

iamo

Leibniz Institute of Agricultural Development
in Transition Economies



Leibniz Institute of Agricultural Development
in Transition Economies (IAMO)
www.iamo.de



I should like to offer my warmest congratulations to IAMO on its 20th anniversary and I hope that the staff at the Institute continue in their successful work. The Leibniz Institute has become one of the leading research institutions for agricultural economics, and the research landscape of Saxony-Anhalt is unthinkable without it. I welcome the collaboration with partner institutions in our *Land* and beyond. Research thrives on such exchange.

Dr Reiner Haseloff

Minister President of Saxony-Anhalt



I congratulate this important research institute and knowledge provider on having reached 20 years. IAMO has evolved from being an observer and analyst of the processes of change in the agriculture and food economy of Central and Eastern Europe to a first-rate adviser on questions of international agricultural economics research, especially with regard to food security. Transition means movement. I hope for IAMO that it doesn't just keep up, but can continue to set the pace and act as a ground-breaking adviser for reforms that will benefit both people and the market.

Christian Schmidt MdB

Federal Minister of Food and Agriculture

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Foreword

After being founded in November 1994, IAMO swiftly got down to work. Everything needed to happen immediately and at the same time. A functioning administration had to be set up, thirty members of staff appointed for the three academic departments, joint courses developed for students from our partner countries and Martin Luther University Halle-Wittenberg, and long-term, sustainable networks established in the transition countries. The need for scientifically based policy advice was enormous, radical reforms had either already been implemented or were waiting to be carried out, the transition crisis had just reached its peak in many countries and the Eastern Enlargement of the EU was beginning to loom on the horizon.

As a new institution, IAMO had to assert itself from the very start in the stiffly competitive arena of global research. With its long-term strategy for publications as well as in acquiring third-party funding, the Institute managed to establish itself as an internationally renowned institution of agricultural and transition research. Since 2005, the number of articles listed on a citation index with an impact factor has increased more than five-fold. Over the past eight years the amount of third-party funding has, on average, doubled. All of this has made it possible to more than treble the number of academic staff

at IAMO since its foundation. This benefits in particular the supporting of young academics, which is another of IAMO's core tasks. By setting up the IAMO Graduate School, the Institute has succeeded in establishing a programme of doctoral training of international stature.

A consistent focus on quality in academic work bears fruit, as is described in more detail in the IAMO Portrait at the end of this publication. Academic staff at IAMO work together globally with the leading practitioners of their disciplines, the best manifestation of which is the annual IAMO Forum. Problems of agricultural development in transition countries come under intensive discussion with representatives from politics and business, and solution strategies are worked out. As a research centre, IAMO enjoys an ever greater popularity. Agricultural economics policy advice in Germany, the EU and many transition countries is no longer thinkable without IAMO. The Institute regularly offers its own contributions to public debate.

In fact IAMO stands for more than just excellent research, it also stands for a Europe which is coming ever closer together in an increasingly interlinked world. The Institute's building is on an expanded former barracks complex in the west of Halle, whose use documents the

ever-changing history of Europe and the great opportunities of this continent. From 1935 to 1945 the large army and air force communications school was housed here in 160 buildings. Until 1991 the 27th Guards division of the Red Army was stationed in this gigantic complex. Afterwards it was converted to civilian use with generous financing from the European Union conversion fund. The barracks buildings are now home to university and non-university research institutions. The father of an IAMO staff member from Ukraine was stationed in these barracks as a high-ranking officer, while guests from the former Soviet Union performed their military service here.

IAMO is a particularly potent symbol that times in Europe have changed for the better, despite all setbacks. Currently researchers from seventeen countries from three continents are working at the Institute. Overall, visiting academics, fellows and staff from thirty countries have worked at IAMO since its foundation. This international, cosmopolitan focus is what most shapes the character of IAMO.

At the beginning of 2014, IAMO's change of name to the Leibniz Institute of Agricultural Development in Transition Economies took into account the Institute's expanded research horizon. Its focus has long stopped being purely on Central and Eastern Europe. China, for example, has increasingly become the target of IAMO's attention. Eurasian regions in general, such as Central Asia and the Caucasus, are featuring more highly in IAMO's work and they complement the intensive research into

Russia and Ukraine. The development of economically, environmentally and socially sustainable agriculture in this vast area will have an important say in the whether global food security can be achieved in the coming decades, whether suitable strategies to deal with the consequences of climate change can be devised, and whether it will be possible to continually improve living standards in rural areas. These are crucial requirements for political stability in this highly sensitive region.

Since its foundation IAMO has been closely associated with Martin Luther University Halle-Wittenberg (MLU). Joint study courses with an international focus have made an important contribution to capacity building in the partner countries. There have also been jointly run, annual summer schools in Central and Eastern Europe, Central Asia and the Caucasus. Collaboration with MLU has been strengthened further by the opening of the ScienceCampus Plant-Based Bioeconomy in June 2012. Here the Leibniz Institutes of Halle research in close cooperation with the corresponding university departments, promoting knowledge and technology transfer in the Halle (Saale) region.

IAMO's successes in its three core tasks of research, acting as a forum of exchange between science, business and politics, and supporting young academics would not have been, and would not be, conceivable without a smoothly functioning and flexible administrative department. Since its foundation IAMO has been in intense global competition with other research institutions. It is therefore vital to consistently find rapid solutions to

unforeseeable problems and at the same time adhere to the principles of an orderly administration. Maintaining this often tricky but necessary balance was, and is, only possible because of the extraordinary efforts of the administrative staff. Here, therefore, we express our thanks to them for twenty years of outstanding work.

IAMO's work would be inconceivable without the crucial input we get from the Ministry of Sciences and Economic Affairs of Saxony-Anhalt and the Federal Ministry of Food and Agriculture (BMEL). The same comes from the members of the board of trustees and the scientific advisory board. All strategic decisions which have helped IAMO establish itself as a globally renowned academic institution of transition research have been supported and assisted by these two bodies, and for this they deserve our heartfelt thanks.

The first of three feature articles in this IAMO Annual analyses the implementation of EU agricultural policy in the new Member States ten years after the Eastern Enlargement. In the run-up to expansion there was great anxiety on both sides. This was hardly surprising given the very high degree of heterogeneity in agricultural structures in an enlarged Union. The key question was whether it is actually possible to design the Common Agricultural Policy (CAP) in a way which is fair to all members of the enlarged Union. The other two feature articles deal with the large of Russia, Kazakhstan and Ukraine, which have risen to become new global players on the world agricultural market, and whose agricultural potential is

to a large extent lying unused for a number of different reasons. The second feature article investigates whether the oft-imposed restrictions on agricultural exports actually stabilise bread prices in these three countries, as the governments claim, or whether the opposite is in fact the case. The steppe land in the border area between Russia and Kazakhstan was first commissioned for arable farming under Nikita Khrushchev in the 1950s. The environmental, economic and political consequences of this are still felt today, as the third feature article demonstrates. Only now does it appear possible to exploit the enormous agricultural potential in this region in an economically profitable and environmentally sustainable way.

A fourth article considers the role of the extensive area of abandoned farmland in Russia for climate change. Recultivating this land without doubt runs the risk of intensifying climate change. Whether and how, under the conditions of the transition countries, agricultural cooperatives can make a contribution to agricultural development, is investigated in the fifth article, which offers a comparative analysis. The sixth looks at a very different subject. In the course of globalisation, a broad middle class with money to spend has also emerged in Russia, whose demand patterns follow the latest trends. IAMO has examined whether German and Russian consumers are ready to pay a higher price for wheat bread with health-boosting additives. The seventh article deals in detail with social transfers and the accuracy of their impact in rural China. One of the declared aims of the Chinese government is to combat widespread poverty.

The next article offers an insight into more theoretical aspects of transition research, discussing whether civil society organisations can make a substantial contribution to the development of agriculture and rural areas.

The final article summarises the most important findings of the IAMO Forum 2014: "The rise of 'emerging economies': Towards functioning agricultural markets and trade relations".



IAMO's Directorate (from l. to r.): Prof. Dr Thomas Glauben, Dipl. Ökon. Hannelore Zerjeski, Prof. Dr Thomas Herzfeld, Prof. Dr Alfons Balmann

Ten years after the Eastern enlargement: The implementation of EU agricultural policy in the New Member States – An assessment

THOMAS HERZFELD, JUDITH MÖLLERS

Introduction

Ten years after the biggest enlargement of the European Union, this paper looks back at the implementation of the EU's Common Agricultural Policy (CAP) in the New Member States (NMS). We will discuss the most important findings, successes and failures, and draw up conclusions for future enlargements. Of particular interest to us is how the CAP's complex set of rules has been adopted and implemented in rural areas, places which are afflicted by many economic problems. At the same time, rural areas have been and continue to be the target of a number of different measures of common EU policy. At the heart of this paper are the most significant policy findings and those problems which have not yet been solved despite all efforts in the past. We will focus in particular on the conflict of aims between the effectiveness and accuracy of CAP measures, and the transfer of what has developed into a large catalogue of instruments to former planned economies.

At the start of the 1990s, the administrative structure in all transition countries of Central and Eastern Europe was relatively centralised, the former monopolised interest groups continued to wield a strong influence and the state played a big role in economic processes. Often

the public goods were lacking to support market-based competition. Eastern enlargement presented the NMS with the huge challenge of taking on board the complex and supra-nationally prescribed policy package of the CAP within the adoption of the rules of the so-called *Acquis Communautaire*. But when drafting policy the EU, too, was now forced to take into account the huge rise in heterogeneity and the increasingly divergent interests between Member States (MS) (TANGERMANN and VON CRAMON-TAUBADEL, 2013). For example, Eastern enlargement has meant that farm structures within the EU have become far more heterogeneous. Both ends of the scale – the smallest and subsistence farms, and also large agricultural enterprises – have clearly grown in importance.

Basically, the CAP has a strong tendency to preserve the status quo. In the past reforms have always been the result of considerable external pressure (TANGERMANN and VON CRAMON-TAUBADEL, 2013). The enlargements of the EU have also given rise to pressure for reform. Prior to the large Eastern enlargement, the major concerns were whether the direct payments of the CAP would remain financially viable in an expanded community, and whether the specific problems pertaining to rural areas in the NMS could be solved by the CAP. Consequently, the reforms aimed to restrict the growth in disbursements



Vegetable fields in Hungary



while providing more money for rural development policy. Moreover, in the EU's rural development programmes we can see tentative steps to expand the policy focus to all economic activities in rural areas and the problems of all people who live there. This territorial approach is still in its infancy, which means that the CAP continues to be heavily oriented towards the agricultural sector, and that financial transfers go predominantly to farmers or landowners.

The introduction of EU agricultural policy in the NMS: Implementation and theory

The supra-national European agricultural policy that the accession countries had to adopt was conceived at the end of the 1950s to ensure the alignment of national agricultural policies and increase food production in the founder states. Until well into the 1990s the CAP was first and foremost protectionist, and designed for agricultural market instruments. Problems, such as the heavily growing budget and increasing overproduction, were only addressed half-heartedly, for example by introducing quotas. The first substantial changes in agricultural policy only came with the MacSharry reform of 1992, in response to pressure of negotiations within the Uruguay round of GATT talks. Amongst other measures, this reform introduced direct payments linked to production. In the years which followed these reforms were taken further (AGENDA 2000; LUXEMBOURG AGREEMENT, 2003) – in part, clearly, in view of the accession negotiations which had been taking place since 1998.

Today the CAP is based on two pillars. The first of these includes border measures and agricultural market policy, including direct payments. Since 2000 the so-called second pillar of the CAP has comprised measures for rural development. As part of the adoption of the *Acquis Communautaire*, all sections of the EU policy, especially the comprehensive agriculture chapter, must be accepted by NMS and integrated into their national legislation prior to accession. The NMS also had to develop the extensive administrative infrastructure required by the CAP.

The substantial Eastern enlargement of 2004 harboured considerable potential for conflict. The desire to enjoy equal treatment was in conflict with financial feasibility. Ultimately the NMS prevailed, succeeding in securing an agreement that the introduction of (reformed) direct payments would take place in stages until 2013. There is a certain leeway for shaping the CAP, in both the accession negotiations and the negotiations over individual finance planning (programming periods) for several years. For example, funds can be switched between the first and second pillars, as well as within the second pillar. For the NMS, however, a conflict existed here from the very beginning. Although policy measures that were simple to implement were preferable to more complex ones, as in itself the introduction of the CAP represented a barely manageable task for administrations in NMS, the substantial structural problems in rural areas of the NMS are more easily resolved by the more flexible, but administratively more demanding measures of the second pillar. Moreover, the measures of the second pillar require

in the EU context greater involvement of local administrations and in some instances national co-financing as well. The often high intensity of regulation and monitoring of these measures also impedes successful implantation and enforceability. And last, but not least, incentives for fraud and corruption emerge too (BRÜMMER and KOESTER, 2003).

Below we will take a more detailed look at selected elements of the CAP and their implementation in the NMS. With the drop in intervention prices since the MacSharry reform, agricultural market policy instruments on the internal EU market have become relatively less important, and have only been relevant to the NMS in exceptional cases (e.g. the cereals intervention in 2004-06 or the milk quota). We will thus focus on uniform border measures, direct payments and rural development policy, devoting a further section to the demands required of public administrations for a successful implementation of the measures. Finally we will discuss possible conclusions for future enlargements.

Uniform border measures

As far as the implementation of the CAP is concerned, uniform border measures represent a comparatively unproblematic area, as there is no scope for national policy here, while the intensity of regulation and monitoring is relatively low (BRÜMMER and KOESTER, 2003). The expected result is that price levels between MS will converge. For the NMS this can be clearly seen by reference to the measure

of protection known as nominal rate of assistance (NRA), which is defined as the total price difference between domestic and global market price, domestic product subsidies or duties and price differences for production factors. Figure 1 shows a very clear convergence of protection levels from 2004 or 2007. For some countries such as Slovenia and Romania, this has meant a drop in NRA relative to the decade prior to accession. By contrast, Bulgaria in particular experienced an increase in NRA compared to the 1990s. The graph highlights the substantial reduction in the variance of NRA between the ten countries under consideration.

The consequence of this fall in NRA as a result of the removal of trade barriers is that consumers in NMS have, on average, been winners of Eastern enlargement. Particularly urban households with low incomes, which in many NMS around the turn of the millennium had to spend a significantly higher proportion of their available income on food than Western European households, have benefited from lower food prices. On the other hand, as taxpayers the inhabitants of NMS are increasingly contributing to the financing of the CAP. As we will see in greater detail in the following section, in a transitional phase direct payments to farmers in the NMS have risen continually. The overall positive economic growth of the NMS between 2004 and 2013 resulted in increased contributions to the EU budget. Thus the eight accession countries in the first round increased their share of the EU budget from 3.6 % in 2004 to 6.7 % in 2013.

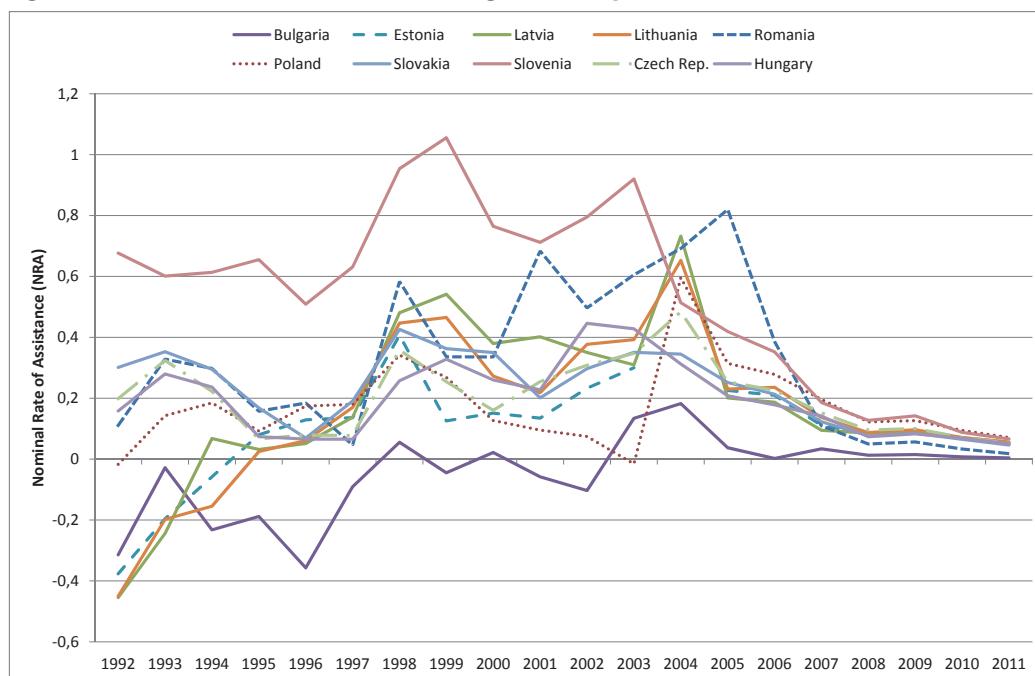
Direct payments

Since their introduction the importance of direct payments has been continually rising; they currently account for the largest proportion of the CAP budget. Whereas the original justification for introducing direct payments was the necessary compensation for losses in income caused by the fall in intervention prices, now additional arguments are offered, such as the provision of public goods. Even in the old MS, however, it quickly became clear that this sort of sectoral income transfer

impedes structural change, as inefficient farmers remain in production, too, and income inequalities within the sector tend to become exacerbated. Since the linking of the payments to the cross compliance requirements, more-over, the level of bureaucracy needed for implan-tation has also risen sharply.

In the NMS direct payments were introduced in a simplified form as the so-called Single Area Payment Scheme (SAPS). Only Slovenia has from the outset applied the more labour-intensive system of direct payments from the old MS. The implementation of direct payments took

Figure 1: Nominal rate of assistance for agricultural products in the NMS



Source: Own depiction based on ANDERSON et al. (2008) and ANDERSON and NELGEN (2013).

place in stages, starting at accession with 25 % of the final sum, and reaching this final sum in 2013, or in 2016 for Bulgaria and Romania. Although average payments vary between MS quite considerably, depending on the total budget allocated to each country, within the NMS the application of the SAPS has led to uniform payments for all eligible land. Whereas the Baltic states on average receive the lowest payments per hectare (between 100 and 150 euro/ha), Slovenia, Hungary and the Czech Republic are the Central and Eastern European NMS with the highest payments (between 260 and 380 euros/ha).

On average in these countries, the direct payments represent one of the most important sources of income. They are thus (partly) a means of income support. And yet direct payments are not a suitable instrument for reducing poverty in the rural areas of the NMS. A special report by the EUROPEAN COURT OF AUDITORS (2012) criticises the fact that the payments are heavily concentrated on a few large agricultural enterprises, whereas the majority of farm owners receive only a very low level of assistance. The aforementioned dual farm structure in the NMS means that in the most extreme case – Bulgaria – more than half of SAPS payments have gone to only 2 % of farms. By contrast, the needs of the large number of small farms barely receive any consideration; the varying national minimum thresholds mean that many of these farms receive no direct payments at all. Another feature of the NMS is that, in comparison to the Western European MS, they have a high proportion of agricultural land in state ownership. For this reason, the state is the largest beneficiary of direct payments in Hungary, for example. In Poland,

too, direct payments are made to local officials in the land administration. In Romania and Bulgaria, communes are amongst the recipients of direct payments. Moreover, by a capitalisation of the subsidies in rental and land prices, the effectiveness of the instrument as a targeted means of income support is reduced, and the growth of efficient farms impeded.

Although SAPS is a simplified system and the demands on the MS in implementing it are relatively lower, evidence exists that there are still significant problems with implementation. The EUROPEAN COURT OF AUDITORS (2012), for example, points out that in many NMS the overall extent of farmland qualifying for payments has not yet been sufficiently identified. Reasons for this are the inadequate definition of criteria to identify eligible land in good agricultural condition and insufficiently developed or not regularly updated systems to identify farmland, or even a lack of such systems altogether. In addition, the preparations to transfer the simplified system to an EU-wide uniform calculation procedure were inadequate. It has thus been necessary to extend the SAPS into the new programming period 2014-20.

The example of Romania illustrates how the introduction of SAPS payments has been associated with serious problems. Here the agricultural administration faced considerable difficulties at the start. With regard to SAPS, establishing farm sizes, ownership, land use and identifying land parcels eligible for subsidy has undoubtedly presented a huge challenge. Amongst other things there

was a lack of a functioning and digitalised land registry. This meant that conflicts had to be resolved in protracted arbitration processes, in which the farmers concerned had to attend joint sessions to come to agreement on existing land overlaps (WORLD BANK, 2010).

Rural development policy

Measures of the CAP's second pillar, which are oriented towards rural development, have increased their share of overall agricultural subsidy since the 1980s from around 5 % to more than 20 % today. In contrast to the completely supranational measures of the first pillar, rural development policy measures are the joint responsibility of the MS and the Union, which means that individual MS are responsible for the concrete shaping of the programmes and also have to make a financial contribution via a co-financing mechanism.

When implementing rural development policy the MS had the possibility of selecting relevant policies from a catalogue of 42 measures, grouped into three objective axes. The three axes of the 2007-13 financial framework were: increasing competition, improving the environment and landscape, and improving the quality of life and the diversity of the economy in rural areas. A fourth axis, spanning the three above, is the LEADER programme, which promotes local action groups. Rural development policy, as part of EU structural policy, also aims at aligning the standard of living between the MS and regions. For this reason, proportionally more money flows into the

poorer MS, and thus into the NMS too (TANGERMANN and VON CRAMON-TAUBADEL, 2013). In the 2007-13 financial framework the EU set aside a total of 96.2 billion euros for rural development policy. In the period 2007-13 Poland, with 13.4 billion euros, was the biggest recipient amongst the NMS. Romania, Hungary and the Czech Republic followed with 8.1, 3.9 and 2.9 billion euros respectively. During the most recent agricultural reform the thematic axes of the second pillar were converted into six priorities, for at least four of which each MS must establish a development programme.

The system of rural development policy offers the chance to bring goals determined at EU level in harmony with national and regional needs, thus building a bridge to specific interests at local level. Theoretically, greater leeway in the choice of policy instruments and in the shaping of measures increase the accuracy of these measures. But the wider range of courses of action also harbours risks, some of which lie in the complexity of the system, which the still inexperienced NMS cannot always cope with.

The accuracy and effectiveness of measures depends greatly on how the MS make use of the opportunities offered to them, and how the measures are implemented by the national administrations and potential recipients of financial assistance. Here, the NMS face in principle the same task as all the other MS, although in the early phase some risks are more pronounced.

