realize economies of scale; and he is an experienced farm manager. Later, a corporate farm manager and an economist both stressed the close relationship between the individual farmer's managerial experience and the farm's success. Both types of farms face similar problems: acquiring land and capital, either via restitution procedures or on the market.

3. Restitution procedures

In line with the general privatization of property, land that was used by cooperative farms in 1948 and formally owned by private individuals, can now actually be taken over by their heirs. It must be remembered that property titles were never formally transferred, though practically the full bundle of property right — the right to use, profit and sell — was removed from formal owners. From the beginning of the land reforms in 1992 until 1999, only owners planning to start their own farms could and can claim their land. (This policy allows for a flow from cooperative to private farming but not to other uses during an adjustment period, after which agriculture as a sector should be able to compete for productive resources with other sectors.) When both property titles and individual farming prospects are documented, shares in land and capital stock are physically returned. That seems problematic, given the indivisibility and quality differences that characterize the corporate farm's capital stock. Indeed, interviewed private farmers reported either no or low quality capital restitution, and low quality land return.

In one instance, the interviewee had, after seven years of deliberation, obtained only one old tractor and four cows (the worst, he judged), which allegedly represented only three thirds of his rightful share of the value. (To validate the statement, a pile of legal documents and lawyer bills were shown.) He is still in the process of obtaining his full share by legal action. Another individual farmer claimed his capital share, but did not receive anything. Instead of a costly legal struggle he bought machinery and buildings, financed by bank loans. Corporate farm managers reported that they do facilitate restitution, and asserted that quality and divisibility issues are not problematic: the number of actual claimants is so small, that there is always a tractor or barn that suits the claimant. Yet one manager in particular ascribed his financial troubles to the restitution process while his account was confirmed by others.

It was the paperwork connected with handling claims that allegedly was a source of the farm's losses. On that farm, up till now 80 cases have been or are being handled. However, most claimants find out, during or soon after the restitution procedure, how complicated and unprofitable farming here is (if they really wanted to be farmers), or that the profits on alternative use are nil and sale is impossible (if that was a pretence for getting the property). The claimants that really do start their own farms currently number only 8 out of 80 claimants, of whom only one operates a market-oriented farm of a viable size. Most rent the land back to the cooperative, which is happy to do that, as the manager explicitly asserted. In another instance no individual farms had been formed from former corporate farm property, but the same administrative troubles were reported. Here claimants would sell their plot as a garden, or for recreational or construction purposes. (This farm was situated near the Austrian border, where alternative land uses are more rewarding.) Whatever capital was obtained — mostly cows and machinery — would typically be sold immediately. This 800 hectare farm had been losing 10 hectares annually since 1994 in this way. In yet another instance, a farm had to re-negotiate 1700 of its 2000 hectares of acreage. It offered owners to either take out the land, or continue to rent it to them for an annual KCs 800, — which is a relatively low rent. Owners of a total 500 hectares took their land out, but most found they could not use it profitably. They even had to pay fines because of excessive weed growth and seed production on their waste plots, polluting neighbouring (corporate) farm land. Most offered the land for rent to the corporate farm again.

A threat to cooperative farm survival may emerge in 1999. This will be the end of the seven-year period in which restitution claims have to be accompanied by documentation of individual farming prospects. Since 1998, restitution shares must be provided in money if demanded. Claimants' current willingness to investigate the value of their ancestors' property indicates that the majority might prefer that. As one corporate farm manager explained, this is more likely since most owners (as first heirs to expropriated citizens) are quite old. Supplementing pensions or the desire to leave money rather than a plot to children may induce a large-scale monetization of farm property. This would mean bankruptcy for most cooperative farms if a significant number of the owners did that, since they do not have the financial resources. After bankruptcy, farms would again be nominally owned by the state, but neither politicians nor managers want that. Managers' expectations are that the government is not going to allow large-scale bankruptcy, and legislation will be adjusted. Anticipating these problems, many cooperative farms are currently switching to the joint-stock or limited liability variety. This immunizes them from effective claims on resources, although it does not imply any restructuring or improvement in efficiency — a rather unexpected reform outcome.

4. Land markets

After obtaining his de-collectivization share, the initiator of an individual farm aiming at commercial rather than hobby farming normally possesses an insufficient number of hectares of farm land. Given the local dominance of cooperative farms, additional land has to be purchased from landowners renting to that cooperative. This involves high search and bargain costs. Several owners must be traced if a sizeable increase in acreage is to be made, and owners want to be compensated for a change in their rent contract.