In the preparation stage for rural development programmes, MS need to identify problems and consistently

formulate goals, which then must be harmonised with the catalogue of measures. Care must also be taken to look out for synergies or potential development policy and other policy areas. In itself, this task of national policymakers in politics and administration is the first serious stumbling block on the way to successful policy implementation. Some MS obviously have problems in formulating their goals clearly and devising their own consistently objective-focused programmes which are compatible with the EU measures, or in creating synergies with other policy areas (EUROPEAN COURT OF AUDITORS, 2013; EUROPEAN COMMISSION, 2011). This problem is not exclusive to the NMS, but in these countries it occurs with particular frequency. A graphic example here is Romania. In Romania the lack of a political vision for the agricultural sector was a major factor seriously impeding both the formulation of a strategy and the setting of priorities. What emerged was a certain passivity and reactivity towards EU targets and a choice of measures that was insufficiently selective (WORLD BANK, 2010).

Selectivity is a key criterion for attaining a sufficient level of quality in implementation. In Romania, for example, 27 measures were on offer. Without adequate selectivity the country offered a very broad spectrum of measures eligible for subsidy, which consequently gave rise to huge administrative costs and substantial problems when it came to implementation. Other NMS such as Hungary (10), Czech Republic (13) or Slovenia (10) selected considerably fewer measures. In Slovakia 65 % of the subsidy was concentrated on only four measures, allowing a

significant reduction in administrative costs (WORLD BANK, 2010).

It is far more difficult to achieve an optimal allocation of funds if goals are not clearly defined or, as we have observed in some cases, the allocation of resources is subject to heavy political influence, or influenced by certain lobby groups (EUROPEAN COMMISSION, 2011). We have also observed, moreover, a certain path dependency in practical implementation, by which certain measures are only selected because of (positive) experiences in the past. The optimal allocation of funds can even be impaired during the decision-making over implementation. For a number of measures in the third axis, the EUROPEAN COURT OF AUDITORS (2013) found that money was not systematically assigned to those projects that best served the stipulated goals. In the Czech Republic, for example, this happened as a result of a lack of minimum standards, i.e. an inadequate definition of the selection criteria (EUROPEAN COURT OF AUDITORS, 2013).

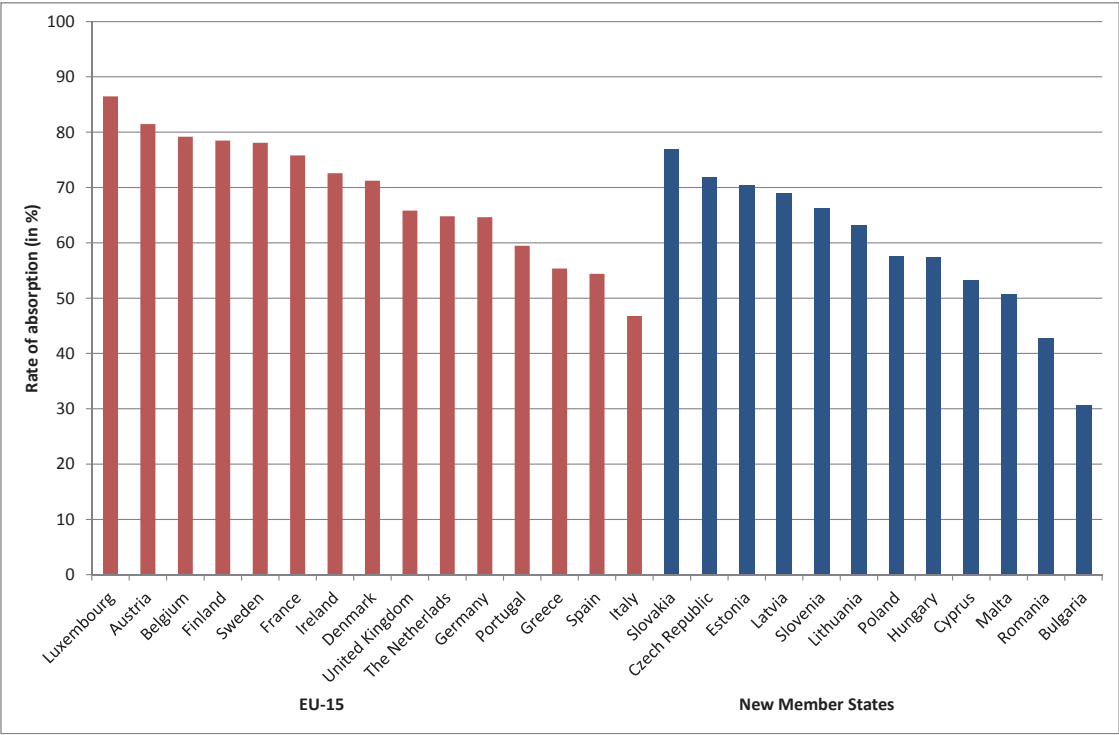
Problems in implementation can also be seen in expenditure rates, which are very variable amongst the EU-15 countries, too. In the NMS up till 2012, Romania and Bulgaria used less than two-thirds of the funding they were allocated (Figure 2). There are a variety of reasons for this. Some potential recipients of funds have insufficient information about the opportunities or there is inadequate support for people looking to make successful applications. The WORLD BANK (2010) found with relation to Romania that an effective advisory system increased the quality of applications, reduced the error rate and in many

respects accelerated the overall application process for EU-supported measures. In the NMS the administration and potential beneficiaries also lack experience in innovative measures in particular. For this reason, the idea of participative development of projects, bringing in many local actors outside of the local administration, is not always put into practice (FURMANKIEWICZ and JANC, 2011). Moreover, in some MS the necessary co-financing represents a barrier to implementing measures for rural development (EUROPEAN COMMISSION, 2011).

Administrative aspects of implementation

The expertise of national and local administrations is a decisive factor for the efficiency and effectiveness of the practical implementation of the CAP. Especially in the NMS, where a large section of the administrative apparatus responsible for agricultural policy and rural development was set up recently, the administrative burden for the proper administration of CAP funds is

Figure 2: Expenditure rates of EAFRD funds 2007-12



Source: Own depiction based on European Commission (various years).

very high (EUROPEAN COMMISSION, 2010). There is often a lack of financial experts, and employees with foreign language skills and international connections. To some extent, traditional agricultural policy objectives are still prevalent in administrations, such as an emphasis on autarky to increase national self-sufficiency. Deficiencies in the organisation of administrations can also be seen – to take Romania as an example – in the widespread manual processing of applications. In the most extreme cases, a single farmer's application can require up to 40 signatures (WORLD BANK, 2010). At a local level, there is often a lack of third sector organisations that can function as a catalyst for the absorption of funds or whose participation in the drawing up of applications is expected by the Commission.

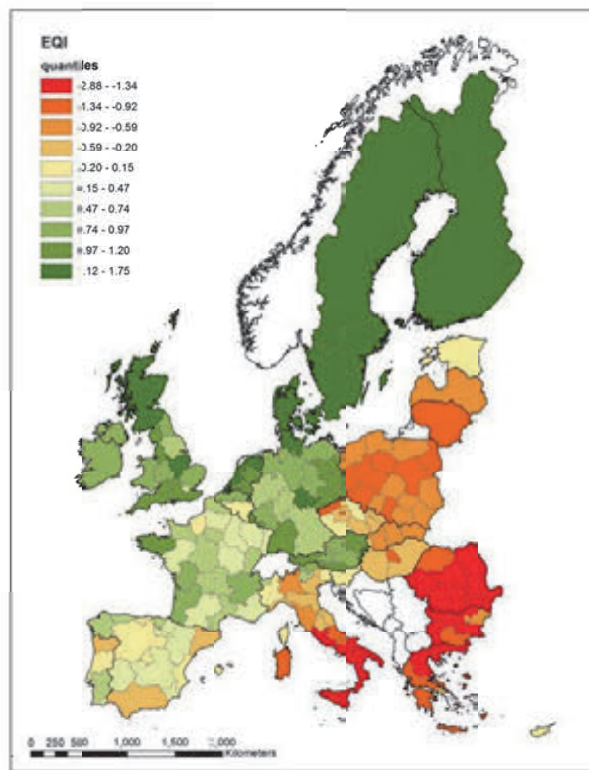
In relation to the disbursement of second pillar funds, the EUROPEAN COURT OF AUDITORS (2013) criticises the large number of errors that creep in when money is paid out. In particular, it highlights that recipients have failed to observe certain environmental regulations or that rules of public procurement law have been broken. Further criticism must also be levelled at how eligible beneficiaries are determined and the criteria for the selection of projects. As mentioned above, in practice these are often disregarded (EUROPEAN COURT OF AUDITORS, 2013). The monitoring systems in the NMS, too, frequently fail to bear close examination. In the case of Romania, the European Court of Auditors even came to the conclusion that the administrative and monitoring processes, on the ground controls, the selection, implementation,

quality control and reporting of findings, as well as the implementation and monitoring of compliance of other commitments are ineffective. A comparison of application processing (in axis three of the second pillar) between Great Britain and Poland shows just how much an effective administration can reduce the burden on the applicant. In Great Britain, processing applications took on average nine weeks, and important criteria such as regional prioritisation and economic criteria were taken into consideration. In Poland, the review process generally took longer than six months, and neither an adequate review of the quality of individual projects, nor a comparison between projects was undertaken (EUROPEAN COURT OF AUDITORS, 2013). In Romania, the fact that various authorities are involved in processing applications is a major impediment to smooth implementation (WORLD BANK, 2010).

Besides formal guidelines, informal institutional factors also play a role in the implementation of the CAP. Disparities may be a result of different national bureaucratic cultures, for example with relation to the strict enforcement of standards, the rapid and efficient processing of applications, or tolerance of corruption (TANGERMANN and VON CRAMON-TAUBADEL, 2013). Amongst the NMS, Bulgaria especially, but also Romania and Poland, display a relatively high incidence of irregularities and a greater frequency of reports of fraud. These can be partly explained, however, by a greater intensity of monitoring in weak systems overall (EUROPEAN COMMISSION, 2014). In Romania the recently established and accredited payment offices

are, on the whole, better organised than older sections of the administration, in which the traditional bureaucratic culture is still prevalent (WORLD BANK, 2010). The limited experience of CAP, but also frequent changes in personnel in administrations following policy changes, are reasons why an 'institutional memory' and thus smooth procedures based on routine do not exist in many NMS.

Figure 3: The European Quality of Government Index (EQI)



Source: CHARRON et al., 2014.

We must also emphasise that the NMS do not constitute a homogenous group as far as institutional quality is concerned. According to the European Quality of Government Indicator (EQI), drawn up by the Quality of Government Institute at Gothenburg University, Estonia is on a par with southern Belgium (Wallonia). By contrast, regions in eastern and southern Romania, as well as parts of Bulgaria, are comparable to Sicily and south-western Italy (Campania and Calabria). This index is created on the basis of citizens' evaluations of free access to courts, health and education institutions, the influence of corruption on elections, and the level of scrutiny of local media (CHARRON et al., 2014).

Conclusions

The experiences of NMS with the CAP outlined above first pose the question of how sensible it was to extend the CAP system to the NMS. As it already had in the old EU, the strong orientation towards the agricultural sector and the focus on a few targeted income transfers look outdated. The specific structural features of the NMS too, e.g. the dual farm structure prevalent in many countries, exacerbate conflicts of goals inherent in the CAP's catalogue of measures. Thus the benefit to millions of the smallest farms in the NMS is as good as nothing, whereas it is disproportionate for a few large agricultural enterprises. In general, therefore, the instruments of the CAP should be revised and made more specific to provide a clearer definition of objectives and more adequate criteria for the achievement of these

objectives. In this respect, the 2013 CAP reforms represent more of a continuity than a clear policy change. Although the MS are benefiting from some simplifications and have slightly more leeway in their choice of the various policy instruments and use of funds, more concrete, measurable objective goals are still lacking.

The outline of the development of the past ten years shows that existing differences between the old and new MS are becoming less pronounced. As far as expenditure rates or institutional quality are concerned, we can see that there are great similarities between the southern and south-eastern European countries on the one hand, and the Baltic and Western European states on the other. This means that the division between new and old MS is outdated. Instead the regions affected by particular problems need to be identified, as well as the corresponding measures to combat these.

Four further conclusions are of particular importance to future accession countries. First they should ask how they can best prepare for, and implement the CAP. The principal aim for accession countries during negotiations, besides obtaining as large a subsidy as possible, should be to formulate precisely their minimum and maximum objectives, as well as their medium-term strategies. The ability to formulate goals should thus be seen as a key skill, both in preparing to adopt the CAP, and in the subsequent implementation of measures. The same is true of the formulation of national and regional strategies, which have been identified as the basis of a successful rural development policy (WORLD BANK, 2010; WOLZ et al.,

2012). These objectives, as well as the main aspects of the CAP, should be reflected in national policy as early as possible, to minimise later friction losses.

Second, experiences has shown that the access of farmers and the rural population to information is vital for the successful implementation of rural development policies. Thus the setting up and development of adequate extension services and an administration which can cope with the high demands of the CAP is important. The rural population does not always view the EU in a positive light (MÖLLERS et al., 2009, have illustrated this fact for Croatia and Slovenia). Factual information campaigns are thus advisable. If information is imparted at an early stage, this can help prevent delays in launching programmes. This is best achieved by involving the extension services well in advance of the actual start of a programme. Regarding the more complex follow-up measures, which are often deferred to begin with, care must be taken that farmers are given sufficiently early warning about any forthcoming changes (WORLD BANK, 2010).

Third, weaknesses in administration represent a barrier to the smooth introduction and implementation of the CAP. The high bureaucratic cost is barely affordable for some countries. And yet the benefit of CAP measures for rural areas hinges on the quality of their implementation at national and regional level. Within agricultural administrations, therefore, it is important to make available the structures and expertise at an early a stage as possible. Time and again it is emphasised that the frequent policy-related changes in administrative

personnel hinder the development of an institutional memory within the NMS (WORLD BANK, 2010; WOLZ et al., 2012) and thus a smooth, routine-based implantation of the CAP.

Fourth, there is an array of crucial policy areas not covered by the CAP, but which must be addressed by the countries themselves. These include the development of land markets and extension services. Establishing equal access to public goods such as education, health or justice must also become a much higher priority. Good institutional parameters are important for both agricultural and non-agricultural entrepreneurs, and thus represent a key element for the sustainable development of the agricultural sector and of rural areas in all the countries of the EU.

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Vineyard in Slovenia

Are export controls an effective instrument for stabilising food prices?

The experiences of Russia, Ukraine, Kazakhstan and Serbia

LINDE GÖTZ, IVAN DJURIC, THOMAS GLAUBEN

Introduction

During the phases of high prices on international agricultural markets in 2007-08 and 2010-11 many countries tried to prevent the high global market prices from spreading to domestic markets. The preferred instrument for attempting this was the trade policy of market intervention: countries with surpluses restricted their exports to global markets to increase the supply on domestic markets and thus keep a lid on prices. Importing countries likewise tried to increase the supply on their domestic markets by liberalising the markets and eliminating existing trade restrictions such as import tariffs. These interventions in international agricultural trade were aimed at combating food price rises in order to safeguard low food prices for domestic consumers. During the phase of high prices in 2007-08, 37 exporting countries and 59 importing countries across the globe undertook market interventions (FAO, 2008).

This article offers an overview of investigations at IAMO into the domestic effects of export restrictions for wheat in Russia, Ukraine, Kazakhstan (RUK) and Serbia. In these countries the export of wheat was restricted by means of export duties, export quotas and export bans in periods of

high and rapidly rising prices on global markets. At the heart of this issue is the question of the effectiveness of export controls. What are the observable price effects, what differences are there between countries and how can these be explained? To assess the effectiveness of export controls it was necessary to investigate the price relations along the supply chain, from the producer price for wheat, the price of flour to the final consumer price for bread. For price-dampening effects must be passed on by all actors at intermediate stages along the supply chain if the consumer is to benefit from them. This problem is also the subject of an intensive scientific discussion (cf. DIAO et al., 2013; JOLEJOLE-FOREMAN et al., 2013; LIEFERT et al., 2013; MARTIN and ANDERSON, 2012).

The RUK countries and Serbia are characterised by excellent natural conditions for the cultivation of cereals. Russia, Ukraine and Serbia have large areas of extremely fertile black earth. In the last few years these states have become important cereal-exporting countries. Today, RUK's share of global cereals exports is already 20 % (USDA, 2014). Whereas Russia and Ukraine have their own ports on the Black Sea and thus export predominantly to the large cereal-importing countries of North Africa and the Middle East, Kazakhstan is a landlocked

country without direct access to the global market. Consequently the neighbouring Central and Eastern Asian countries are the main importers of wheat and wheat flour from Kazakhstan. Serbia, by contrast, is a small cereals exporter, but nonetheless a country of great regional importance as a supplier of cereals. Serbia exports predominantly to the neighbouring countries of the western Balkans, such as Bosnia-Herzegovina, Montenegro, Macedonia and Albania.

The OECD/FAO (2012) estimate that the annual global demand for cereals will rise to three billion tonnes by 2050, which means that the global cereal production will have to rise by 30 %. The Eastern cereal-producing nations may play an important role here, as they have large untapped potential to increase further their production of cereals. Production efficiency might be increased by, for example, intensifying the application of fertilisers or using high-performance seeds (BOKUSHEVA and HOCKMANN, 2006). In addition, former agricultural land, large areas of which were taken out of production during the transition process, could be recultivated. To exploit this potential, however, extensive investment is needed, including from private financiers. For example, it is reckoned that in Ukraine the investment needed to exploit the existing cereal potential is 1,000-2,000 US\$ per hectare of farmland (HARMGART, 2011). Export restrictions, however, create very negative incentive effects on investment in the cereal sector. For, in the short term, export controls produce large losses for producers and cereal dealers, who cannot benefit from the high global market prices and at the same time are exposed to an

increased price risk on the domestic market (GÖTZ et al., 2013b). In the long-term, therefore, these market interventions also harm future global food security.

The following section will highlight the effects of export restrictions on the domestic wheat price. In the third section we will consider the different effect on individual regions of the Russian export ban in 2010-11. Section four focuses on the price effects along the supply chain. The final section will consolidate the findings and offer some conclusions.

Export restrictions and price effects on the domestic wheat price

During the agricultural crisis of 2007-08 and the phase of high prices on global agricultural markets in 2010-11, the RUK countries and Serbia restricted wheat exports by using trade policy measures. In 2007-08 Russia introduced a temporary tariff on wheat exports by up to 40 %, while in 2010-11 the export of wheat was banned altogether. Ukraine restricted wheat exports in 2006-07, 2007-08 and 2010-11 by means of export quotas based on the allocation of export licences. In Kazakhstan (2008) and Serbia too (2007-08 and 2010-11), wheat was subject to a temporary export ban.

Figure 1 shows the development of the domestic producer price for wheat in comparison to the wheat price on global markets,¹ and the net wheat exports for the

¹ The Free on Board (FOB) price for French bread wheat at Rouen harbour was chosen to represent the global market price.

RUK countries² and Serbia. What market and price effects can be seen? First of all it is clear that during the period of export restrictions, the countries' wheat exports fell heavily. In addition, during the export ban (2010-11) the gap between the domestic and the global market price increased in Russia during the export ban (2010-11) and in Ukraine as a consequence of the export quota system (2006-07, 2007-08 and 2010-11). This can be put down to the fact that the reduced export levels led to an increase in the wheat supply on the domestic market, thus dampening the national wheat price. By contrast, during the imposition of duties on exports (2007-08) in Russia and the export bans in Kazakhstan (2008) and Serbia (2007-08 and 2011), domestic prices did not fall relative to the global market price, but rather rose to levels above it. Why did export restrictions fail to have a downward impact on prices here? Our investigations have shown that in these cases the restrictions on exports were placed on a market already characterised by a supply deficit and a trend towards price increases. Figure 1 shows that, just prior to the introduction of export duties, Russian wheat exports had risen disproportionately. The same is true of Kazakhstan in 2008 and Serbia in 2007. On these markets, therefore, the export controls were ineffective, as the export supply was already very low or non-existent. In Serbia, moreover, the price-dampening effects of additional policy-based market interventions were

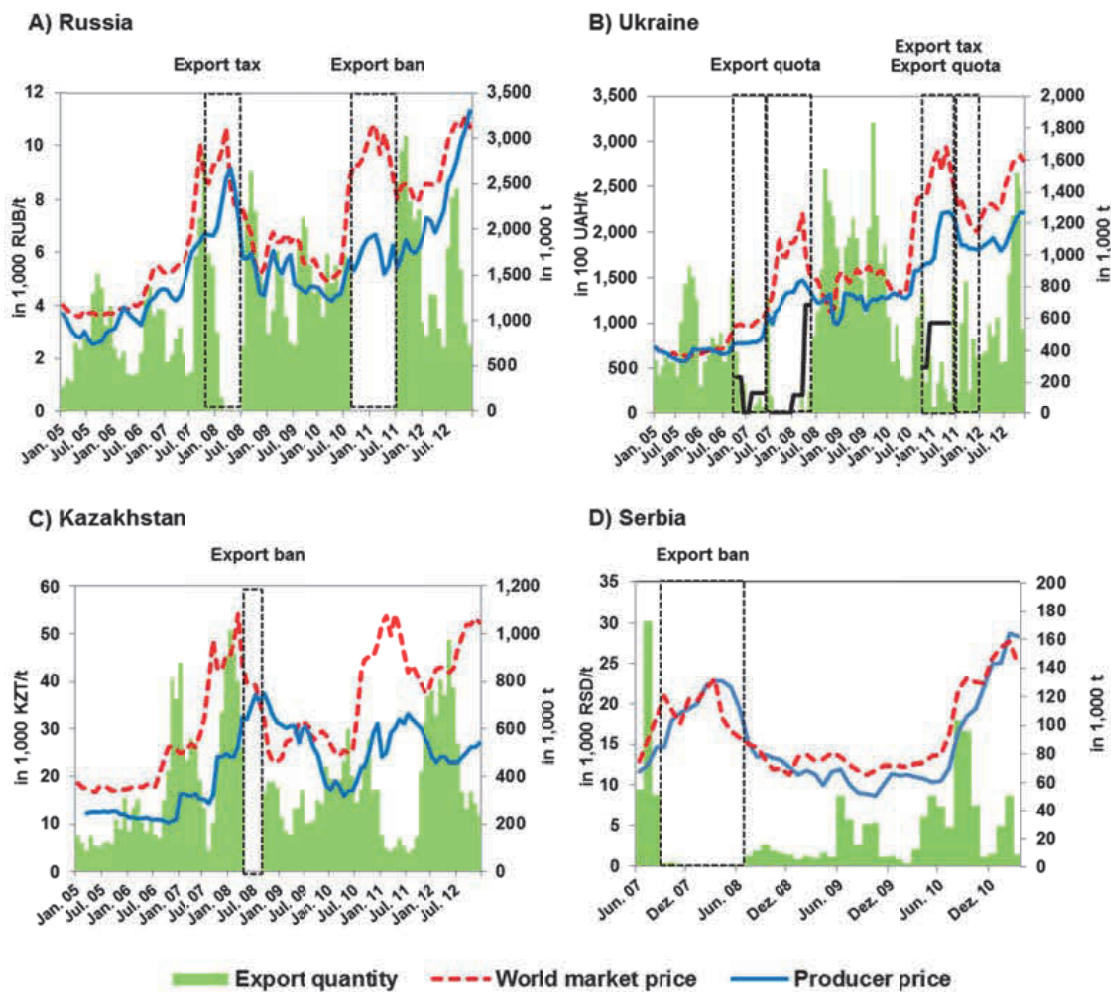
thwarted. For example, when the government twice bought up cereals on the domestic market, the result was that prices were further driven upwards (cf. DJURIC et al., 2014).