One individual farmer had increased acreage from 200 to a total 300 a few weeks before the interview took place. This amount was the sum of acquisitions belonging to five owners, all of whom he knew personally. It was knowing the owner rather than the attributes of the land that made him select these plots. In order to make them rent out the land to him, taking it out of the collective farm where they rented it until then, he had to pay a substantially higher rent: 2000 KCs annually, compared to the 1020 KCs the cooperative farm paid them, and the 1000 KCs he paid for renting state land. He explained the premium by the fact that owners, being first heirs to pre-1948 owners, are mostly quite old, and not prepared to go through all the administrative work required for a change of the rent contract without a significant reward for it. After his transaction, the local cooperative farm raised its rent to 1500 KCs annually: at least here competition in land markets appeared to be present.

5. Market structure and payment arrears

After privatization, many processing firms were no longer constrained by state regulation in price strategies and started to skim off farm profits through low prices and late payment. They could do this because farms often had no choice as to which firm they would sell, which was a result of the high concentration in the processing industry. For payment arrears to occur, not only one party's power over another is a condition. The absence of effective contract enforcement mechanisms is also required. If these were effective, the lack of market power resulting in breach of contract could be repaired by appeal to the court system's legal power, as is the practice in developed market economies. Interviewees testified to both the deficiency of the court system (if not of legislation) and the advantage that the stronger market actors take from this situation. The phenomenon is not confined to producers, but was reported by literally all interviewees, often spontaneously. Two major impacts of arrears are that they inhibit firm restructuring because solvency boundaries become blurred; and through this loss of information they impede spot market development as transactions become personalized (Ickes & Ryterman).

As arrears are partly based on a lack of countervailing power, it may pay farmers to collude in dealing with processors and traders of off-farm produce. Interestingly, some attempts have been observed in the Czech Republic, but with little success. One specific example comes form the dairy sector, where six producers and a processor were interviewed. Milk, like meat, fruit and some vegetables but unlike grain or potatoes, cannot be stored without costly technologies and must be sold immediately after production. This gives the processor or trader large bargaining power. The relevance of perishable products is indicated by the fact that one interviewed management team purchased meat processing technology for this reason, bypassing the processor and transacting directly with the wholesaler. That solution is not available in dairies, where processing and storing technologies are more expensive. A comparison with the cereals sector is also instructive. Here farmers can choose to wait for some months for a seller's market (although that is of little use in a situation where structural overproduction and price decreases were smaller). This is one reason why many farms tend to specialize in cereals.

Interviewed dairy farmers gave specific examples of the market power of the processing firms. Apart from continuous real price decreases, abrupt changes in required quality standards were frequently announced. When the farm could, either for technological reasons or because of cost constraints, not adapt its production process so as to produce, say, the required fat percentage, their produce would then be purchased as lower-quality milk at commensurately lower prices. The one small milk producer interviewed (operating a 20 cow farm) even had great difficulty selling milk. The pressures in one case gave rise to the founding in 1994 of a collusion of 150 corporate and cooperative farms (out of a total of 300 delivering farms to that local processor). This group purchased a 51% share in their common milk-processing company in order to control the price strategy. One interviewed representative of a member farm that holds a 3% share in it mentioned that the share had cost them dearly, but gave little influence in return. This was confirmed by other, non-member farmers in the region and by an academic economist. Inability to translate their majority stake to a controlling vote in the board as well as difficulties in agreeing on a common policy appeared to have been at the root of the ineffectiveness of the construction. Consequently, members have only been able to decrease the lags between delivery and payment from five to two months, and to negotiate stable quality requirements, not to obtain cost-covering prices. Due to the costly purchase of the share in the milk processing company, at the time of interviewing, this shareholder cooperative was in grave financial trouble, threatening its viability.

In an interview with the general manager of the monopsonist milk processor, it became clear that the firm's market power is firmly established. As only half of the milk suppliers are united in the shareholder cooperative, the processor is free to choose a deliverer despite the farm organization. Its profits and turnover have continuously increased since 1993, since retail milk prices have risen far more than off-farm milk prices (curiously, this was justified with reference to inflation). The firm was among the top 500 firms in the Czech Republic with regard to profitability, and had been expanding its markets both domestically and in the Far East. Asked explicitly about the occurrence of arrears, the manager asserted that payment practices are 'normalized,' as the firm operates in competition with foreign firms. However, interviewed suppliers stated that they run payment arrears of 20 mln Crown to the cooperative shareholder members' (this figure excludes arrears to the other 150 deliverers). Apparently, 'normalcy' applies to international markets only, not to payment practices vis-à-vis primary producers.