To obtain a quantitative estimate of the price effects, non-linear, time-series econometric analyses of the price transmission were carried out and indicators defined for measuring the effectiveness of export restrictions (cf. DJURIC et al., 2014; GÖTZ et al., 2015; GÖTZ et al., 2014; GÖTZ et al., 2013a; GÖTZ et al., 2012). In general we can state that, besides dampening prices, export restrictions decouple domestic price developments from those of global markets. As trade with international markets is reduced or even prohibited, price developments on the global market lose their significance for domestic price movements, whereas national factors, such as relationships between supply and demand, increase in influence.

In the countries studied, however, there was no complete decoupling of domestic prices from world markets, as the export restrictions were temporary and traders could anticipate price developments after the lifting of export controls. The initial findings of our studies indicate a price-dampening effect of 40 % as a result of the export ban in Russia in 2010-11. In Ukraine the export quotas imposed in 2006-07, 2007-08 and 2010-11 produced an average price-dampening effect of 20 %. According to the findings, the effectiveness of export controls was greatest in Russia.

² The price in the northern Caucasus was chosen to represent the domestic wheat price for Russia, as the northern Caucasus is the most important region for cereal cultivation in Russia.

Figure 1: Development of domestic and international wheat prices and wheat exports



Source: Own depiction based on DJURIC et al., GÖTZ et al., 2013a, GÖTZ et al., 2014.

Regional effects of the export ban of 2010-11 in Russia

Russia is characterised by a high degree of geographical heterogeneity and a very uneven distribution of agricultural potential between the regions (Fig. 2). For example, the production of cereals is concentrated in the following regions: Northern Caucasus, Western Siberia, Volga, Urals, Central Black Earth and Central. Demand, however, is concentrated in the two urban centres of Moscow and St Petersburg. The export ban came into force in Russia in 2010, when the Urals, Volga, Central Black Earth and Central regions were affected by severe drought, leading to a collapse in cereal production in these regions (Fig. 3). By contrast the cereal harvest in the Northern Caucasus, the most important cereals region, was relatively good, even surpassing that of the previous year. As Russia mainly exports its cereals to the global market via the Black Sea ports in the Northern Caucasus region, when trade is unrestricted and "free", large trade flows can be seen from the production regions into the Northern Caucasus. As a result of the export ban in 2010-11, however, the supply surpluses of the Northern Caucasus could no longer find their way onto the global market, while at the same time there was a supply deficit in those regions affected by the drought. As a consequence the trade flows were reversed during the export ban (SREBRENNIKOV et al., 2014). Figure 4, for example, shows the development of the flow of cereals between the Volga and Northern Caucasus regions.

During the export ban of 2010-11 only Northern Caucasus and Western Siberia had a supply surplus and delivered cereals to the regions in deficit, thereby dampening the prices in the importing regions. The largest volumes of cereals were imported by the Central region, to supply the population of Moscow, and the Urals region, which was worst affected by the poor harvest.

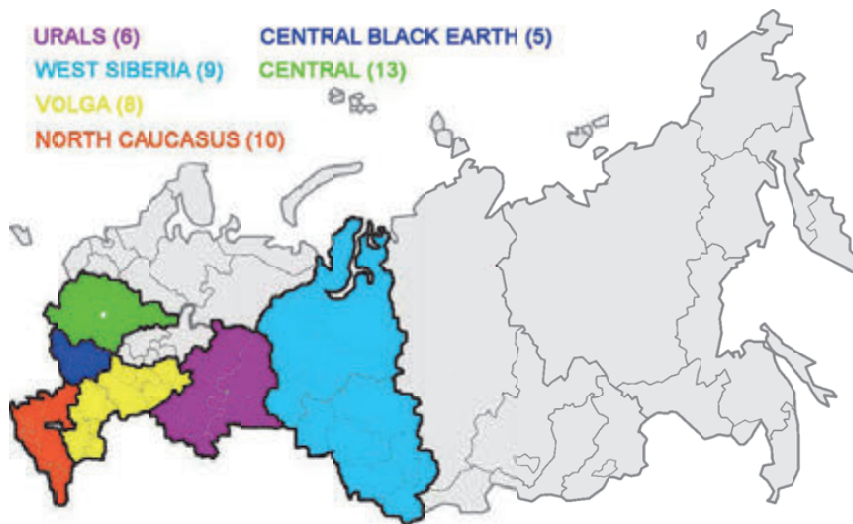
Ongoing studies (GÖTZ et al. 2015) are analysing the regional price effects of the 2010-11 export ban in Russia. Initial findings indicate that the observed price effect of minus 40 % in the Northern Caucasus, corresponding to the volume of cereal imports from the Northern Caucasus, was transferred to the regions in deficit. The calculation of the price effects of export controls in the regions with a supply deficit also took into account the rise in prices caused by this deficit. We can see that in these regions, too, the export ban dampened prices substantially.

Price effects along the supply chain

The aim of export controls is to increase domestic supply and stem food price rises. For a restriction of wheat imports to have a dampening effect on the price of bread, the price-deflating effects on the wheat price must be passed down by actors at all stages of the supply chain to the end consumer (Figure 5). Here, the milling industry, bakeries and retailers play a key role.

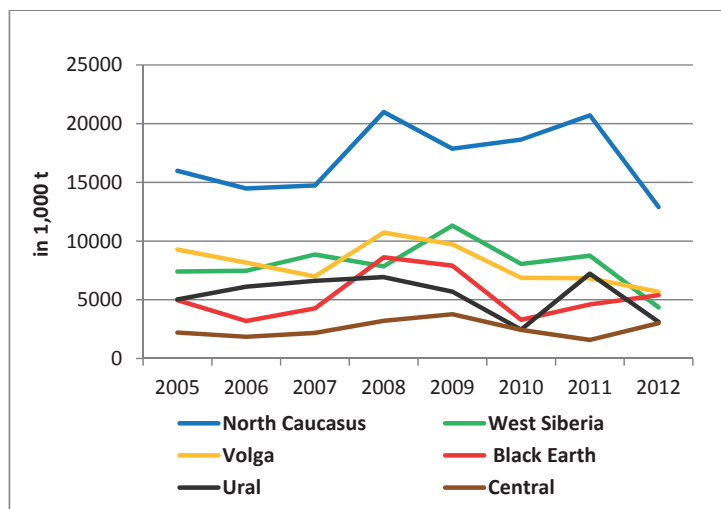
The development of the price difference between the flour and wheat price shows that during the periods of export controls the flour-wheat price differential increased

Figure 2: Major grain producing regions of Russia



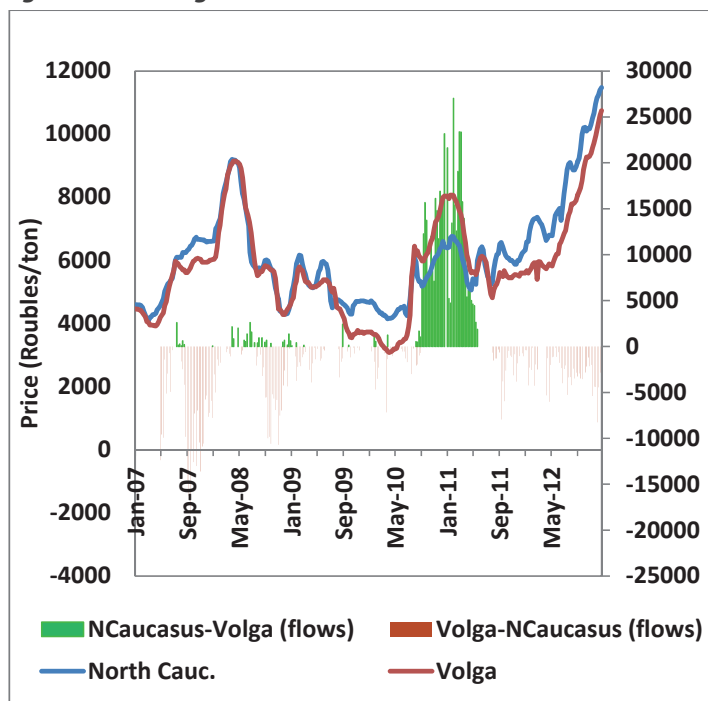
Source: Own illustration.

Figure 3: Development of Regional Cereal Production



Source: Götz et al., 2015.

Figure 4: Interregional Trade in Cereals between Northern Caucasus and Volga



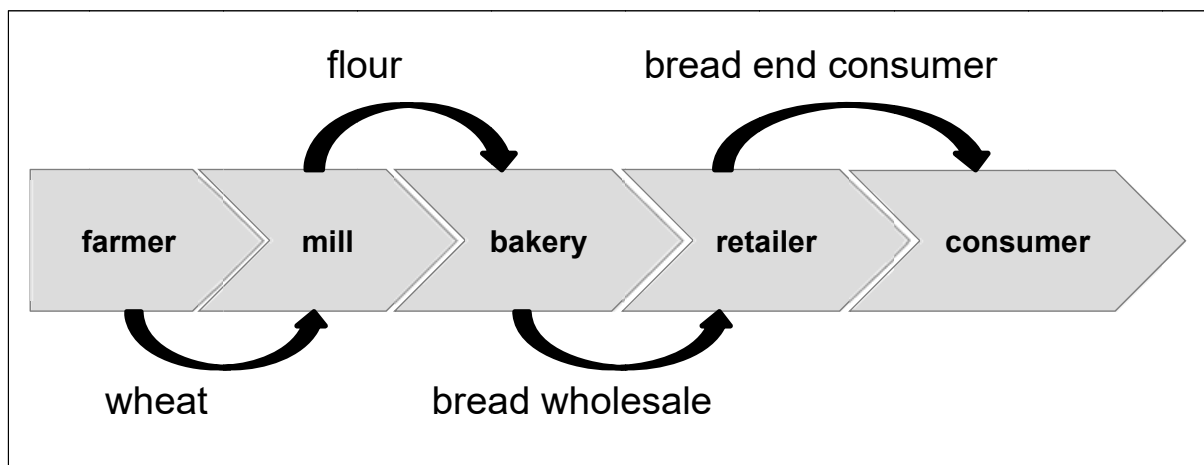
Source: Götz et al., 2015.

in all four countries, at least intermittently (Figure 6). In particular, the fall in wheat price levels in Russia during the imposition of export duties in spring 2008, and in Ukraine during the export quotas in 2007-08, were not transmitted to the flour price, with the result that the difference between flour and wheat prices rose sharply. In Serbia, too, the fall in the price of wheat in spring 2008 was only partially passed on by the mills.

Can the rise in the price of flour relative to that of wheat be explained by an increase in production costs? To answer this question we studied the development of

production costs for flour and the profits of large mills in Serbia and Russia. Unlike small mills, large ones have their own silos for storing wheat. They mainly buy wheat at relatively low prices during harvest time, store it and thus are not affected by price rises over the course of the year. In spite of this, the large mills have publicly defended increases in the price of flour, citing rising spot prices. The findings show that the profits of the milling industry were considerably higher when emergency policies were in place than those under free trade conditions. From this we can conclude that the large

Figure 5: Wheat-Bread supply chain



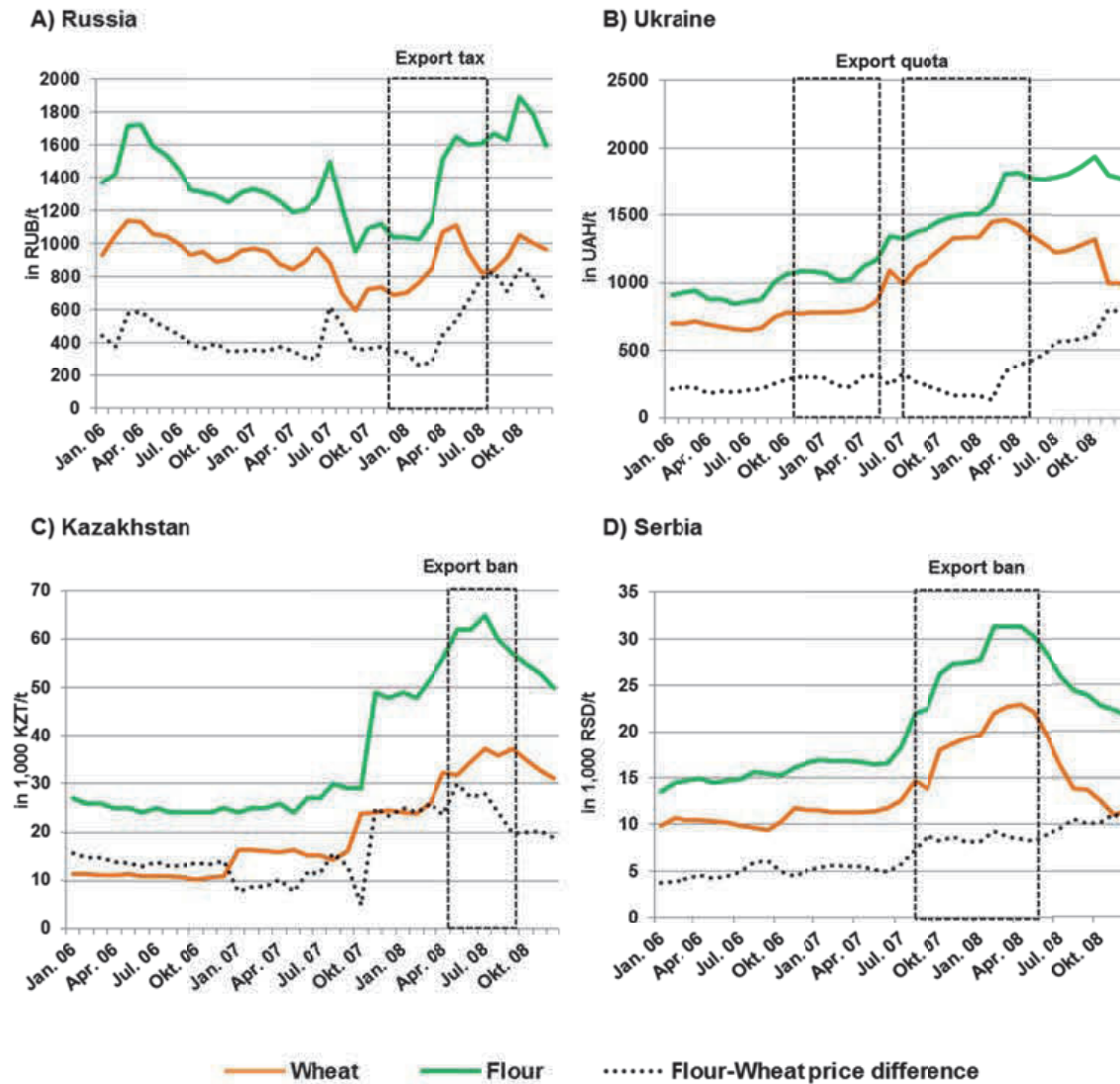
Source: Götz et al., 2013c.

industrial mills have benefited from crisis intervention by the state. Initial findings for Russia show that here, too, large mills were able to increase profits during the period of export duties.

This raises the question of the extent to which changes in the price of flour are passed on to the end consumer via the price of bread. For periods when export controls were in place, we can observe increases in the bread price in all four countries, also relative to the price of flour. Our studies show that the rise in bread prices in the RUK countries is a result of the increase in wheat and flour prices, as well as in other production costs such as labour and energy. Thus the bakery industry in the RUK countries has not profited from export controls. In Serbia, on the other hand, the bakery industry explained to the

media that the rise in the bread price during the export ban was due to the increase in flour price – similar to the argument put forward by the Serbian milling industry (see above). Just like the large mills, however, industrial bakeries have their own capacity to store wheat. Thus it is not the current market price (spot price), which is relevant to the bakery industry, either, but the wheat price at the last harvest (plus storage costs). Figure 7 shows that the production costs for bread when based on the cost of storing wheat are substantially lower than when based on the spot price. Thus, even during the food price crisis, the bakery industry was able to raise the price of bread price and increase its profits. There are indications that the supermarkets took the largest share of these profits for themselves, and thus are likely to have been the major beneficiaries of the public interventionist policy

Figure 6: Development of wheat and flour prices in the RUK countries and Serbia



Source: DJURIC et al., 2012; GÖTZ et al., 2014.

during the crisis. The end consumers, on the other hand, who ought to have benefited from this policy, faced substantial bread price increases of more than 50 % and have been the losers of state intervention (Götz et al., 2013c).

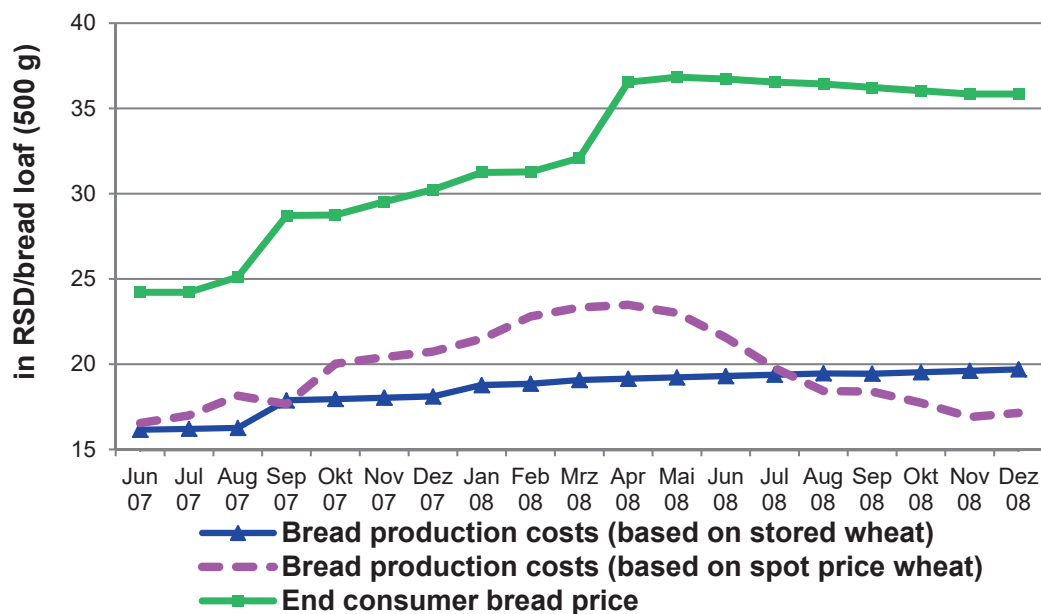
Conclusions

In only four out of eight cases have our investigations into the price effects of export controls for wheat in the RUK countries and Serbia shown price-dampening effects on the domestic wheat price. Only the export ban

in Russia (2010-11) and the export quotas in Ukraine (2006-07, 2007-08, 2010-11) succeeded in dampening domestic wheat prices in relation to global market prices. By contrast, the export controls in Kazakhstan (2008), Serbia (2007-08, 2010-11) and Russia (2007-08) proved to be ineffective, as at the time of the imposition of these controls there was already a deficit in domestic market supply. In such a situation not even export restrictions can prevent a rise in the domestic price above that of the global market.

Our findings also indicate that in some cases actors along the wheat-bread supply chain did not pass on

Figure 7: Development of production costs for bread in Serbia



Source: DJURIC et al., 2012.

price-dampening effects, but raised prices further. In this way, large industrial mills in Serbia and Russia were able to increase their profits by raising flour prices. Similarly, the bakery industry and supermarkets in Serbia increased bread prices during the food price crisis, thereby boosting their profits. In contrast to Serbia, bread prices in the RUK countries were caused by an increase in production costs. According to our calculations, however, even if a price-dampening level of 17 % in the Central region of Russia is passed on fully along the supply chain, this leads to only a 3 % fall in the bread price in Moscow.

We can conclude, therefore, that the effectiveness of export controls to dampen national agricultural and food prices is highly questionable. We must also take into account that the substantial price-dampening effect of the 2010-11 export ban in Russia was only short-lived. For it must be assumed that, under free trade in 2010-11, domestic prices would have risen to a level above the global market price only for a few weeks. Not least in view of the high economic costs for domestic cereal producers and traders, and the negative effects on investment in the cereals sector and on future global food security, these countries should refrain from adopting policies that decouple domestic price developments from those on global markets, as protection against steep price rises. A consumer-oriented policy that helps needy sections of the population adapt to high food prices, e.g. by means of direct money transfers, food coupons or food banks, would, from the perspective of the economy overall, be less of an economic burden in the long term.

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Sixty years of the Virgin Lands Campaign in Russia and Kazakhstan: An assessment from an economic, ecological and political perspective

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ROLAND KRAEMER, IRINA KURGANOVA, MICHAEL KOPSIDIS

Introduction

As the world's population quadrupled in the 20th century from 1.5 to 6 billion, so the area of agricultural land increased substantially (RAMANKUTTY et al., 2002; RAMANKUTTY and FOLEY, 1998). The expansion of agricultural production and land use poses a great threat to biodiversity and results in the loss of uncultivated natural habitats. These land-use processes consist not only of gradual, reversible changes, but also critical turning points (RADELOFF et al., 2013) at which fundamental decisions are made about the expansion or decommissioning of agricultural land. Although we know that such turning points – often irreversible – exist in land use, we cannot reliably predict when they will occur in the future (MÜLLER et al., 2014). What we can do, however, is analyse fundamental decisions relating to land use from the past and draw lessons from these.

One such critical turning point was the so-called Virgin Lands Campaign (VLC) in the former Soviet Union (FSU), when between 1954 and 1964 more than 43 million hectares of predominantly untouched grassland in the Eurasian

Steppe of Russia and Kazakhstan were turned over to cultivation. The goal was to increase wheat production to meet the pressing Soviet need for cereals after the Second World War (DURGIN, 1962; McCauley, 1976). As an alternative to this rapid expansion of farmland, so-called "broadening the cultivation", opponents of the VLC, which originated with Khrushchev, proposed a strategy of "deepening the cultivation". This envisaged a relatively small expansion of arable land, focusing instead on increasing wheat yields on existing farmland (DURGIN, 1962). Sixty years after the start of this most rapid large-scale land-use expansion, we can now analyse the effects of the land reclamation programme on agricultural production, as well as ecological and socio-political development in the study area.