Clearly, the existing profitability problems in Czech dairies are largely borne by primary production. However, although in this example formation of countervailing power has so far been unsuccessful, many (about 20) other instances of seller collusion are reported. In autumn 1997 there was a meeting of 18 milk producers' cooperatives in Prague, with the aim of founding a national organization of primary producers so as to defend their interests vis-à-vis processors. Future developments will perhaps provide more insight into which type of producer collusion can be an effective means to establishing countervailing power.

More generally, arrears can be observed to varying degrees in Czech agribusiness. One grape production and wine processing firm reported payment arrears that increased over the last three years from 14 to 90 days, both in domestic deliveries (which constitute the larger part of the firm's output) and foreign trade. In order to enforce contracts, court appeal is slow — it takes up to five years — and costly. Neither can they turn to alternative partners, since there is overproduction and hence a buyer's market. Yet another solution, bypassing traders by delivering directly to the retail trade, is impracticable because of the lack of the necessary network and equipment. In addition, taking this avenue would merely increase the number of market relations and hence the number of payment arrears. One cooperative farm mentioned a payment arrear case that they had brought to court in 1992; after more than five years, they were still waiting for a verdict. A conglomerate of production and trade, largely in agriculture, reported payment arrears as its main problem, amounting to two million Crowns (on a 250 mln Crown annual turnover) in arrear for half a year on average. They also took a case to court four years ago, without results. Yet another farm mentioned bills in arrears for as long as a year and a half. Far from only being connected to the first phase of the transition, payment arrears still appear to be still pervasive in Czech agribusiness.

6. The credit system

Credit is a bottleneck factor in both post-socialist farm restructuring and rural development; yet rural credit markets are severely underdeveloped and credit programmes are rife with inefficiency and crowding-out problems — facts that are widely recognized but have led to little empirical research to date. In the Czech Republic, credit is the only field in which the government subsidizes farmers through a state fund (PGRLF). This fund guarantees about 80% of loans and pays the larger part of interest. The reasons for this policy are clear. Agriculture's low risk-connected profitability is unable to attract funds on its own steam. In addition, payment arrears, blurring liquidity and solvency boundaries, largely forestall the development of credit and trade relationships between farms and their suppliers and purchasers. Such information problems render the building of personal relations more important for credit transactions, as was evident in several interviews.

One private farmer, when starting his farm in 1993, went to a particular bank because of his personal acquaintance with the bank management. He obtained a four million Crown loan, two million of which was spent on machinery and two million on operational input like seed and fertilizer. The State Credit Fund guaranteed the machinery loan for 80% and the operational loan for 50%. The rest of the loan was guaranteed partly by the use of his house as collateral, and partly by the cereal trader whom he sells his produce to, which backed up the rest. This firm did that because the farmer is one of the larger deliverers of a total of 20 cooperatives and 100 private farms (all smaller than his), and both partners prefer long-term trade relations. The farmer is now coming out of the start-up phase, and only needs two million crowns credit annually. He expects to be self-sufficient with regard to credit needs in a few years. Another private farmer working a small farm in mountainous areas was trapped into credit policy changes. He related that in 1990 he financed 80% of the start-up costs of his farm in the form of a government-backed bank loan (of 60,000 KCs) with a fifteen year maturity and an interest of only 2%. It would be written off when half of the principal was repaid. After a change in policy, he now has to repay the full sum. This causes considerable financial trouble.

Without state guarantees (and sometimes even with them), banks are generally unwilling to lend. These credit constraints, impeding farm economising processes, have various causes. One corporate farm management team reported that they believe to have good prospects for efficiency improvements, but were unable to acquire a loan for investments. Thus they now operate more labour-intensively than necessary. Banks will not lend them money because they expect the agricultural trade policies, putting domestic producers at a disadvantage, will continue. This would, in their perception, make profits impossible even with the best business plan. Another problem they encountered is that banks have insufficient specialist knowledge for assessing business plans. Through cautious lending behaviour, banks minimize risk, although at the cost of efficiency in credit allocation. The perception of high risk imposed short time horizons on most banks. In reaction, they stopped providing loans with a maturity of more than one year, thus effectively blocking investments.

A typical problem is the use of collateral. Since there is virtually no market for the assets usually so employed in agriculture, i.e. buildings and land, their value is unclear and efficient collateralizing impossible. As a bank manager said, collateral is often assessed by banks on just ten per cent of its 'official' (i.e. as assessed by tax authorities) value. One farm management team, for instance, could only obtain KCs 15 mln credit on their KCs 130 mln property. A bank manager explained the collateral problems in greater detail. They are forced to accept only land and buildings as collateral, despite the fact that these are non-tradables and hence the resale value is very low. This is so because the land property office is only authorized to change ownership titles in case of sale from the present owner to the new owner. As the bank is formally not the owner of the collateral, the bank cannot sell when the lending farm goes bankrupt, and hence collateral risks are too high.