The political economy of the Virgin Lands Campaign

1953 was a momentous year for the Soviet Union, and not only because of the death of Josef Stalin. The Soviet Union urgently needed to increase its agricultural production to meet the growing domestic demand and improve the food situation. Wheat yields in the



Endless steppe land in northern Kazakhstan

USSR, however, still lay far below the average yields of "enemy nations", including the USA. In the eyes of the Soviet government it would have been a sore defeat in the "battle of the systems" to even consider the idea of importing wheat from the supposedly inferior capitalist camp, thus turning the Soviet Union (Russia) from one of the world's largest wheat exporters under the Tsars into a wheat importer. In 1953 the Soviet state produced only 29.8 million tonnes of cereal, less than the 1940 pre-war level of 35.6 million tonnes (JOSEPHSON et al., 2013). During the Second World War the German army had occupied a third of the cereal growing area of the Soviet Union, leaving behind terrible devastation. Besides the 28 million people who died in the war and the drastic depopulation of rural areas that ensued, agricultural production also suffered from a lack of farm machinery and equipment. Another collectivisation campaign from 1946 to 1953 in the newly acquired areas of what today constitutes Belarus, Ukraine and the Baltic States, brought about no improvement in the wheat supply (JOSEPHSON et al., 2013). Increasing agricultural production was, therefore, deemed necessary and became the subject of bitter political debate.

A dispute arose over the succession to Stalin between Nikita Khrushchev, then First Secretary of the Central Committee, and Georgy Malenkov, Chairman of the Council of Ministers. In their struggle for power, the question of the future orientation of agricultural policy played a key role (JOSEPHSON et al., 2013). Malenkov advocated increasing yields by greater use of fertiliser

and farming technology on the existing arable land in the so-called old agricultural areas in European Russia (HARRIS, 1955; McCAULEY, 1976). Instead, Khrushchev favoured a policy of extending maize cultivation in the former main wheat and rye growing areas in Ukraine and central Russia (McCAULEY, 1976). By expanding the area of farmland, wheat would be grown in the Eurasian Steppe – where there were vast stretches of land that had never been used for arable farming – exploiting the natural fertility of the steppe soil (DURGIN, 1962; McCAULEY, 1976). Khrushchev prevailed – probably also because the Soviet Union lacked sufficient capital reserves to intensify agricultural production in the western farming areas (WEIN, 1980).

In February 1954 Khrushchev announced a plan for increasing cereal production, which anticipated within a short period of time 35-40 % higher yields in relation to 1953. This rise was to be achieved by rapidly bringing into cultivation up to 30 million (and later up to 40 million) ha of predominantly untilled steppe land in Russia and Kazakhstan (DURGIN, 1962). Although the plan was approved there was a certain scepticism about its economic viability. Malenkov, who within the Communist Party was in opposition to the group around Khrushchev, called the plan an opportunistic adventure. Together with Molotov and Kaganovich, Malenkov's colleagues from Stalin's inner circle, he continued to support the "deepening" approach in opposition to Khrushchev's "broadening" approach. His intention was to reclaim only 20 million hectares of land for cultivation, while

using more resources to increase yields on existing and new arable land. But their plan failed to meet with agreement and later they were expelled from the Communist Party.

Agricultural production during the Virgin Lands Campaign (VLC) 1954-64

On the instructions of the Central Committee of the Communist Party of the Soviet Union (CCPSU), in spring 1954 tractors began ploughing up untouched steppe land in order to sow wheat to supply the growing Soviet population. Given that there was often no infrastructure in the untouched steppes, huge efforts were needed to mobilise and resettle "Conquerors of Virgin Land" (Pervotselinnik). The Virgin Lands Campaign ("Osvoenie tselinykh zemel") aimed at the large-scale mobilisation of young people, led by the youth organisation of the CPSU: Komsomol. In fact, with its appeal to the Soviet "youth", the Virgin Lands Campaign modelled itself on the total mobilisation of society during the accelerated industrialisation of the 1930s, except without the elements of Stalinist terror or the mass use of forced labour. After 1953 the state system of labour camps (GULAG) had for the most part been liquidated.

In addition to the lack of preparation for the land reclamation, when evaluating the VLC we must also note that the land with the best agricultural-ecological conditions was already in cultivation. This is to say that the expansion of agricultural land took place chiefly in

areas with unfavourable conditions for arable farming, such as insufficient rainfall (<300 mm per year), or a high frequency of drought and harsh winters as a result of a continental climate. Moreover, in the Virgin Lands areas, frosts often occurred early, in some places already in August and September (AFONIN et al., 2008; DURGIN, 1962).

The area covered by the VLC extended across northern Kazakhstan as well as several Russian provinces (Volograd, Rostov, Saratov, Bashkiria, Kurgan, Orenburg, Altai Krai, Kemerovo, Novosibirsk, Omsk, Tyumen, Krasnoyarsk, Irkutsk and Chita) (Fig. 1). Of the 40 million ha that were scheduled to be brought into cultivation during the VLC, 11 million had already been ploughed up in 1954, five million of which were in Kazakhstan (Figures 2 and 3). Originally the plan had envisaged bringing into cultivation 2.3 million ha in the first year, whereas in fact the area sown at the end totalled 3.6 million ha.

Because of a lack of agricultural technology, many fields could not be harvested and so the cereals were left to rot on their stalks. Even so, in the first year of the VLC, an additional 14.7 million tonnes of cereals were harvested in the Soviet Union. This promising early success on the fertile steppe lands encouraged further expansion. Already in the following year the area of land ploughed grew to 30 million ha, 20 million of which were sown with seed (DURGIN, 1962). The drought of 1955, however, shattered the faith in the success of such virgin land schemes, which assumed at least two to three good

Figure 1: Area of the Virgin Lands Campaign (1954-64)

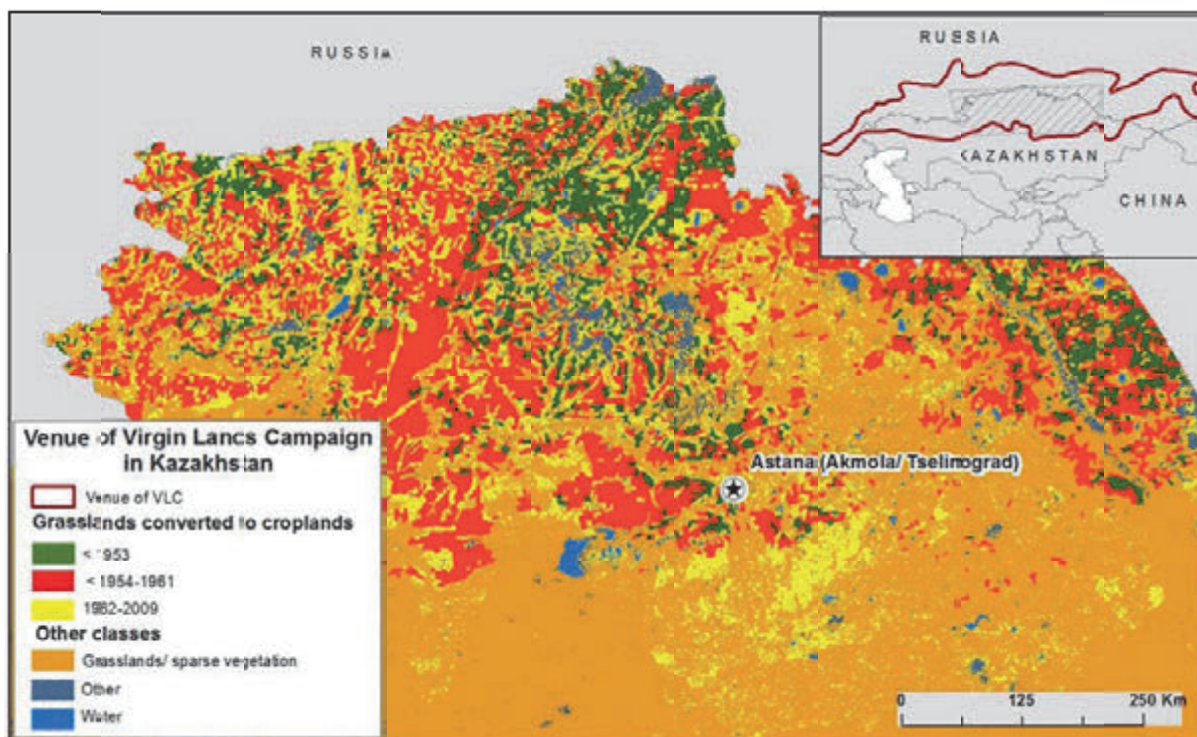


harvests every five years. Although land in cultivation in the Virgin Land areas had doubled relative to 1954, the area sown with seed only increased by 35 % (DURGIN, 1962).

The following year only 5.6 million ha of arable land were brought into cultivation (Figure 3), as the goal of the VLC, which had been to reclaim an arable area of 30 million ha, had been fulfilled. At the same time there was a substantial expansion of land sown with seed: 13 million additional ha. This meant that the total extent of land sown in the Virgin Lands area was 33 million ha.

1956 saw the best harvest in this area so far: 64 million tonnes of cereals (DURGIN, 1962). In 1957 a further 3 million ha of steppe land were ploughed up (Figure 3). But after a succession of consecutive drought periods starting in 1957, and in view of the vast area already ploughed but not yet sown, expansion of arable land virtually came to a halt in 1957. In the years that followed the harvests reflected the weather conditions of each particular year, but even in better years the cereal harvest did not match that of 1956, and this in spite of a huge expansion of arable farmland. At the beginning of the 1960s, in

Figure 2: Phases of land reclamation in Kazakhstan

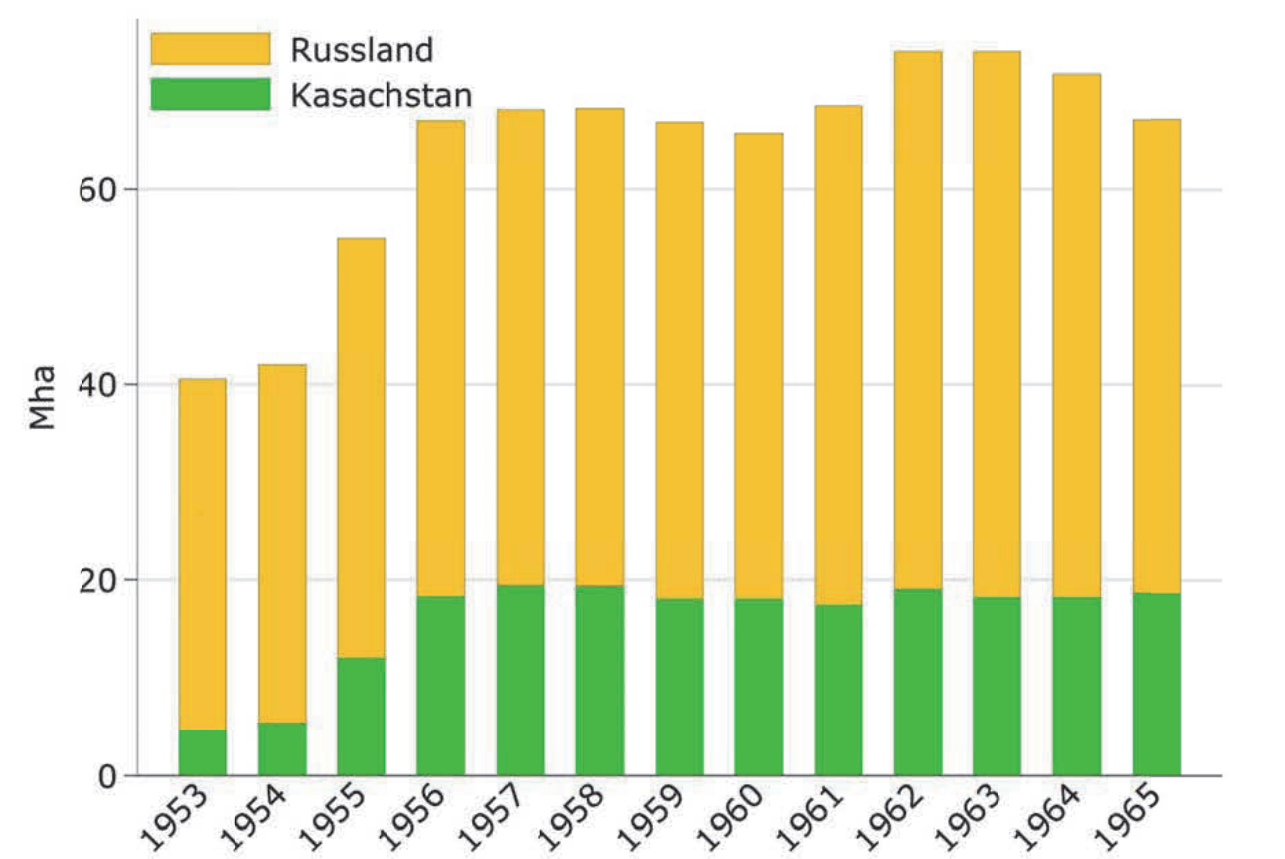


Source: KLEIN et al., 2012; MSU, 1964.

particular, several years of drought had a disastrous effect on cereal production in the Soviet Union (JOSEPHSON et al., 2013). The drought of 1963 was especially serious for cereal production in the traditional granaries of the Volga and Black Earth regions, but also in Ukraine and the Virgin Land areas. The extreme droughts led to very low yields (an average of 3 dt per ha in Kazakhstan, KAZSTAT, 2003). The grain harvested was not even sufficient to provide enough seed for the following year (JOSEPHSON et al., 2013).

Because of the cereal shortage there was large-scale slaughter across the Soviet Union to adjust livestock numbers to the sparse volumes of feed (GKS SSSR, 1991; GKS, 1956). In the end the Soviet Union was obliged to purchase around 10 million tonnes of cereals from its "political and economic" enemies (JOSEPHSON et al., 2013). The hope that the reclaimed Virgin Lands could act as a stable buffer to compensate for poor harvests in the traditional granaries had been shattered, and the Soviet Union came nowhere near reaching its objective of

Figure 3: Increase in newly cultivated arable land in the Russian and Kazakhstani parts of the VLC from 1954–64, in millions of hectares



Source: GKS SSSR, 1991; GKS, 1956-1990; KAZSTAT, 2003; KAZSTAT, 2010.

160-180 million tonnes of cereal production by 1965. Soon afterwards Khrushchev was ousted by his opponents in the CPSU, led by Leonid Brezhnev. Criticism of Khrushchev's determined and overoptimistic agricultural policy clearly played a role in his downfall (JOSEPHSON et al., 2013).

Agricultural production after the VLC 1965-1990

It was not possible to bring the agricultural activities in the Virgin Lands areas to a rapid end. During the VLC hundreds of thousands of people had migrated from throughout the entire Soviet Union to the Virgin Lands areas in Russia and Kazakhstan. Thousands of new settlements had been built, as well as the accompanying infrastructure such as schools and hospitals. From 1954 to 1960 the Soviet government invested 44 billion rubles, or 20 % of total Soviet expenditure on developing the VLC areas (DURGIN, 1962). Under the terms of the state planned economy the overall profit of the VLC accounted for came to 76 billion rubles. The Soviet calculation was based on an evaluation of the cereal harvest at market prices and tax income from the VLC areas.

In spite of officially proclaimed successes, because of its unsatisfactory results the Virgin Lands Campaign barely featured in Soviet propaganda after 1964. During Brezhnev's time in office the Soviet government focused on attaining a greater degree of intensity in

agriculture, by heavily increasing the volumes of chemical fertilisers used, more efficient use of machinery and equipment, intermittent decommissioning of farmland and increasing protection against wind erosion. In spite of this, further stretches of land in the VLC area were ploughed to create arable land, often in areas that were barely suitable for arable farming (Figure 4). Both the Russian and Kazakhstani VLC areas reached their peak farmland extent in the period 1975-80, a total area that remained practically unchanged until the collapse of the Soviet Union in 1991.

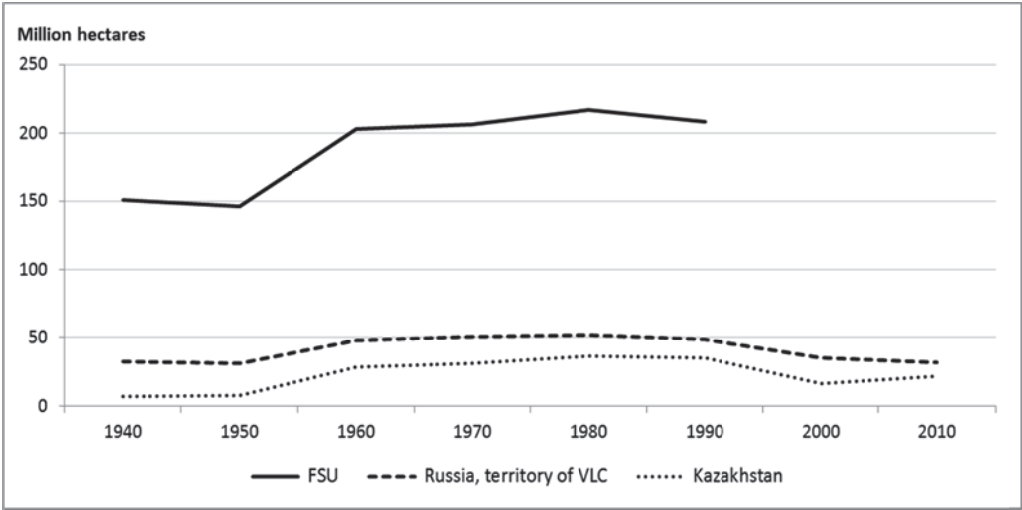
In both the Russian and Kazakhstani VLC areas, efforts were made to increase cereal yields (Figure 5). Between 1965-90 the average wheat yield in Kazakhstan was 8.9 dt/ha in comparison to 7.1 dt/ha in the period 1954-64. Similarly, in the Russian VLC areas annual cereal yields rose from an average of 6.8 dt/ha in 1954-64 to 9.4 dt/ha in 1965-90. This helped stabilise cereal production and allowed less favourable areas such as the northern and temperate part of European Russia to cut back. Yields, however, still remained well below those in the European granaries of the Soviet Union (Ukraine and especially the Black Earth region), where over the same period they were as high as 16 dt/ha. Soviet cereal production continued to be at too low a level even to meet the minimal goal of self-sufficiency, and cereal imports from the capitalist West regularly amounted to between 10 % and 16 % of Soviet production.

Agricultural production during the period of transition 1991-2000

The dissolution of the Soviet Union and the institutional reforms that followed brought about rapid and far-ranging changes to land use in the entire former Soviet Union (FSU). The sudden disappearance of a guaranteed market, combined with a roughly 90 % drop in state agricultural subsidies, resulted in a massive slump in agricultural production in former VLC areas, both in Russia and Kazakhstan (PETRICK et al., 2013; PRISHCHEPOV et al., 2013; SCHIERHORN et al., 2013) and the total area of land farmed in Kazakhstan shrank substantially. In Kazakhstan, 19 million ha of VLC arable land became fallow,

and by the end only 47 % of the area farmed in 1990 was still in cultivation (Figure 4). The extent of land taken out of cultivation corresponds approximately to the 20 million ha expansion of arable land during the VLC, 1954-64. A similar development took place in the Russian part of the VLC, where from 1991 to 2000 13.5 million ha became fallow, and only 46 % of the area farmed in 1991 remained in cultivation (Figure 4). Around half of the steppe land converted into arable land thus became fallow. Large areas began a slow reversion to steppe land (KRAEMER, 2014). In the VLC areas under investigation, the land that was decommissioned was predominantly in areas where the soil had degraded in the Soviet era, which was situated too

Figure 4: Total area of sown land (in million hectares) in the former Soviet Union (SU) as well as in the Russian and Kazakhstani parts of the VLC



Source: GKS SSSR, 1991; GKS, 1956-1990; KAZSTAT, 2003; KAZSTAT, 2010.

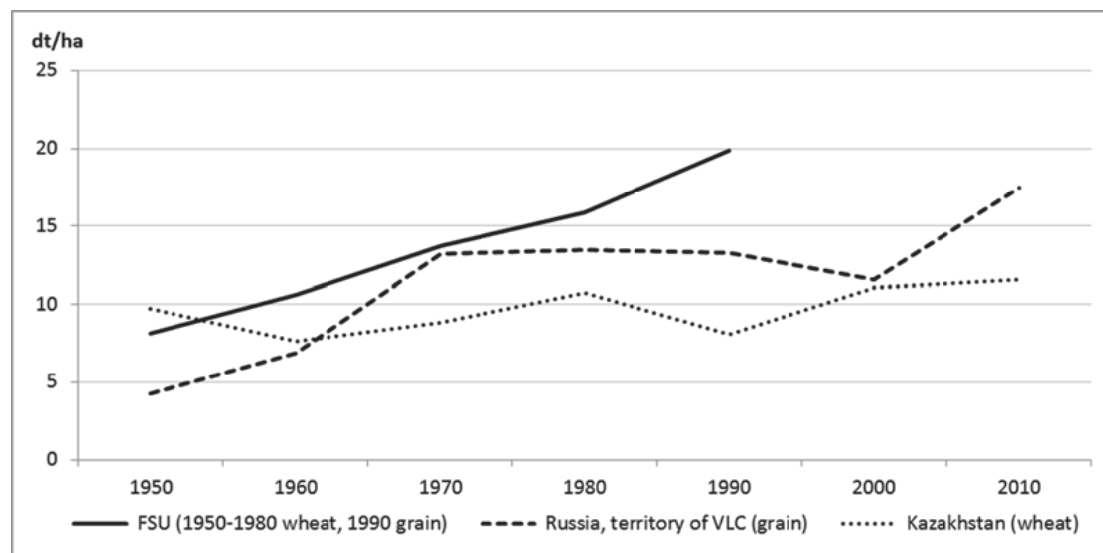
far from settlements and suffered from too little rainfall (KRAEMER, 2014). Structural changes in the economy also played a key role in the reduction in agricultural land. During the transition crisis this occurred as a result of massive drops in feed cultivation, triggered by the radical cutback in labour-intensive and capital-intensive animal production (PETRICK, 2014; SCHIERHORN et al., 2013).

After 2000 some of the fallow arable land was brought back into cultivation. This trend has continued to the present day and can be seen in both some provinces of the Russian part of the VLC as well in northern

Kazakhstan (Figure 4). By 2010 the area of arable land in Kazakhstan had returned to 60 % of the 1990 figure. The changes in use reflect the specific agro-ecological suitability of each soil for crop farming. Areas of land better suited to cereal production were the first to be brought back into cultivation, whereas fields with degraded soils and a low level of natural suitability for crop farming remained unused (KRAEMER, 2014; KRAEMER et al., under review).