Since farm profitability will not be able to reach the levels of industrial or services-related sectors in the foreseeable future, no commercial bank will lend substantially in agriculture under competitive financial market conditions. The only way of directing savings towards agricultural investments is a non-profit, farmer-owned credit union of some sort. At the time of interviewing, there were plans to found such a union but there has not been any concrete result as yet.

7. Discussion

This study shows both how relevant the institutional set-up of transition policies is to its outcomes, and how economic actors respond to the specific challenges that follow. The fate of property transformation policies is an illustration of path-dependency in reform: small institutional details have had serious consequences. This is most visible in the under-specification of the features of property to be restituted, which resulted in claimants getting property that formally met specifications, but was considerably less valuable than was intended in restitution plans — an ironic reminder of the former system's economic problems. The inadequacy of bureaucratic product specification when the supplier has no interest in product quality could have been learnt after decades of central planning. This caused serious delay and misuse of the restitution process, and brought about costly and mostly ineffective lawsuits. The expectation of large-scale re-allocation of land and resources to private farming during 1992–1999 after which complete resource mobility could be realized is another example of policies based on flawed institutional premises. The inefficiency of the restitution process and the discretion that the existing institutional structure provides to actors not interested in its progress brought about stagnancy in restructuring and necessitates costly policy changes in the near future.

Important institutions needed to make a market function smoothly are currently still lacking. These notably include bankruptcy and contract enforcement legislation, and the bureaucratic apparatus needed to enforce those rules. These defects created payment arrears and bankruptcy arrears (which are in fact payment arrears in the debt business that banking is), and hence impeded market development in farm products and in credit. The result of payment arrears is a loss of profitability and a primitivization of trading towards a basis of personal relations rather than efficiency. One result of 'bankruptcy arrears' is (sometimes over-cautious) banks' failing to honour profitable loans where prospective borrowers cannot show their profitability or give guarantees regarding repayment beforehand. In both markets, missing institutions hinder actors in managing risk. They need more information on profit and risk before trading, because the law does not offer a safeguard against unexpected hazard. When that information is not available or too costly to obtain, transactions that would otherwise have been profitable are not made. Thus, the deficient institutional environment also impedes investment opportunities via the banking system.

8. Conclusion

Despite the considerable progress that has been made in the transformation of agriculture in Central Europe, the widely held assumption that agricultural markets in the region are now fundamentally similar to Western European markets is doubtful. Several features of the operation of the farms-and-agribusiness system appear to be clearly different from common notions about market operations. In many cases, these characteristics generate particular problems that cannot be assumed away if agricultural and rural policies are to make sense. The aim of this paper is to identify a number of these problems through the description of cases observed in structured-interviews fieldwork in the Czech Republic in late 1997.

In particular, distinguishing features of Czech agribusiness include the following. Rationalization of ownership relations and production, as envisaged in the reform packages, is impeded by the complexity of transformational institutional arrangements and by unanticipated opportunities for wealth redistribution, both in the restitution process and on newly developing markets. Product selection in primary production is to a considerable extent controlled by bargaining power and the threat of payment arrears rather than by consumer market demand and technical supply opportunities. Land markets do not work well due to information problems. Transactions here are governed by personal relations and information that is coincidentally available rather than by some process of increasingly efficient distribution of resources. A genuine rural or agricultural credit market of any size has not yet developed. Credit is almost completely controlled by state action, but this assistance is insufficient given the large needs for funding restructuring processes. Credit policy changes also introduce extra uncertainty in the financial situation of farms. On the demand side commercial lending is hindered by the low profitability, lack of credible collateral, and the unclear financial position (due to payment arrears) of farms. On the supply side, prohibiting factors include bank managers' inability to assess sector-specific risks and the crowding-out effect of state subsidies. In all transactions between primary production units and the processing industry, payment arrears based on unevenly distributed market power severely damage the viability of farms and their potential for restructuring.

During the research, no effective solutions to the problems described above could be observed. Initiatives from the primary production sectors, however, included plans to found credit and seller cooperatives as a means to address missing-markets and countervailing power problems, respectively. Although any precise forecast of the developing market structure would likely be as mistaken as the atomistic spot markets envisaged in early reform plans, we can expect to see such and other institutions emerge as a response to the specific Central European mix of the inherited economic structure, agrarian policies and market forces.

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