In 2010 the sown area was only around 70 % of the figure during the high point of the VLC in 1965 (Figure 6).

Figure 5: Development of cereal yields in the former Soviet Union (FSU) in both the Russian and Kazakhstani parts of the VLC



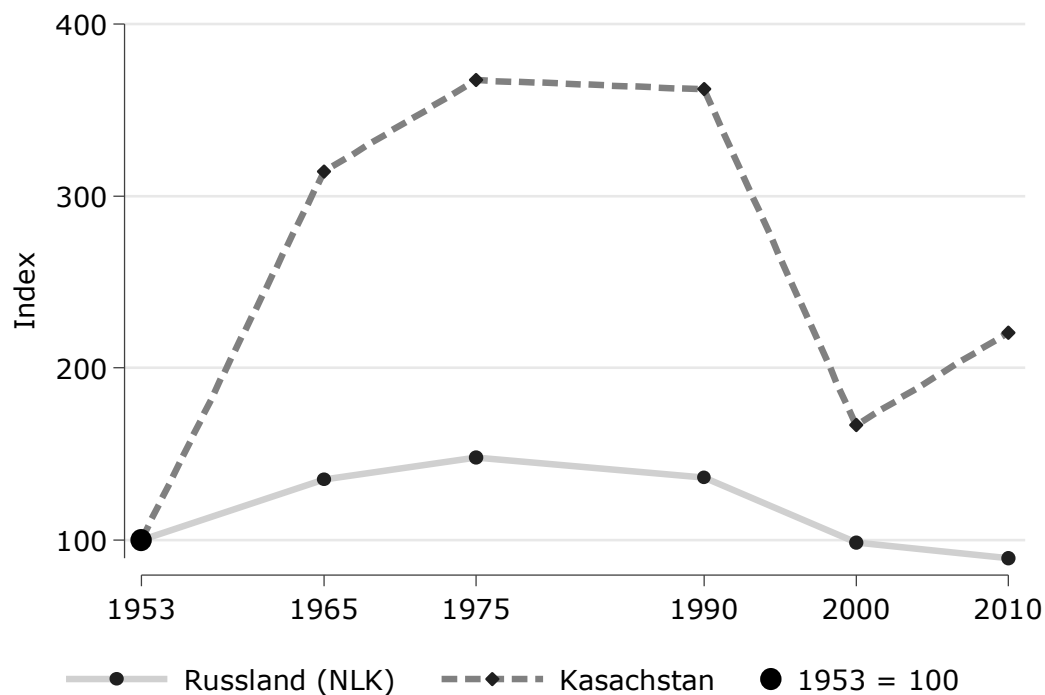
Source: GKS SSSR, 1991; GKS, 1956-1990; KAZSTAT, 2003; KAZSTAT, 2010.

Note: For the Russian part of the VLC cereal yields are depicted, for the Soviet Union and the Kazakhstani part of the VLC wheat yields are depicted, all in decitonnes per hectare.

On the other hand, compared to 1953 the amount of arable land in Kazakhstan had more than doubled by 2010. Unlike in Kazakhstan, in the Russian part of the VLC areas, land continued to be decommissioned after 2000. Between 2000 and 2010 the area sown with seed fell by 3.2 million ha. Overall, in 2010 the area of arable land in cultivation in the Russian VLC areas was only 65 % of that in 1990, and 60 % of the 1965 figure (Figure 6). Interestingly, in the Russian VLC areas considerably less arable land was in cultivation in 2010 than prior to the

VLC (i.e. only 89 % of the 1953 figure) (Figure 6). In some Russian provinces of the VLC, e.g. the Republic of Buryatia, crop production almost came to a complete halt. In this sense the year 2000 represented a turning point, as wheat yields started rising again. The average wheat yield rose in Kazakhstan from 9.4 dt/ha in 1999-2000 to 10.3 dt/ha in 2000-10. Yields experienced a similar development in the Russian VLC areas, rising from 10.8 dt/ha (1990-2000) to 14.6 dt/ha (2000-10) (Figure 5).

Figure 6: Area sown with seed in 2010, compared to 1953



Source: GKS SSSR, 1991; GKS, 1956-1990; KAZSTAT, 2003; KAZSTAT, 2010.

Impact of the VLC on the environment, the economy and on policymaking

The VLC had a profound impact on the environment. The conversion of 40 million ha of largely untouched Eurasian steppe land during the VLC signified a massive reduction in habitats for many key species. For example the expansion of cultivated land in untouched steppe areas seriously diminished and fragmented the habitat of the saiga antelope (*Saiga tatarica*), which had previously been home to three distinct sub-populations (BEKENOV et al., 1998). The negative effects of this habitat fragmentation were underestimated at the start of the 1950s, and some were not even known about. By 1990 the reduction in habitats had led to inbreeding amongst the saiga antelopes, and the lack of new genetic material resulted in an increase in mortality rates.

The rapid ploughing up of vast tracts of steppe land without any accompanying measures to combat wind erosion led to a repeat of the notorious North American dust bowl of the 1930s. It is estimated that around 7 of the 40 million ha of arable land in the Russian VLC areas were damaged by wind erosion. Salinisation also occurred in the dry steppe lands. A lack of preventative measures against erosion and the insufficient use of chemical fertilisers led to a reduction in the humus volumes in some VLC areas to a tenth of the starting level. Soil degradation continues to be a massive problem for Russia and Kazakhstan. Today farmers are paying the

price with extremely low yields in the areas affected. According to the first estimates since 1990, the vast degree of soil erosion has also probably released more than 920 million tonnes of carbon into the atmosphere. At the same time, the decommissioning of land after 1990 in the Russian and Kazakhstani VLC areas helped capture around 24 million tonnes of carbon per year.

The VLC had a substantial impact on the socio-economic development in the agricultural border areas of northern Eurasia. Populating these areas in a short time was possible by mobilising massive human and financial resources. Northern Kazakhstan developed into one of the most important granaries in the world (PETRICK et al., 2013). On the other hand much criticism was voiced about the loss of Kazakh national identity through the disappearance of nomadism in the entire Kazakhstani VLC area (KRAEMER, 2014). This question gained in importance when discussion arose over whether concentrating solely on crop production in agricultural border areas was a sensible strategy, or whether the dry steppes were not more suitable to livestock farming.

In hindsight, the conclusion we can draw from the economic and ecological impact of the VLC is that the plan advanced by Malenkov and his supporters – to bring only 20 million ha of virgin steppe land into cultivation and focus more on increasing yields in the new and old cereal areas – would have probably been the better strategy. But Khrushchev's determination to reclaim virgin land was legendary, eventually costing him his office.

In his "Kazakhstan 2050" strategy, President Nursultan Nazarbayev declared the agricultural sector to be a main target of his economic policy. Cropland and live-stock numbers are to be expanded again and, with state subsidies, new technologies are expected to give a boost to productivity (PETRICK, 2014). Similar to Khrushchev, who cited 1990 as the year when Kazakhstan should have reached a level of general prosperity on a par with leading nations, for Nazarbayev 2050 is the target year by which his country should have by and large caught up with the West.

What is certain is that the diversification of the Kazakhstani economy, 50 % of whose value is based on oil and gas production, is advancing. But we must bear in mind that the successful realisation of this ambitious catch-up programme is based on strict state regulation, implemented by a frequently corrupt bureaucracy. In actual fact, many institutions responsible for the administration of land ownership, have not essentially changed since the end of the Soviet Union. For example, most farmland is leased out by the state. Functioning land markets do not exist, which means a market-based allocation of land to the best user cannot occur. Instead, the state-regulated lease system represents another source of corruption. Although Kazakhstan is richly endowed with land as a factor, land productivity is very low. Contemporary developments in crop and livestock farming, which result in land-use conflicts, particularly in those areas with marginal soils, continue to be worrying. Agriculture in the Russian and Kazakhstani VLC

areas only has a future if those responsible for policy succeed in drawing lessons from the past for a sustainable regional development in the future.

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Grazing cattle and the Soviet legacy in northern Kazakhstan

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Field inspection in Belgorod, Russia

Climate protection and feeding the world: Russia gives cause for hope

FLORIAN SCHIERHORN, DANIEL MÜLLER, ALFONS BALMANN

The demand for agricultural produce is expected to more than double by 2050. At the same time, in many places agriculture is stretched to its limits. In Russia, however, a huge degree of agricultural potential remains untapped. Russia can help secure the world's food supply and is also in a position to mitigate climate change. Why and how is that possible? A trip undertaken in 2013 by IAMO academics through Russian provinces, as part of wide-ranging field, research has given a more detailed insight into these circumstances.

The end of the world

We must have arrived at the end of the world. For the time being our excursion in Russia stops at this abandoned place, the road disappearing into dense mixed woodland. We are in the Russian province of Bryansk, somewhere just under 400 km south-east of Moscow (Fig. 1). By Russian standards this is in the vicinity of the modern metropolis. We get a surprise when we look at the map because this road should not finish here. Our map shows areas of farmland which ought to dominate the landscape in this region. But for some time now we

have been surrounded only by forest and overgrown meadows and pastures. We drive around for a while, passing through abandoned villages, finally needing the help of two locals to get back out of this dead end. The men are delighted by this rare visit to their lonely world and describe to us a region with great stretches of arable land, lush meadows and pastures, large livestock numbers, as well as vibrant and intact village structures. Like our map, the descriptions given by the men date from another time. And yet a time which is barely further than 25 years back in the past. How do these two worlds go together, what happened?

40 million hectares of cropland abandoned

The collapse of the Soviet Union in 1991 heralded the decline of the agricultural sector. In the turbulent transitional stage after 1991, the huge level of state support for agriculture was drastically cut back, while in the course of privatisation questions of land ownership were often inadequately regulated (PRISHCHEPOV et al., 2013). Thousands of agricultural enterprises, the former kolkhozes, were now incapable of surviving in the face

Figure 1: The Black Earth belt in European Russia

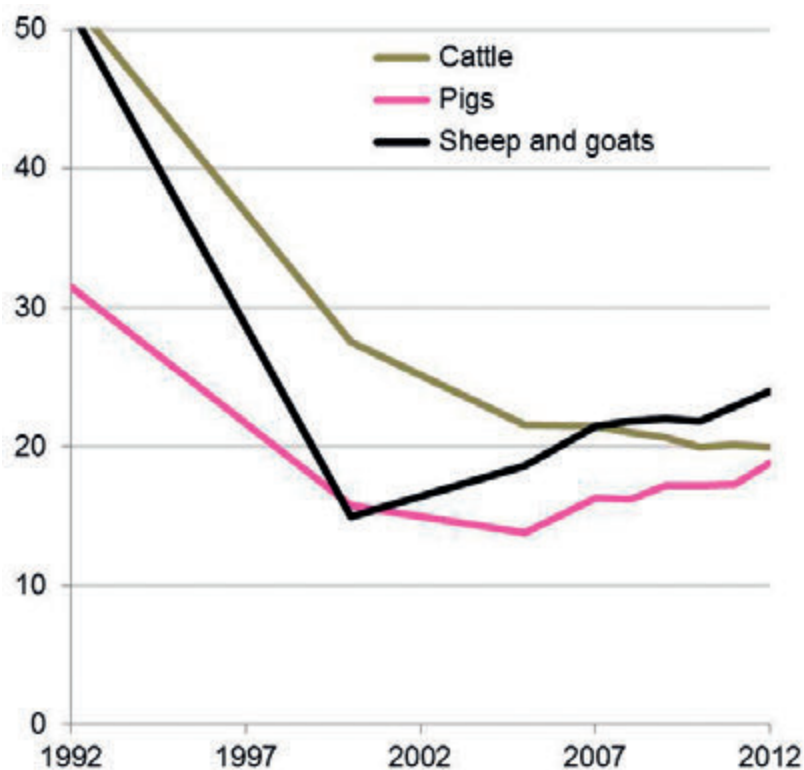


Source: Own depiction.

of increased international competition. The livestock sector was particularly badly hit by the system change. In Russia the number of cattle fell from 52.5 to 20 million between 1992 and 2012 (Fig. 2). Consequently the demand for feed crops and pastures plummeted and large areas of cropland were abandoned. Prior to 1991 Russia was able to supply herself with meat and dairy products; today the country is one of the largest importers

of these goods in the world (FAO, 2014). The quality of life in rural areas also declined. A lack of employment opportunities in agriculture and the closure of social facilities such as kindergartens and schools caused many millions of people to migrate to the large cities. The astonishingly fast rate of demographic and natural-geographical change in Russia has had far-reaching consequences that still persist today. Around

Figure 2: Agricultural livestock numbers in Russia from 1992 to 2012 (in millions)



Source: Own depiction based on data from Rosstat (FEDERAL STATE STATISTICS SERVICE OF RUSSIA 2014, www.gks.ru).

40 million hectares of arable land are currently lying fallow in Russia (SCHIERHORN et al., 2013). By comparison, in Germany there are currently 11 million hectares of arable land in cultivation. Rural areas are characterised by high levels of unemployment, an aging population and alcoholism. Substantial regions have been largely depopulated.

Fallow areas in Russia counteract climate change

Brining this abandoned land back into cultivation could raise agricultural production considerably (SCHIERHORN et al., 2012). These areas, however, have in the meantime been performing another function. Since farming has ceased, weeds, grasses, bushes and, later, juvenile trees have been growing on the abandoned land. As it grows, this secondary vegetation takes carbon dioxide (CO₂) from the atmosphere, storing it as carbon in the vegetation and the soil. In this way the abandoned areas of Russia are making a key contribution to mitigating climate change. Abandoned agricultural land may have another positive effect. Left alone, these areas are re-colonised by native flora and fauna, and in many areas species diversity is constantly on the increase.

The recultivation of abandoned land would release the carbon stored in the soil and vegetation and reduce species diversity. Particularly on agricultural land which were abandoned during the first decade after the collapse of socialism, substantial volumes of carbon are stored (SCHIERHORN et al., 2013). The recultivation of this

older abandoned land, given its large area, would release globally significant volumes of carbon dioxide, accelerating climate change. A way of avoiding the clash between environmental protection and global food security would, therefore, be to restrict recultivation to more recently abandoned land, as this would cause fewer emissions. For example, the recultivation of around four million hectares of land abandoned after 2000 in European Russia, could theoretically produce an additional 6 million tonnes of wheat, given current average yields. This represents a quarter of the average annual harvest in Germany.

At the moment, however, all this is purely hypothetical. Given the current situation in Russia, actual growth is likely to be smaller. An inadequate infrastructure, poor political parameters, corruption, and a lack of capital and qualified workers have such a negative impact that, in spite of the high potential, it is unlikely that the recultivation of abandoned land in Russia can at the moment make a substantial contribution to the stabilisation of global cereal prices.

By increasing yields Russia could rise to become a leading export nation

We continue our excursion southwards and reach the fertile Black Earth belt, Russia's main breadbasket (Fig. 1). The second stop on our journey is Belgorod, the capital of the oblast of the same name. Belgorod is situated in the fertile Black Earth belt and is a centre of Russian

agriculture. Here the fields usually continue as far as the eye can see; abandoned agricultural land is rare. In the last few years Russia has risen to become a leading exporter of wheat, most of which comes from the Black Earth belt. However, the yields in the Russian breadbaskets, that is to say the volume of wheat harvested per unit of land, do not even amount to half those achieved on average in Western Europe. Computer models simulating the growth of wheat plants show that the drier and hotter climate in southern Russia can account for only part of this difference in yields. More is down to the shortfall in cultivation methods. Many Russian farmers have to resort to inefficient agricultural machinery and they often use only small amounts of fertilisers and pesticides (SCHIERHORN et al., 2014). Irrigation systems, meanwhile, which allow high yields even in drought years, have mostly become dilapidated since the collapse of the Soviet Union.

Conservative model findings relating to potential yield increases show that Russian wheat production could rise by up to 32 million tonnes, or more than 50 % of current production volumes (SCHIERHORN et al., 2014). Russia could thus become the largest global exporter of wheat and make a substantial contribution to meeting the rising demand throughout the world. With these yield increases the older abandoned areas could remain untouched and climate goals implemented. Modern cultivation methods supported by satellite and computer technology ("precision agriculture") allow considerable yield increases at little economic and ecological cost. In highly developed agricultural nations

this is already becoming the standard. In Russia, with its huge fields and even larger farms, such methods could be used to great effect, but there is still much catching up to do.

Russian agriculture lags far behind technologically

Such a technological revolution in Russia, however, requires major investment in agriculture. The financial resources of most farms continue to be weak; domestic banks thus have little motivation to provide credit. Reliable political parameters are lacking, moreover, as are an efficient infrastructure and agricultural training and research. For this reason a large degree of production and profit potential remains untapped.

But there is hope. The Russian government appears to becoming aware of the huge untapped agricultural potential and the opportunities this offers, and is continually increasing its support for the agricultural sector. Spurred on by increasing profit opportunities, big investors are also taking the initiative in Russia and establishing huge agricultural enterprises, so-called agroholdings. These often have several hundred thousand hectares of land under cultivation. Over the last few years agroholdings have made a significant contribution to increasing crop yields. Some of these investors are processing enterprises, such as sugar factories, which are securing their natural resources; others are oligarchs reinvesting in Russia via subsidiary companies their fortunes that have been transferred abroad; others still are

international investors providing risk capital. Because of their financial power and size, agroholdings have excellent access to finance capital, which provides a good basis for increased investment in modern technology, infrastructure and training for employees.

Only about one fifth of agricultural land is farmed by agroholdings today, however. Moreover, nowhere near all agroholdings are operating efficiently and realising the maximum possible yields. Success in agriculture cannot be simply bought, but requires intensive engagement with the technology, as well as with the economic and natural conditions. And in Russia these conditions pose a huge challenge. Given the wealth of the country's

resources, overcoming the many challenges facing Russian agriculture is of worldwide importance for the development agricultural markets and safeguarding the greenhouse gas balance. Ultimately, therefore, Russia's agricultural development concerns us all.

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Fallow land in Bryansk province, Russia

Development problems in Central Asia: The example of agricultural service cooperatives

NODIR DJANIBEKOV, AXEL WOLZ

Land reform and farm restructuring

More than two decades since independence, all five Central Asian countries are agrarian nations. A high proportion of the rural population is primarily dependent on agriculture (Table 1) and, with a growing population, competition for scarce productive land and water is becoming tighter. But agricultural production is not only a key factor in securing the nation's food supply, it also accounts for a significant proportion of export income. After the collapse of the Soviet Union in 1991, all five countries experienced a dramatic slump in agricultural production. It was thus one of the first tasks of the new governments, using state-controlled agricultural reforms, to get production going again and increase rural incomes. In the new circumstances, collective and state farms, which were constantly running up ever greater debts, were restructured into more suitable business forms in the so-called "decollectivisation" process.

More than 20 years after independence, the results of transition in the agricultural sectors of the individual countries in the region are very varied. Each country

took its own approach to reforming agricultural markets and access to land, and to shaping institutional parameters. The reforms varied between countries in type and scope, as well as in how quickly they were implemented (LERMANN, 2009). At the start of transition the emphasis was on liberalising agricultural markets and product prices; farm restructuring only started later. Within a few years some countries accelerated this process. They introduced individual land ownership or land use rights, and allocated a proportion of the land belonging to large agricultural enterprises to small family farms (Table 1). This process went furthest in Kyrgyzstan, where newly created family farms operate on average only 2.8 ha. In Kazakhstan large farms can be found in the northern rainfed farming regions, whereas in the southern irrigated regions small farms tend to predominate. Small farms also predominate in Uzbekistan and Tajikistan, although restructuring is not yet complete in Tajikistan, while there is still a long way to go in Turkmenistan, too. Around 94 % of agricultural land in Turkmenistan is farmed by state-managed farmers associations, which are very similar to the socialist collective farms.



Rice fields in Vietnam

In the short term the initial phases of land reform brought about growth. In the medium to long term, however, the growth-inhibiting disadvantages of farm fragmentation came into play. The key reason for this is that the restructuring of institutional parameters to support new small farmers takes considerably longer than farm restructuring. The new (very small) farms have to fend for themselves, while the classic services for former Soviet agriculture, such as large-scale machinery, intensive fertiliser application, centralised irrigation facilities or extension services, have been cut. The lack of suitable access to financial services, marketing, the delivery of supplies and equipment, and extension and information services, makes it difficult for the newly established small farms to operate efficiently. These problems are particularly prevalent in the more densely populated regions, where the farms are very small, reliant on irrigation facilities and focus on labour-intensive sectors such as fruit and vegetable or livestock farming.

Membership in an agricultural service cooperative for joint machinery use, marketing, saving and obtaining credit as well as purchase of supplies and equipment would give small farmers in Central Asia the opportunity to realise certain economies of scale. This sort of cooperative has played an important role in the development of agriculture not only in Western and Central Europe, North America or Japan, but also in Tsarist Russia. There,

cooperatives were formed because there was either no other way of accessing services, or only at horrendous prices. In short, service cooperatives tailored to small farms can provide an important function in correcting market failure, as they have been able to in the past. In general different people group together voluntarily to exploit the advantages of potential economies of scale or to strengthen their negotiating position. Successful service cooperatives are founded on three fundamental principles: self-help, self-management and self-responsibility. As owners of the cooperative firm, the members fulfil three roles; they are users/beneficiaries, supervisors and financiers (GOLOVINA and NILSSON, 2011).

Agricultural service cooperatives in the region

In spite of the great efforts made over farm restructuring, the policies underlying agricultural reforms remain inconsistent. Land reforms created different forms of property rights and land tenure across the countries: With basically family-oriented agriculture very different land tenures emerged:

- 1) Leased land and a constantly developing land market (Kyrgyzstan and Kazakhstan)
- 2) Long-term leases from the state with usufructary rights, and transferability restrictions, but with operational autonomy (Tajikistan and Uzbekistan)

Table 1: Rural population, agricultural employment and private farms in Central Asia

	Kazakhstan (KZ)	Kyrgyzstan (KG)	Tajikistan (TJ)	Turkmenistan (TM)	Uzbekistan (UZ)
Rural population (% of total), 2013 ^{a)}	47	64	73	51	64
Employed in agriculture (% of labour force), 2012, UZ = 2010, TM = 2007 ^{b,c)}	26	30	47	48	27
Number of private farms, 2012, UZ = 2010, TM = 2008 ^{b,c)}	164.856	356.642	72.000	2.450	66.100
Average size of private farm (ha), 2012, UZ = 2010, TM = 2008 ^{b,c)}	309	2,8	55	10	80
Notes	64 % of farms <50 ha, but operate 2 % of land (ø = 10 ha).	Arable land is mostly evenly distributed to rural families.	80 % of farms <10 ha (ø = 3 ha)	Farmers' association operate ca. 94 % of land; small private farms ca. 1 %	554 % of farms: cotton and wheat (ø = 106 ha), 31 %: fruit and vegetables (ø = 15 ha)

Source: ^{a)} WORLD BANK (2014); ^{b)} NATIONAL STATISTICAL YEARBOOKS; ^{c)} FAO (2012).

Note: ø = Average farm size.

- 3) Short-term lease contracts on state land with complete business subordination to the state-managed farmers' associations (Turkmenistan).

As long-term land use rights often do not exist, the state can take back farmland and allocate it to other users. The land reforms in Tajikistan, Turkmenistan and Uzbekistan are subordinated to national political goals, such as domestic self-sufficiency in wheat (goal of autarky) as well as stable currency receipts through high cotton exports (export goal). In these countries the production volumes for these two strategic products are prescribed to farmers, who have to orient themselves

to central state planning. This means they are also completely dependent on state-organised deliveries of supplies and equipment.

In the past few years the governments of Central Asia have recognised the difficulties of small-scale farming under the prevailing circumstances, and now acknowledge the need for supported services. They lack understanding, however, for the basic principles of successful service cooperatives. Rather than encouraging the setting up of cooperatives as a self-help organisations ("bottom up"), the state introduces hierarchical structures ("top down"). This form of agricultural cooperative

is very often financed by the state. The chief personnel of the cooperatives are appointed by the state administration too. Farmers are invited to become members, but they do not have to invest any of their own money into the mutual organisation or undertake any other obligations. It is no surprise, therefore, that members have no feeling of responsibility for "their" cooperative. One could argue, of course, that without the state initiatives there would be no support organisations for farmers at all. This reasoning maintains that cooperatives established from above are better than none at all, and that these hierarchically structured organisations might turn into member-oriented ones over the course of time. No such transformation has been seen to date, however, neither in developing or transition countries. The overall experience has been that when state and financial support comes to an end, this form of cooperative quickly breaks up (GOLOVINA and NILSSON, 2011; LERMAN, 2013).

Agricultural service cooperatives have been established in almost all Central Asian countries in recent years. They are few in number, however, and many seem to exist on paper only. According to LERMAN and SEDIK (2014), development in this region is lagging decades behind that in Europe. In Kyrgyzstan, for example, around 1,400 agricultural service cooperatives were registered in 2011 under the Ministry of Agriculture. The national office for statistics, however, only had a record of 400 active service cooperatives and, of these, only 20 could be identified that were service-oriented. Precisely six

cooperatives corresponded to the model of an agricultural cooperative in the Western sense (LERMAN, 2013). This shows that many service cooperatives are inactive and that their actual number in the region is terribly low.

One of the fundamental reasons why agricultural service cooperatives set-up on a voluntary basis have failed to make much headway in Central Asia seems to be the legacy of the socialist past. Experiences with Soviet agriculture have given rise to a deep-seated mistrust of all sorts of cooperatives. In all states of the former Soviet Union, when both politicians and farmers hear the word "cooperative" they generally think "production cooperatives". In post-independence legislation production cooperatives are defined as commercial organisations that sell their products to third parties only and which are primarily reliant on the labour of their members (LERMAN, 2013).

Because of their negative experiences with the Soviet cooperative model imposed from above and the lack of information about service cooperatives in a market economy, farmers' support for the cooperative idea is marginal. This impedes the development of social capital and attempts at joint action. The new farmers lack knowledge and experience of how service cooperatives based on self-help need to be organised to generate economic advantages for their members. As many farmers in the region have only very limited business freedom and have to fulfil prescribed production

goals, there does not seem to be any reason for the establishment of voluntary cooperatives either. The long drawn-out process of farm restructuring as well as the lack of ownership rights for land impede long-term business planning and investment in partnerships between farms.

Where policy supports the development of cooperatives, frequently it is other goals that are being pursued. Often, the cooperative serves as a form of organisation similar to the *kolkhozes*, to consolidate the holdings of small farmers into larger production units. This alienates farmers from the cooperative idea, tending to deter them from forming cooperatives (LERMAN and SEDIK, 2014). Turkmenistan, for example, has developed farmers' associations as state organisations along the lines of the former collective farms. The individual farmers are compelled to work the land jointly and the use of resources is prescribed. Amongst groups of water-users, too, there are considerable interventions from above, meaning that members feel no responsibility for the maintenance of the irrigation systems.

The other basic socialist cooperative model relates to "consumer cooperatives". Generally these are non-commercial businesses which sell their products exclusively to their members, but which are only partially reliant on their labour. As a state-run system in the Soviet Union they provided the rural population with services. Although the notions sound relatively similar, their fundamental principle is not comparable to that of service

cooperatives in the Western tradition. In all five countries the formal attributes are not clearly defined and frequently inconsistent in national legislation. All five countries have passed legislation relating to cooperatives, although with the exception of Kyrgyzstan the term "service cooperative" is not used. The organisation of agricultural services is implicitly left to the "consumer cooperatives" (LERMAN, 2013).

The experiences of other transition countries

In almost all former socialist countries we can see that agricultural service cooperatives have not developed in the way that might have been expected after the large rise in the number of private farms. In only a few of these countries were agricultural service cooperatives established which lasted for a considerable time.

In eastern Germany, by contrast, the government has had no role in the redevelopment of agricultural service cooperatives; all it did was to provide a suitable legislative framework. Whenever potential members wanted to set up a service cooperative, the state gave them the same sort of support offered to the reconstruction of any other type of other agricultural business form, i.e. investment grants in the start-up phase. Here, however, unlike all the other socialist transition countries, they could draw on the smooth-functioning western German cooperative system. Information campaigns, training, and advice could easily be requested from experts in western Germany. Because of the comparatively large

average farm size, only around 200 agricultural service collectives were established in eastern Germany. As a result of mergers, their number has been continually on the decrease over the course of the last few years (RÖSLER, 2014).

In China and Vietnam state authorities have not only implemented a suitable legislative framework, they have also played a role in providing information, training and financial support. In both countries local administrations have given huge support to the setting up of service cooperatives, although developments have followed different paths. In Vietnam the government was intent on transforming as many former collective farms as possible into agricultural service cooperatives after the land was distributed amongst the farmers. The government also enabled new service cooperatives to be set up from scratch. In China, by contrast, the former collective farms were completely liquidated, but the farmers could, if they so wished, enter into informal cooperation. Not until about 25 years after decollectivisation was a law on cooperatives passed, permitting the establishment of agricultural service cooperatives (SULTAN and WOLZ, 2012). In both countries, however, doubts exist as to whether these cooperatives can fully realise the three fundamental roles of members as users, supervisors and financiers. The legislation appears at least to offer a step in this direction.

Prospects for Central Asia

This paper has discussed the need and options for the development of agricultural service cooperatives in Central Asia. After independence, the restructuring of agriculture gave rise to new forms of farm dominated by small family farms, which currently play an important role for national agricultural production and rural employment. As a result of farm fragmentation and the disparity between an infrastructure for supporting agriculture, which is oriented towards socialist farm types, and the predominance of small farms, agricultural service cooperatives are back on the political agenda.

In principle it is conceivable that at a time when farmers are not able to set up service cooperatives on their own initiative, the government should engineer this development. This assumes, however, a realistic understanding of the economic and social requirements for efficient cooperation between farms, and of the behaviour of farmers (GOLOVINA and NILSSON, 2011). Preliminary studies show, however, that policymakers only have an extremely limited understanding of these two vital aspects. Instead of reintroducing large, state-managed agricultural enterprises under the guise of forming cooperatives, the governments should focus on creating the necessary legal framework for real farmers' cooperatives. They should also support information campaigns, training and advice relating to how agricultural service cooperatives are set up and how they operate on a day-to-day basis ("capacity building"). They should not,



Local produce on sale in Central Asian markets



however, meddle in issues of personnel and the course of daily management (LERMAN, 2013). Currently the prospects for self-sustaining agricultural service cooperatives in the region are very modest.

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USAID agricultural development project in Georgia

Russian consumers' attitudes towards health-enhancing foods – The case of anthocyanin-rich bakery products

IRINA DOLGOPOLOVA, RAMONA TEUBER, VIOLA BRUSCHI

Introduction

Several studies have reported a growing interest amongst Russian consumers in health-enhancing foods (KOTILAINEN et al., 2006; POPOVA et al., 2010; USDA, 2012). This development is usually attributed to rising per-capita incomes and diets changing towards more Westernized food patterns. Currently, most foods that are marketed as having health benefits on the Russian market are dairy products, but the consumption of functional bakery products, i.e. bakery products with ingredients which are supposed to support a healthy diet, is on the increase (AGRICULTURE and AGRI-FOOD CANADA, 2011). One positive ingredient which has not yet been associated with bakery and cereal products, but has attracted growing interest in recent years both from researchers as well as from food manufacturers, is anthocyanin (LI and BETA, 2011). Anthocyanins (ACNs) belong to the group of flavonoid compounds and are responsible for the red, purple and blue colour of many fruits and vegetables. Anthocyanins have been shown to be strong antioxidants and there is evidence that they possess anti-inflammatory, anticancer, antidiabetic, and ocular

health-enhancing properties (ABDEL-AAL et al., 2014). Usually the intake of ACNs is highly seasonal, since the major sources of ACNs are red and dark berries such as blueberries, blackberries and blackcurrants. However, anthocyanins are also present in blue and purple wheat grains. These blue and purple wheat varieties naturally contain a higher amount of anthocyanin, but until now have yet to be cultivated on a large scale due to lower yields in comparison to the high-yielding wheat varieties currently available (ETICHA et al., 2011).

Even though these grain varieties seem to be highly promising from a public health perspective, in that they have the potential to ensure a consistent daily consumption of ACNs, no knowledge exists on how consumers would respond to cereal products derived from such grain varieties. Previous studies highlight that the acceptance of food with health benefits is dependent on a range of factors such as the product itself, the product-nutrient combination and the perception of the information given on the health benefit (i.a. HELLYER et al., 2012; SÍRÓ et al. 2008). This paper will address these research issues for the first time for Russian consumers by

investigating the acceptance of health-enhancing food in general, and in particular anthocyanin-rich bakery products derived from purple wheat.

Focus group analysis

We used a mixed methods approach, i.e. a combination of qualitative and quantitative data, to gain an empirical insight into Russian consumers' perception of diet and health in general, and more specifically of anthocyanin-rich bakery products. To begin with, qualitative data was collected from four focus group interviews with a total of 30 participants in December 2012 in Moscow and Irkutsk. Moscow and Irkutsk were chosen to allow us to obtain data from cities reflecting different regions and living conditions in Russia. Moscow, with approximately 12 million inhabitants, is the capital and largest city of the Russian Federation. It is often considered to be different from other parts of Russia due to its economic prosperity and the fact that most of its citizens are assumed to be influenced by Western trends. Irkutsk, with around half a million inhabitants, is located in Siberia close to Lake Baikal, a rather remote location. Income levels there are far below those in Moscow and also the influence of Western trends is assumed to be significantly lower.

Table 1 presents the socioeconomic characteristics of the focus group participants. The ratio of male to female participants was 50-50 in both cities. The age structure was heterogeneous, ranging from 22 to 73 years. Most participants possess a postgraduate degree

and earn an average monthly income of 30,000-60,000 rubles. Less than one third of the sample said they were smokers, and even fewer stated they consumed alcohol on a regular basis.

The focus group interviews were semi-structured using a guide, and covered the following topics: (i) consumers' attitudes towards, and knowledge about, foods with health benefits; (ii) consumers' intentions to eat foods with health benefits, specifically anthocyanin-rich cereal products; (iii) factors influencing consumers' decisions to eat anthocyanin-rich cereal products; (iv) the willingness to pay a price premium for anthocyanin-rich wheat products; and (v) the perception of old grain varieties and the role of traditional products in their diets. The last point was discussed with the assumption that this could represent an important factor in the acceptance of health-enhancing products derived from purple wheat in Russia. Since purple wheat is an old variety and naturally contains higher amounts of ACNs, this product differs to other functional food products that derive their functional propriety from enrichment or artificial addition of some ingredients. During the discussions a short slide presentation was used to inform participants about anthocyanin and its health effects. The presentation also included information about old (ancient) grain varieties and their positive effects in terms of biodiversity and nutritional contents.¹

¹ Old grain varieties generally possess a higher nutritional content than modern varieties, since significant negative correlations between grain yield and grain mineral concentrations have been reported due to a dilution effect (FAN et al., 2008; ZHAO et al., 2009).

Table 1: Characteristics of focus group participants

City	Moscow	Irkutsk
No. of participants	14	16
Male/Female	7/7	8/8
Age (in years)		
Income (in rubles) ^{a)}		
Education (highest degree) ^{b)}		
Undergraduate level	1	4
Postgraduate level ^a	13	12
Presence of children under 16 years in household		
Yes	2	5
No	12	11
Smokers	4	3
Regular Alcohol Consumption (few times a week or more)	1	2

Notes: ^{a)} Based on an exchange rate of 1 ruble = 0.025 € (December 2012) the income ranges in euros are (rounded to the nearest euro): <744 €, 744-1,488 €; 1,488-2,231 €; >2,231 €.

^{b)} The large number of participants with a postgraduate degree can be explained by the fact that Russia has one of the highest rates of university degrees and one of the largest tertiary systems in the world (UNESCO, 2009).

The results of the focus group discussions can be summarised as follows. It has been known for many years that Russian consumers are extremely concerned about contamination through "chemistry", and this topic featured prominently in our focus group discussions. Foods that consumers regard as healthy are unprocessed and without any additives, pesticides or genetic modification. For this reason, home-grown food was often cited as safe and healthy. Indeed, many Russians rely on private household plots as a source of food, and this has a significant impact on their attitudes toward foodstuffs. Interestingly, most participants in our study cited meat and dairy products as healthy foods. This probably

reflects the fact that during the Soviet era livestock production was heavily subsidised and dietary recommendations encouraged a high intake of meat and dairy products, a habit which still persists (LIEFERT, 2004; DELLAVA et al., 2010). This lack of awareness about the negative health effects of an excessive consumption of animal-based products seems to be a major point of concern from a public health perspective.

Functional food is generally well regarded, but only in the case of natural functional food products which, according to our findings, include kefir, sour milk, sour cheese, and blueberries. The general opinion is that naturally healthy products exist and there is no need to

add specific nutrients to products or modify products. Everything the human body needs can be obtained from natural products. In this context, however, several (mainly older) participants argued that nowadays the quality of food is not as good as in the past, and thus there is actually a need for such health-enhancing foods.

Due to the fact that anthocyanin-rich cereals are naturally rich in anthocyanin, the products were fairly well regarded overall and not rejected per se, as would have been the case if the anthocyanin was added artificially. Technological engineering, genetic modification or artificial addition of compounds seem to be strong criteria for rejecting foodstuffs. It also became clear that consumers are not willing to compromise on taste because of health factors. Moreover, most participants consider

novel foods as risky, and novelty-seeking is minimal even though the participants' acceptance of novel foods seems to be more pronounced in Moscow than in Irkutsk. In general, there is a pronounced scepticism towards new food products in the sense of not being traditional or proven over time. The focus group interviews allowed us to gain a deeper insight into a topic not studied so far with regard to Russia.

Experimental auctions

Based on the findings from the focus groups we developed a questionnaire and an experimental auction for the quantitative data collection. The experimental auctions were conducted in December 2013, again in Moscow and Irkutsk. In total, 212 participants, mainly



Focus group discussion

students, took part. Table 2 summarises the statistics of our sample.

The auction procedure was as follows. First, participants were asked to complete a pre-auction questionnaire in which they provided information on, amongst other things, (i) socio-demographic variables, (ii) consumption frequency of bread and biscuits, (iii) the importance of different attributes in their purchasing decisions for bread and biscuits, (iv) beliefs about the connection between food and health and (v) knowledge about anthocyanin and old grain varieties. Second, after completing the questionnaire, participants were given 200 rubles (approx. 5 euros) and were familiarised with the auction procedure. Third, participants were asked to post bids for an anthocyanin-rich bread roll and a 100g packet of anthocyanin-rich biscuits after being exposed to two different information strategies. One presented the health benefits of anthocyanin first. The other began

by outlining the benefits of old grain varieties, i.e. higher nutritional content and greater biodiversity.

Bids submitted by participants during the auction allowed us to analyse the willingness to pay (WTP) for anthocyanin-rich bakery products. Figure 1 illustrates the mean bids for the whole sample. WTP1 refers to the bid for the base product (first round), WTP2 refers to the bid for one additional attribute (either anthocyanin or old variety – second round), and WTP3 refers to the final bid after all information was given (third round). WTP Δ ant and WTP Δ old refer, respectively, to the marginal willingness to pay for the attribute anthocyanin and old variety.

As can be seen from Figure 1, each attribute is valued positively, i.e. on average bids increased after each round of information. This would not have been particularly surprising had the study been carried out in a Western country such as Germany, where most people

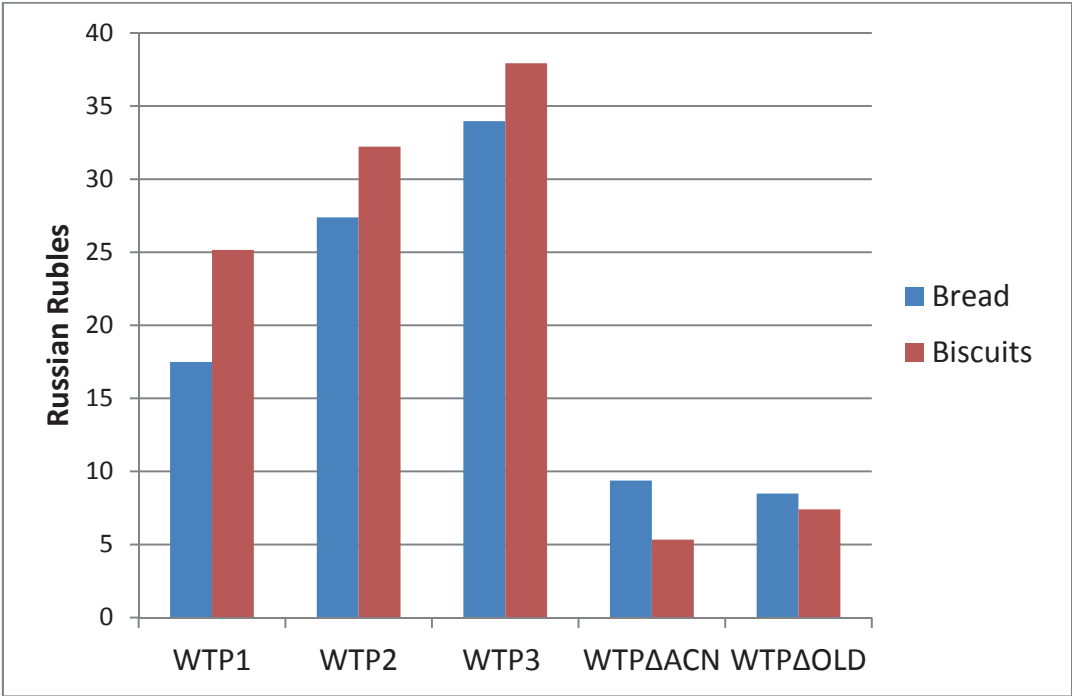
Table 2: Characteristics of auction participants (N=212)

Variable	Definition	Mean	St. dev.
Gender	1 = male; 2 = female	1.726	0.447
Age	age in years	22.322	6.617
Education	Educational level 1=BS; 2=MS; 3=PhD	1.224	0.451
Income (Russian roubles)	1=<30,000; 2=30,001 - 60,000; 3=60,000 – 90,000; 4=> 90,000	2.633	1.006
Nutrition-related illnesses	1=yes; 2=no	1.726	0.447
Sporting activities	1=yes; 2=no	1.604	0.490
Smoking	1=yes; 2=no	1.811	0.392
Alcohol consumption	1=every day; 2=few times a week; 3=few times a month; 4=few times a year; 5=never	3.526	0.818

trust the food supply-chain actors. But seeing as Russian consumers are highly suspicious of new food products, this is a remarkable finding. Another interesting point is the different marginal WTP for the two different information strategies employed during the auctions. The results indicate that, in the case of bread, the anthocyanin information is valued higher than the old variety information, while the opposite can be observed for biscuits. These results indicate that it might be necessary to design different product-specific marketing strategies for anthocyanin-rich bakery products.

Subsequent analyses of factors influencing consumer's willingness to pay for anthocyanin-rich bakery products highlighted that female students, students who had already purchased foods with health benefits before and students for whom healthy and traditional are the most important attributes in choice of bread exhibited a higher willingness to pay for anthocyanin-rich bread. In the case of biscuits only the variable "previous purchase of foods with health benefits" was significant.

Figure 1: Mean bids in Russian Rubles, pooled for Moscow and Irkutsk



Conclusions

Encouraging a healthy diet represents a major challenge for Russian policymakers in their attempts to combat the growing mortality rate connected to chronic, diet-related diseases. The regular consumption of anthocyanin-rich bakery products could be a promising strategy to improve the quality of diets.

The findings presented above demonstrate that a potential market for anthocyanin-rich cereal products does exist in Russia. Most participants showed an interest in the general idea of cereal products naturally rich in anthocyanin. Since the presence of anthocyanin in a food has to be taken on trust, it needs to be signalled. In Russia, the widespread mistrust of food labels and advertising may represent a major barrier for entering the market. Thus a successful marketing strategy must put familiarising consumers with the product as a priority. Here, the distribution channel might play an important role. Selecting well-trusted retailers like specialised shops and bakeries could facilitate the establishment of trust relationships and consequently increase the willingness to buy these products.

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Focus group discussion

An evaluation of social transfers in rural China

LENA KUHN

Absolute poverty in rural China

In its Millennium Declaration of 2000 the General Assembly of the United Nations cites combating poverty across the globe as one of the major challenges of the coming decades. One of its objectives, designated as "Millennium Goals", demands the halving of absolute poverty by 2015, taking 1990 as the reference year (UNITED NATIONS, 2014).¹ From a global perspective this target is likely to be met in 2015, especially as the poverty rate of the most populous country in the world, the People's Republic of China, had already fallen from 60.2 % in 1990 to 11.8 % in 2009.

In spite of this, the World Bank calculated that in 2009 an average of 21 % of the population of China's rural areas still lived below the poverty threshold of 1.25 PPP\$ per day (cf. Figure 1). Rural infrastructure and economic output remain substantially behind those of the big

cities. The marked disparity between urban and rural areas is partly a consequence of development policy, which has long prioritised rapid growth in industrial centres. In addition a strict registration system (hukou), which persists today, severely limits the permanent migration of the rural population to more affluent urban areas. Unlike many other transition countries, therefore, absolute poverty in China is currently a predominantly rural phenomenon.

For a number of years the Chinese state leadership has placed greater emphasis on rural development to counteract this disparity between cities and the country-side (Mu, 2014). Since the turn of the millennium in particular, investment in infrastructure, education and health has been increased. At the same time, changes in legislation have made freedom of movement easier within China, as well as adapting property rights and the financing of rural communes to new requirements. A new pension system (CAI, GILES, O'KEEFE and WANG, 2012; WANG, 2006), a health insurance scheme (LEI and LIN, 2009), social welfare (THE WORLD BANK, 2011: pp. 79ff.) and programmes to improve the education system should

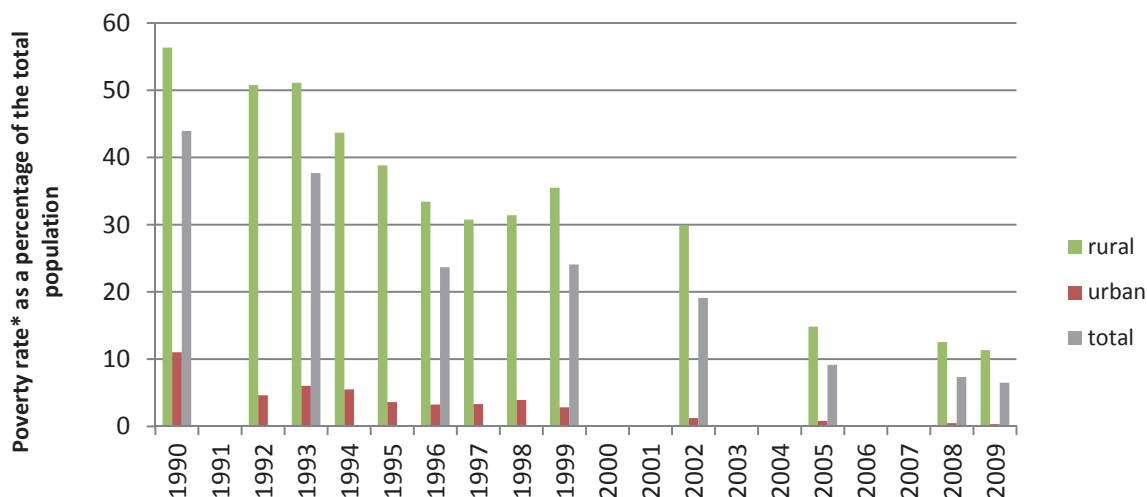
¹ When measuring absolute poverty the choice of poverty threshold is crucial. Its definition in fact varies considerably between regions and over time. Currently absolute poverty is defined internationally as an income of less than 1.25 PPP-\$ per person per day. One PPP-\$ represents a sum of money with the same purchasing power of a US dollar in the USA.

reduce the gap between rural living standards and those of urban areas.

Because of its large scope, it is worth highlighting from an array of different programmes involving direct social transfers the Rural Minimum Living Standard System (RMLSS or "Rural Dibao"). The RMLSS was introduced to guarantee a minimum living standard to households below a regional income threshold by means of direct monetary payments. The programme is specifically aimed at people who through disability, illness, age, or other factors, which are no fault of their own, cannot generate an income or only a very low one. The payments vary between regions, but national legislation stipulates

that they should in every instance cover the costs of food, clothing and accommodation (STATE COUNCIL, 2007). Since its introduction the take-up of this social benefit has been continually on the increase. At the end of 2012, around 28.2 million households were receiving transfer payments, corresponding to 8.3 % of the entire rural population. In 2012, the overall outgoings were 71.8 billion RMB (renminbi), the equivalent of around 9.2 billion euros. About two-thirds of the programme grants are financed by the central government, whereas rural communes (township and county level) are released of all financial responsibility. The administrative costs, though, have to be covered by the local governments

Figure 1: Absolute poverty in China



Source: POVCALNET.

Note: * Poverty threshold: 1,25 PPP\$ (2005) per day.

themselves (WANG, 2012, p. 155; MINISTRY OF CIVIL AFFAIRS, 2014).

This paper is based on a research project examining this transfer system, which is the result of close cooperation between IAMO researchers and the Center for Chinese Agricultural Policy Research (CCAP), a research institute at the Chinese Academy of Sciences. The study brings together essential information about the legislative frame-work and the administrative implementation of the RMLSS, and analyses the effectiveness and accuracy of fund allocation, so-called targeting.

Data and methodology of the evaluation

A variety of information sources are available to assess the effectiveness and accuracy of the programme. The easily accessible data include, besides existing Chinese and Western research papers, the programme's legislative texts and regulations, as well as statistics from the ministries concerned relating to numbers participating in the programme and financial volumes. We are also using information gathered from more than 1,200 households about the receipt of transfer payments, the living standards of beneficiaries and non-beneficiaries, possible weaknesses in targeting and the subjective assessment of the system. Qualitative interviews with individual households and employees of social welfare offices and village administrations in focus regions provide additional information about the implementation and weaknesses of the programme.

The assessment of the RMLSS took place in three stages. Using publicly accessible data, we first analysed the programme's structure, goals and progress. Another task was to evaluate the extent to which the system is meeting its ambitious targets. In essence we were examining whether a) all eligible and interested households were receiving payments, without excessive amounts of money ending up with the administration or ineligible persons and households, and b) whether beneficiaries were receiving sufficient levels of financial assistance to cover their basic needs. A way of addressing this second question was by comparing need (poverty gap) with actual transfer sums. From the information gathered we were able to draw up concrete recommendations for the improvement of the programme in the third stage of our assessment.

Structure, aims and course of the transfer programme

As a general rule, all transfer systems have great difficulty providing access to social transfers for as many eligible beneficiaries as possible, while preventing abuse of the system. The social structure in rural China presents its own particular challenges, which require innovative solutions. Whereas in Germany, to take an example, a high data density and geographical proximity between administrative centres and recipients allow a close network of monitoring and positive incentives, the Chinese legislature has to rely more heavily on self-monitoring by the village community.



Rural middle-class home



Home of someone on social welfare



Farmer's wife

At the start of the application process, therefore, household applications are first checked by staff at the village administration, after which a committee of village leaders and villagers' representatives discusses the needs of applicants and issues an assessment of the eligibility of applicants. Partly to avoid cronyism, the decision over whether to accept an application should not be taken locally, but by social welfare and financial authorities at county level. Details of applicants and a list of the most recently approved households are publicly posted several times during the application process, and citizens are requested to report any suspected cases of falsified information to the local government. Once households are accepted onto the programme, according to the regulations they should be checked, unannounced, once a year. The effectiveness of this system is helped by a close-knit social structure in the village, a weak emphasis on the private sphere (cf. YAO-HUAI, 2005; McDUGALL and HANSSON, 2002) and the comparatively low level of social stigmatisation of dependency on social welfare (cf. MA and ZHAO, 2006; ZHOU, 2012).

However, regulations from the national legislature and instructions from the local administration to staff responsible for the programme reveal the fundamental difficulties facing a state as large as PR China when introducing a comprehensive social welfare system. Although the legislature is attempting to bring in a homogeneous and universal system, it needs to factor in the different requirements of very heterogeneous regions. Thus the aforementioned programme-specific poverty threshold,

as well as secondary criteria (exclusion factors), work processes and allocation formula are determined at regional level. Our data suggests that this interregional heterogeneity not only reduces transparency, but can foster imbalances and impair accuracy too.

The size and administrative structure of the country also have a considerable impact on the implementation of the programme. The central government and the two administrative levels below it are chiefly responsible for formulating the general legal framework and the financing of the system. The county and township levels, on the other hand, are responsible for allocating funds to regions and households, processing applications and monitoring households before and during the transfer of monies. In practice, the social welfare offices of these two latter administrative levels often have to rely on the assistance of the village administration in executing their tasks because of the large volume of manpower required. However, the close-knit social structure and many interdependencies within small villages can significantly weaken some of the aforementioned control mechanisms (see also WANG, 2012).

Another potential weak spot of the system could be in the provision of the necessary credits. Although on average two-thirds of the grants are financed by the central government, paying for the remainder – especially the administrative costs – can represent a large burden for regional administrations, particularly in poorer districts with high levels of social welfare and a low tax basis.



Traditional farmhouse



New build

Measuring the efficiency of the system

In fact, by using household data, we have already been able to find some empirical evidence for the mistargeting of social welfare payments. Here the exclusion of poor households due to the patchy coverage of potential beneficiaries seems to be a bigger problem than welfare fraud by non-eligible households. This finding is consistent with previous studies (WANG, 2012; YI and ZHANG, 2011).

However, the absolute and relative levels of transfer payments are rather low: on average, each beneficiary throughout the country received around 91 RMB per month in 2011, about 16 % of the average rural income. By way of comparison, the total of basic provision and housing benefit from the German SGB VII system in 2011 came to 764 euros, around 25 % of average national income. In absolute terms the transfer sum for a single person without children in rural China, adjusted for purchasing power, was about 0.8 PPP\$ per day, compared to a benefit of around 29.9 PPP\$ per day in Germany (see Table 1).

The reason often given for the comparatively low transfer sum is that farmland functions as a natural social insurance. Most farming households have a small plot of arable land which can be farmed for self-subsistence when other income sources are lacking. This fact also influences how the beneficiaries are determined. As outlined above, social benefits from the Rural Dibao

are aimed at people who, for reasons of age, disability or illness, are not able to provide a livelihood for themselves. Unlike in the German welfare system, those who are fit for work are categorically excluded. In view of this narrow definition of beneficiaries, the low levels of transfer payments can hardly be explained by lack of incentives to work. Moreover we can assume that a person eligible for welfare is almost completely reliant on transfer payments and barely has an income of their own. This means that it is questionable whether, given the average transfer of around 1,090 RMB per person per year, all beneficiaries can attain the national rural poverty threshold of 2,300 RMB per year.

Policy recommendations and outlook

The case-study model designed by YIN (2003), which depicts mechanisms that could lead to the exclusion of people eligible for welfare (exclusion) or the trickle of monies to non-eligible persons (leakage) (cf. Figure 2), is ideally suited to working out suggestions for optimising targeting, the basic problem of most transfer programmes.

Mistargeting can result on the one hand from specific features of individual regions, which are not directly connected to the transfer programme, but nonetheless have an impact on the implementation of the system. These external factors, such as a low level of economic development and a lack of human capital, are difficult to influence in the short term, however. At best their

Tabel 1: A comparison of Chinese and German welfare payments

	Germany (SGB XII)	China (Rural Dibao)
Monthly transfers (in national currency)	764*	90,94**
Transfer per day (in PPP dDollars)****	30,32	0,82
Relationship of transfer payment to average national income***	24,89%	15,64%

Notes: * Standard requirement category I (single, childless adults, see *BUNDESMINISTERIUM FÜR ARBEIT UND SOZIALES [FEDERAL MINISTRY OF WORK AND SOCIAL WELFARE], 2014*) plus average rental costs of welfare recipients (see *STATISTISCHES BUNDESAMT [FEDERAL OFFICE OF STATISTICS], 2014*).

 ** Average national Dibao disbursal per recipient (*MINISTRY OF CIVIL AFFAIRS, 2014*).

 *** Average income in rural China (*NATIONAL BUREAU OF STATISTICS OF CHINA, 2012*).

 **** 2011 PPP conversion factor used (private consumer spending in national currency per intl. \$), see *WORLD BANK, 2014*.

impact on aspects of the programme can be diminished. Here are some of the measures we recommend:

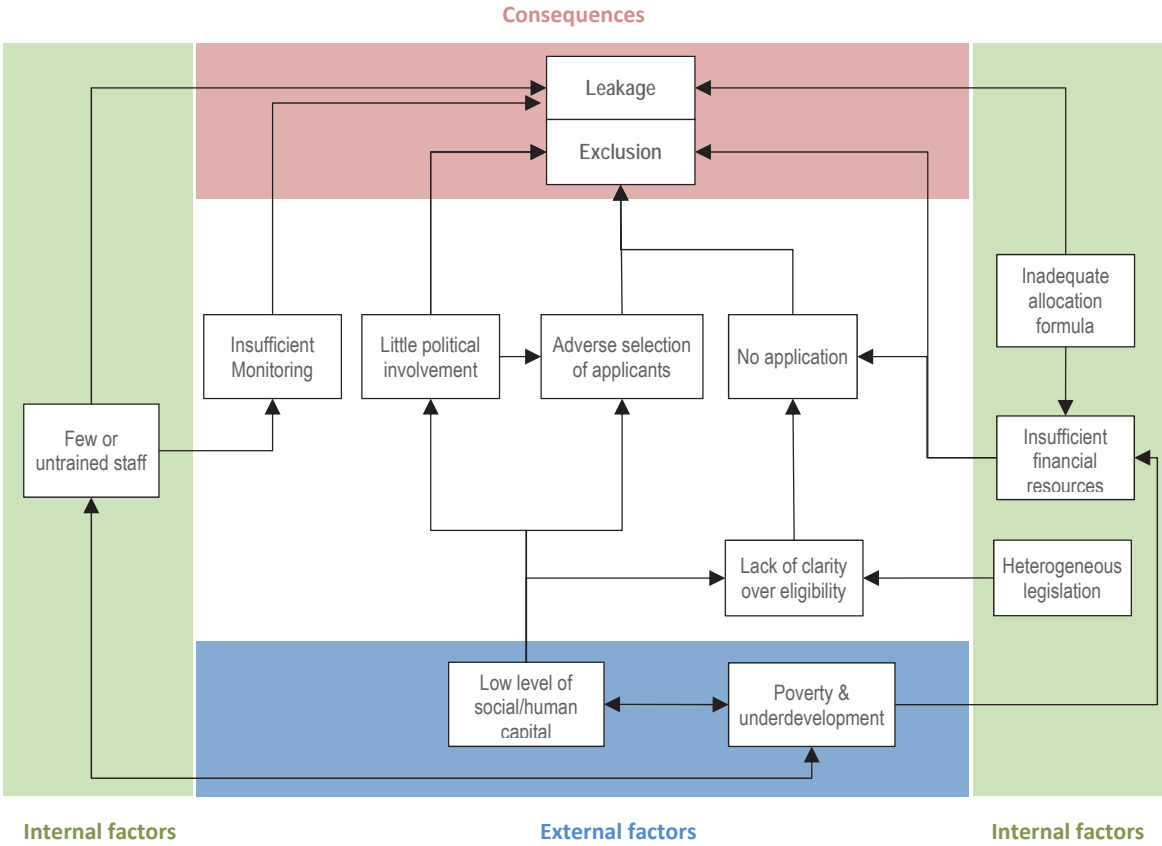
- a) Targeted communication of programme contents and schedule to potential beneficiaries,
- b) Greater involvement of administrative staff at the commune level (township and county)
- c) But less decision-making power at the village level, e.g. the village administration assessing applications
- d) Notices and public evaluation at the sub-village level (rather than village level) to improve public participation in these measures.

But the design of the programme and its implementation can also lead to mistargeting. These factors inherent in the system include allocation formulas or allocation processes by which financial resources are not allocated

to where they are actually needed between regions. A shortage of personnel in the local authorities responsible for the programme or insufficient on-site training for staff are further problems. Factors inherent in the system can be regulated more simply. We consider the following to be important measures here:

- a) A standardisation of work and decision-making processes to improve transparency for beneficiaries and administrators.
- b) An optimisation of the funding allocation formula to prevent budgetary shortages or surpluses within individual administrative regions.
- c) A provision of money for additional and better-qualified staff in communes with a high poverty rate and thus where a greater workload is required.

Figure 2:



Source: Own depiction.

By evaluating the most recently obtained qualitative and quantitative data we hope to substantiate these points. In general it should be noted that in a large number of regions similar measures have already been undertaken and, particularly in the last few years, there

has been considerable success in the optimisation of targeting. Especially in those regions that are less developed economically there is still a great need for an improvement in the allocation of state funds to combat poverty efficiently.



Household interviews

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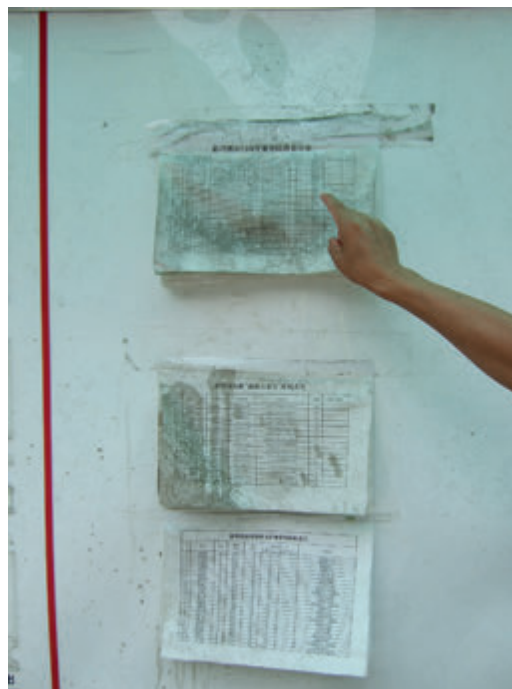
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Communal social welfare noticeboard



List of people on social welfare

Why do we need civil society organisations in agriculture?

VLADISLAV VALENTINOV, LIOUDMILA CHATALOVA

In many parts of the world civil society organisations (CSOs) provide active support to agricultural and rural development. The general term CSO covers an extremely wide variety of voluntary and democratic organisations that belong neither to the state nor to the private for-profit sector (ILIOPOULOS and VALENTINOV, 2009; VALENTINOV, 2009a; 2012a).

Today CSOs support agricultural production and improve the quality of life in rural areas in a variety of ways including the strengthening of market power of small farms, the representation of minority political interests, the provision of social and production-related services, and the promotion and diversification of regional infrastructure development.

The tasks of CSOs generally depend on the economic development of the respective countries. Whereas in Western countries CSOs support the transition from *government* to *governance*, i.e. from the state's dominance in the economic process to the increasing engagement of many more actors, in developing countries its primary task is to increase the efficiency of poorly functioning markets (VALENTINOV, 2008a).

How can we explain CSOs?

Currently, the chief discipline for explaining CSOs remains new institutional economics, which assesses the economic function of CSOs based on the same logic that is applied to profit-oriented firms (VALENTINOV and ILIOPOULOS, 2013). According to this logic, a governance structure is changed when the change can economise on transaction costs and thus increase efficiency (VALENTINOV, 2007; 2011; 2012b). While this explanatory approach is not wrong, it does not tell the full story about CSOs, especially if we take into account the endemic features of rural areas explained below.

From exchange to self-provisioning

Transaction cost economics assumes that transactions always occur, whether through market, hierarchies or other governance structures. But the typical features of rural areas, such as low population density, poor infrastructure and geographical dispersion, induce other types of transaction costs that we call rurality-specific.

These restrict the social division of labour in rural areas, preventing transactions from occurring – a phenomenon which is not dealt with by current transaction cost economics (VALENTINOV, 2009a).

In current transaction cost economics, high transaction costs can be reduced by changing the governance structure, for example from the market to a hierarchy (VALENTINOV, 2008b). But this overlooks the fact that rurality-specific transaction costs are not affected by such a change. The *rurality* makes certain areas of economic activity unprofitable, irrespective of which for-profit governance structures guide economic behaviour. What is more, the more strongly pronounced the rural characteristics, e.g. in the large, sparsely populated, poorly developed areas such as in the expanses of Eastern Europe, the more negative their impact on the rural economy, and thus the greater the need for alternative governance structures such as CSOs.

If certain goods and services are not sufficiently provided by for-profit governance structures in rural areas the logical consequence and the only remaining alternative is the transition to self-provisioning. The objectives of self-provisioning are then reflected in the objectives (missions) of rural CSOs, such as rural partnerships of cooperatives. Thus the CSOs do not economise on transaction costs; rather they respond to the fact that these costs cannot be reduced in a for-profit sector context.

From transaction costs to social costs

Transaction cost economics views transactions as internal operations of an operationally closed system of the economy which ignores the complexity of the social and ecological environment in which this system is embedded (VALENTINOV and CHATALOVA, 2014).

Although the economic system disregards the environment in the aforementioned way, it is metabolically dependent on it. Disruptions of this metabolism generate a phenomenon known as social costs, i.e., an adverse effect of the economic system on the ecological balance and human health (VALENTINOV, 2014a; 2014b). Social costs are not included in the profitability or efficiency calculations, which means that even if for-profit firms economise on transaction costs, they can still generate social costs. The social costs are not infrequently the consequences of this economising.

The role that CSOs play here is in absorbing and neutralising social costs. From the sustainability perspective this role is even more important than economising on transaction costs. The new institutional economics approach, which takes account solely of the internal operations of the economic system, is blind to social costs and thus fails to fully appreciate the contribution of CSOs.

From economic efficiency to a broader ethical base

The exclusion of social costs within the paradigm of new institutional economics raises the question of the moral basis of economic behaviour. Here it is clear that the reduction of social costs is detached from the goal of economic efficiency. In fact what happens is that social costs are generated as a result of striving for efficiency (VALENTINOV, 2013a; 2013b).

The aims and tasks of rural CSOs thus exhibit a range of ethical aspirations which cannot be classified under the efficiency criterion (HIELSCHER et al., 2012; VALENTINOV, 2009b; 2012a; 2012b; VALENTINOV et al., 2013). These aspirations chiefly relate to quality of life and human dignity, e.g. issues that are unrelated to utilitarian criteria and the Pareto principle.

Some examples of alternative ethical criteria, which correspond to the ethical aspirations of CGOs include the *social value principle* (Marc Tool), the *instrumental value* (Veblen, Dewey), the *reasonable value* (Commons) or social justice (Rawls).

Concluding remarks

CSOs have been criticised by advocates of new institution economics (ALCHIAN and DEMSETZ, 1972) for their attenuated property rights and the resulting inefficiencies (VALENTINOV and ILIOPOULOS, 2012). But, as outlined above, it is not the task of CSOs to follow maxims of efficiency.

Rather, their primary function is to make the economic system sensitive to the needs of its social and ecological environments.

Unsurprisingly, new institutional economics cannot account for this function and thus needs to be supplemented by an alternative conceptual framework that admits a broader range of moral criteria.

Important building blocks for developing this framework can be found in heterodox institution economics and systems theory approaches, exploring the ability of the economic system to transcend purely economic criteria in order to become more socially and ecologically sustainable (VALENTINOV, 2012a; 2012c; 2012d; WANDEL and VALENTINOV, 2014).

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Plenary session, IAMO Forum 2014

IAMO Forum 2014: "The Rise of the 'Emerging Economies': Towards Functioning Agricultural Markets and Trade Relations?"

DANIELA SCHIMMING, MARIANNE MÜLLER-ALBINSKY, INNA LEVKOVYCH

The IAMO Forum 2014, "The Rise of the 'Emerging Economies': Towards Functioning Agricultural Markets and Trade Relations?", was held on 25-27 June 2014 in Halle (Saale). Besides the Leibniz Institute of Agricultural Development in Transition Economies (IAMO), co-organisers of the event were the Agricultural & Applied Economics Association (AAEA) and the International Agricultural Trade Research Consortium (IATRC). The IAMO Forum 2014 was supported financially by the German Research Foundation, the Rentenbank, the H. Wilhelm Schaumann Foundation, the Ministry of Sciences and Economics Affairs of Saxony-Anhalt, the City of Halle (Saale) and KWS Saat AG.

In view of rapid population growth and the increasing demand for food, global food security is one of the biggest challenges of the 21st century. At the same time, important emerging countries are becoming both leading consumers and suppliers of agricultural goods. Global processes, such as the future institutional structuring of world agricultural trade, food security and the development of the planet's climate, depend largely on how global and domestic agricultural and food markets

function. It is still uncertain whether the economic dynamics of the "emerging economies" will intensify the pressure on the demand side, or whether their increases in agricultural productivity will be large enough to be able to make a substantial contribution to global food security. What needs to happen on these markets in order to mobilise previously untapped agricultural potential as environmentally and sustainably as possible, and also help generate rural incomes on a broad basis?

The overall objective of the IAMO Forum 2014 was to discuss these issues in an extended dialogue between internationally renowned academics and decision-makers from politics and business, with a focus on debating solution strategies. More than 150 participants from 22 countries embraced this opportunity. The most recent scientific findings and solution strategies were presented at three plenary events and four special sessions. In thirteen parallel sessions participants then had the opportunity to explore the various key questions in greater detail, using concrete examples. Besides the presentation of various theoretical, methodological and empirical approaches, which reflect the current status of research, there were debates as to whether

and how individual research findings can be applied to other transition countries and regions.

Development potential in emerging and transition countries

Professor Thomas Glauben, director of IAMO, opened the first day of the IAMO Forum 2014 conference with an introductory speech on the topic, addressing the increasing global demand for food as well as processes of agricultural development in recent years. Glauben sees

enormous potential, especially for emerging and transition countries such as Russia and Brazil, to increase agricultural production, expand access to global agricultural markets and make a substantial contribution to global food security.

The first plenary session, "Emerging Economies – Are they the Future Global Food Basket?", was focused on the agricultural potential of emerging and transition countries and the decisive factors governing this. William Liefert, agricultural expert from the United States Department of Agriculture (USDA), mainly attributed the



Opening speech by IAMO Director Thomas Glauben, IAMO Forum 2014

increasing cereal production in Russia to the rising per-hectare yields and the sharp drop in demand for feed as a result of the collapse in meat production. He believes that, with investment in new technologies and changes in institutional framework, per-hectare yields in both Russia and Ukraine can be substantially increased. Studies suggest, for example, that Ukraine could achieve yield increases of between 10 and 40 per cent. William J. Martin, Research Manager for Agriculture and Rural Development at the Development Research Group of the World Bank, highlighted a development rarely discussed in public: in spite of rising prices and price volatility, poverty in developing and emerging countries has not increased further. On the contrary, in the long term these trends seem to have a positive effect on reducing poverty. Reasons for this could be new training and income opportunities.

In a practical-focused session entitled "Wheat Supply Chains in CIS Countries: Challenges and Prospects" the business representatives Alexander Korbut, Russian Grain Union, Eugenij Gan, Union of Grain Processors and Bakers of Kazakhstan, and Volodymyr Lapa, Ukrainian Agribusiness Club, spoke about the increasing significance of their countries for global agricultural markets. Russia, Ukraine and Kazakhstan have enormous potential for cereal production and thus could make a crucial contribution to global food provision. However, high costs for transport and harbour infrastructure, poor institutional parameters – including serious legal uncertainty – and the current political conflicts are

serious obstacles preventing these countries from realising their export potential. Korbut also noted that soil degradation and erosion, lack of water in regions with large expanses of land, outdated technology and insufficient investment are impeding the exploitation of production and export potential in Russia.

Agricultural speculation and the volatility of food prices

The plenary session "Volatility and Speculation on Agricultural Markets" on the second day of the Forum addressed the claim by some civil society organisations that financial speculation with agricultural raw materials is responsible for rising food prices across the globe and thus for worldwide hunger. Harald von Witzke, Professor at the Humboldt-Universität Berlin, Germany, took issue with this view, arguing that the actual causes for the rise and increased volatility of agricultural raw materials prices lie elsewhere. On the supply side, growth in agricultural production is restricted by the limited resources available, climate change and increasing energy prices. At the same time, the demand for food is rising with increasing per-head consumption and population growth. The agricultural economist von Witzke emphasised that speculation cannot be identified as a main cause of high and volatile agricultural raw materials prices. Rather, agricultural speculation is a necessary market mechanism acting as an insurance for farmers against price risks. For this reason their functioning



Practical-focused session with Volodymyr Lapa (Ukrainian Agribusiness Club), Oleksander Perekhonchuk (IAMO), Alexander Korbuto (Russian Grain Union), Eugenij Gan (Union of Grain Processors and Bakers of Kazakhstan) (from r. to l.), IAMO Forum, 2014

on commodity futures markets should not be restricted by regulation. In his lecture "Bubbles, Food Prices and Speculations", Scott Irwin, Professor at the University of Illinois, USA, also discussed price development for agricultural raw materials on international stock markets in recent years. He came to the conclusion that although price bubbles were visible, these occurred only rarely and were of short duration. They also occur in phases of falling prices. No concurrence could be identified between price peaks and price bubbles, he said, which means it is impossible to pinpoint price bubbles as the cause of long-term price rises. On the other hand, Christopher Gilbert, Professor at the University of Trento, Italy, came to the conclusion that price bubbles move along the market, which is also termed the "Great Moderation". Consequently, investments in index funds are the direct cause of the occurrence of price bubbles.

In a session on "Perspectives on Global Food Security", organised by Ingo Pies, Professor of Business Ethics at Martin Luther University Halle-Wittenberg, Germany, the academics Christopher Gilbert, University of Trento, Italy, Scott H. Irwin, University of Illinois, USA, and William J. Martin, World Bank, USA, were interviewed about the possible causes and impact of volatile markets. Irwin disagreed with the assumption that so-called long only index funds have an influence on the price development of agricultural raw materials. Gilbert, on the other hand, refused to rule out a possible link, also explicitly emphasising the difference between an *influence* and an *economically relevant* influence. The two

academics agreed that the market would adjust relatively speedily to the new market conditions and that, in the medium term, cereal prices would fall, although not to their original level. World Bank Research Manager Martin pointed out that decoupling domestic markets from global agricultural markets would counteract the price increase for a short time, but in the longer term this would lead to considerably more pronounced price transmissions. Even if the academics remain divided over the question of who or what is responsible for the current price volatility, they do agree that state market interventions, such as export quotas, tend to have a negative impact on price development.

Challenges for international trade relations

In the plenary session on the final day of the conference, participants debated the opportunities and challenges of the Transatlantic Trade and Investment Partnership (TTIP), a free-trade agreement between the European Union and the United States, currently at the negotiation stage. The goal of this agreement is to foster economic growth in the participating countries through easier market access and better coherence of regulation. The TTIP is not chiefly aimed at the agricultural and food trade, but the stipulation of environmental and health standards, animal-protection provisions and lifting tariff restrictions will have a substantial impact on the (global) agricultural sector. By using a general equilibrium model to analyse the TTIP, Martina Brockmeier, Professor at University of Hohenheim, Germany,

forecast significant export increases between EU Member States and the United States. She observed that the United States' export share to the EU would rise by 64 per cent, especially for dairy products, beef and cereals. Brockmeier emphasised that the reduction of non-tariff trade barriers not only helps bring down prices, thus

increasing prosperity, but also has a considerable impact on agricultural trade. Even though most observers assume that the TTIP negotiations may lead to increases in sales and efficiency, there is a controversial ongoing debate about whether this free-trade agreement ought to be concluded.



Keynote Speaker William J. Martin (Weltbank), IAMO Forum 2014

In his research, Gopinath Munisamy from the USDA Economic Research Service, USA, is examining the impact of such a free-trade agreement on third parties such as Russia, Brazil or China, and addressing the impact of (bilateral) tariff and import quotas on their trade partners. Allan Matthews, Professor at Trinity College Dublin, Ireland, and Carmel Cahill, Senior Counsellor at the Organisation for Economic Co-operation and Development (OECD), Paris, France, noted that important trading partners in emerging nations are excluded by the TTIP and that non-participants would be discriminated against. The inclusion of other countries, such as Russia and China in a free-trade agreement for certain raw materials and goods, could be of great benefit to all those involved.

During a special session, Forum participants were given an insight into the research of two IAMO projects: "Global Food Crisis – Impact on Wheat Markets and Trade in Kazakhstan, Russia and Ukraine" (MATRACC), financed by the Volkswagen Foundation; and "Global Food Security and the Grain Markets of Russia, Ukraine and Kazakhstan," (GERUKA) funded by the German Federal Ministry of Food and Agriculture. IAMO academics, Gulmira Gafarova and Dmytro Serebrennikov presented their studies on the pricing behaviour of the RUK countries in the years 1996-2012 and the impact of the Russian export ban on wheat in 2010. The findings show that, for wheat exports, Russia exercises price discrimination against some importing countries. The export ban on wheat gave rise to a reversal of trade flows in the Russian regions.

Kym Anderson, Professor of Economics at the University of Adelaide, Australia, also presented the findings of his study on the impact of economic growth in China and India to 2030 on global food markets and the export activity of Latin America and Sub-Saharan Africa (SSA). Michael Carter, Professor at the University of California, USA, reported on his field research in Kenya and Mali into agricultural microinsurance.

In a session organised by the Food and Agriculture Organization of the United Nations (FAO), "The Future of Trade Agreements in the CIS", participants discussed the political implications of various regional and international trade agreements for the CIS countries. In examining the subsidy policies of selected CIS countries in relation to WTO criteria, Lars Brink from Virginia Tech in Canada observed that only Georgia is pursuing a "Green Box" policy. Ekaterina Krivonos from the FAO focused on how Russia's joining the WTO has affected its agricultural support policy. Although Russia is gradually implementing the WTO's regulations, she noted, it is unlikely that this will mean a transition to a "Green Box" policy for the time being. The effects of Ukraine possibly entering into an association with the EU is being investigated by Veronika Movchan from the Institute for Economic Research and Policy Consulting, Ukraine. She noted that this development will largely be dependent on a harmonisation of the legal framework in Ukraine. In the final lecture of this session, David Sedlik from the FAO discussed the Eurasian Economic Community. He noted that, in spite of the efforts by the countries since

2007, economic integration within the economic community remains weak.



Discussions between sessions, IAMO Forum, 2014

IAMO 1994-2014 – A brief portrait

Twenty years of IAMO

With the end of the Soviet Union, the dissolution of the Warsaw Pact and German reunification, the Cold War world, which had seemed to be set in stone, crumbled. To fill the resulting vacuum, solutions were urgently needed. The planned economy had collapsed. Contrary to the initial euphoria, this did not automatically lead to the emergence of functioning market economies. Instead, economies in transition countries found themselves in freefall at the start of the 1990s. A brand new economic start and a change of system had to be managed under difficult conditions.

The agricultural sector in most transition countries within the former Soviet Union and in Central and South-eastern Europe was far more important than in Western and Northern Europe. A rapid recovery of agriculture and rural areas promised to be a key step in stabilising Europe. With the discipline of agricultural economics being restructured in eastern Germany, this prompted the German Council of Science and Humanities (*Wissenschaftsrat*) to recommend in 1992 the establishment of an Institute of Agricultural Development in Central and Eastern Europe. IAMO was founded on 8 November 1994 as a public foundation and "Blue List" institute.

This later gave rise to the Blue List Association (WBL), which was then transformed into the current Gottfried Wilhelm Leibniz Association e.V. (WGL). As one of the four great German scientific organisations, WGL now has 89 member institutions.

Since its establishment, the Institute's seat has been in Halle on the Saale, a city with a great agricultural faculty that has a long tradition. From the beginning IAMO played its part in reinforcing and expanding Halle, and central Germany, as a research centre. At the same time IAMO has benefited from the wealth of knowledge in Halle and the city's traditionally good connections with Central and Eastern Europe. Only through cooperation with Martin Luther University Halle-Wittenberg (MLU) was it possible to develop a joint international degree course focusing on transition countries. In the first few years this course was a key component of IAMO's day to day work, and it ran until the end of the 1990s. The aim was to offer young people from partner countries a university education geared to international standards, the key term being capacity building. At the time this was only possible abroad. Most graduates returned to their home countries to play an active role in academia, administration or business. Others have built careers in the EU and other international organisations. Moreover,



IAMO Building

the summer schools, financed by the DAAD (German Academic Exchange Service) and held for more than ten years in the successor states of the former Soviet Union for the advanced training of national academics and administrative specialists, only achieved the level of success they did thanks to close cooperation between MLU and IAMO.

Changes in tasks and challenges have also led to a re-orientation and consolidation of the cooperation between the university and IAMO. The IAMO Graduate School, for example, has since March 2012 been a full member of the International Graduate Academy (InGrA) of MLU. Mention should also be made of the opening of the ScienceCampus Plant-Based Bioeconomy in June 2012. Here, Halle-based Leibniz institutes research in close cooperation with the corresponding university departments, promoting knowledge and technology transfer in the Halle (Saale) region.

IAMO's set-up phase came to a distinct end in 1999 with its move into the Institute's current home, a newly converted former officers' club of the Heide South barracks. The following year, 2000, saw the Institute's first external evaluation, undertaken by the German Council of Science and Humanities. Every Blue List or Leibniz Institute must undergo such an evaluation every seven years. The German Council of Science and Humanities endorsed the development that had been achieved and, in November 2000, gave its unreserved recommendation that the Institute should continue to receive

funding as a Blue List research institution. Since then IAMO's research and publication activity has expanded consistently.

As a result of its long-term strategy for acquiring third-party funding and publication activity, IAMO has managed to establish itself firmly as a globally renowned institute of transition research. Essential to this have been the increases and sustainable improvements in publication quality and third-party funding acquisition, described in detail below. These academic successes achieved over the past few years have enabled IAMO to meet the growing demands related to fulfilling its other two core tasks beside research: facilitating exchange between science, business and politics, and supporting young academics. IAMO's subsequent record in all aspects of its work over the last ten years bears eloquent witness to this. The same is true of its second evaluation, which took place in 2007. Again the result was unreserved funding for the Institute on the basis of the extremely positive development it had made.

It is the support of young academics which has benefited most from this upwards trend. Over the last few years, by setting up its Graduate School, IAMO has succeeded in creating an international-level training programme for doctoral students. As a research centre IAMO enjoys every greater popularity with established academics too. The formation of an international China research group has been of particular significance here. The fact that IAMO supports all aspects of equal opportunities and helps employees balance their career

wand family life has been a key factor in the Institute's success.

Over the past few years the IAMO Forum has become firmly established as an international platform for dialogue between high-ranking international and national experts and representatives from academia, politics and business. At the heart of the Forum is the discussion of solution strategies for tackling problems of agricultural development in transition countries. Agricultural economics policy advice in Germany, as well as in the EU and many transition countries is no longer imaginable without IAMO. The Institute regularly offers its contributions to public debate.

Since the Institute's foundation, research and policy advice have been closely linked at IAMO, and have adapted to the changed problems thrown up by the ongoing processes of transition and globalisation. Whereas issues of privatisation, farm restructuring and integration into the system of global trade dominated in the early years, from the end of the 1990s the various aspects of EU Eastern Enlargement, which provoked serious concerns on both sides, came to the fore. Then came analysis of the widely varying and often unforeseen transition paths with their radically different business, market-related and political ramifications. Currently the focus is on the role of transition economies in global economic and ecological processes, for example globalisation, climate change and food security. Even in those countries

where the process of transition is complete, the legacy of the socialist past and the particular transition path taken still influence development today.

IAMO obtained the title "Leibniz Institute" in February 2006. Because our area of study was extended in 2000 to all countries in Europe and Asia that formerly had planned economies, the Institute changed its name. Since January 2014 we have been the "Leibniz Institute of Agricultural Development in Transition Economies (IAMO)."

IAMO in the ascendant – The facts

The research output of an institute is measured by the quality of its publications and the number of high-quality articles. In the agricultural and economic sciences the impact factor has become the key indicator for evaluating publication output. Between 2005-13, IAMO articles in journals with an impact factor saw a greater increase than those in any other type of publications. Whereas the number of articles in refereed journals doubled between 2005-07 and 2011-13, those with an impact factor almost quintupled. The proportion of articles with an impact factor rose from 29 per cent (2005-07) to 68 per cent (2011-13) (see graph). The fact that the proportion of externally refereed articles in English produced by the Institute rose from 67 to 90 per cent over the same period, is further proof of IAMO's growing importance internationally.

We at IAMO

Dr Zhanli Sun

Senior researcher in the Structural Development department

I arrived at IAMO in 2008 in the hope of continuing my academic career, after business and university experience in the USA and China. Although I only had a vague idea of research life in Germany and spoke no word of German, embarking on this adventure proved to be one of the best decisions I ever made. With its lively, multicultural and successful research environment, the Institute continually offers me new challenges and opportunities for academic development. I work with leading global experts on international projects, run a variety of workshops, provide educational support for doctoral students and publish academic articles in renowned journals. Besides these professional successes, I have also become a father to two daughters during my time at IAMO, a fact of which I am very proud.



Nadine Wettstein

PhD student in the Agricultural Markets department

I have been on the academic staff at IAMO since September 2007 and will soon be finishing my thesis. In my years at the Institute I have not only progressed in my research work, but also learned a lot about myself. It has been an exciting, instructive, not always painless time, and far more than just a job. What I particularly like about IAMO is the way my blindness is dealt with totally normally, the fact that I always get the support I need and can always find a sympathetic ear. Otherwise, my academic achievements and the joint project work are my main focus. This time at the Institute is an important period in my life, from which I will gain much more than an academic degree. For the experiences I have had I am grateful to IAMO, my superiors and colleagues, as well as the friends I have made here.

Lioudmila Chatalova

PhD student in the Structural Development department

When students seriously consider the prospect of a PhD, they hope to undertake this in a harmonious, international and stimulating working environment. Which is what I was able to find at IAMO. As your doctoral studies progress, some things change. You spend lots of weekends in the office, drink too much coffee and overuse the word "deadline". When faced with nothing but deadlines you can forget to stop and think about what you are actually doing and why. But not if, over the course of your PhD, you are helped by people who support you, inspire new ideas and reinforce your belief that you can achieve something. Which is the case at IAMO. For all of us here now, as well as everybody who has played their part in the Institute's twenty years of successful work, I hope that IAMO remains a strong and pioneering player in the future.

**Dr Ivan Djuric**

Senior researcher in the Agricultural Markets department

My almost six years of research experience at IAMO have been an extremely exciting time. Daily life at the Institute is comparable to an important conference where you can meet colleagues from around the world, attend interesting seminars and exchange academic and cultural experiences. I have worked on many interesting projects to date. During my thesis I acquired a broad knowledge about the processes on agricultural markets. I learned about price transmission analysis and applied it to a variety of Eastern European and Central Asian countries. I hope that IAMO continues to attract excellent researchers in the future and that it remains a unique institute of international renown.

Hannelore Zerjeski

Director and Head of Administrative department

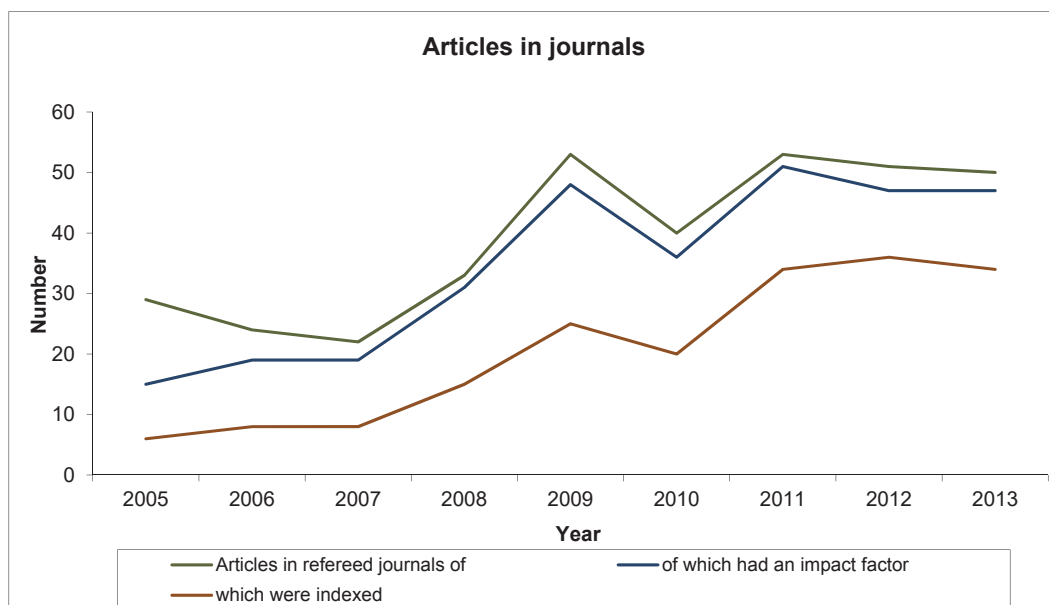
As a founding member of the directorate and the head of the administrative department at IAMO I have been with the Institute along the entire path of its development from 1995 to the present day. I think with fondness back to the early days and the spirit of optimism amongst my colleagues – creating the premises according to which Institute would function, our first contact with partners, both in academia and public administration, the first IAMO conference (now IAMO Forum) and our first evaluation. Our move into the new Institute building in summer 1999 created excellent conditions for work, while allowing for IAMO's growth. Today I am very proud of the Institute, of what we have achieved over the past 20 years, the recognition we have obtained from the academic community, an outstanding working atmosphere, and particularly the achievements of colleagues in my department.

**Prof. Dr Martin Petrick**

Deputy head of the Agricultural Policy Department

The peeling paint on the window frames and the odour of the well-worn linoleum in my first IAMO office at Steintor in Halle (Salle) bear witness to a time gone by. But, like me, my colleague opposite stared at a brand-new computer monitor and talked into a modern telephone. Four years after the Institute's foundation, the economic and social transformation all around us was within our grasp. In spite of the open borders, we university graduates knew little about our unfamiliar neighbours in the East. The working atmosphere at the Institute was marked by curiosity, an impulse to learn and a little naivety. In a historically unique situation, many colleagues wanted to make a contribution to the development of these formerly socialist countries. While the Institute has become bigger, more professional and more international over the years, we have still managed, thank goodness, to preserve some of this aspiration.

Development of publications in refereed and indexed journals



Source: Institute's own statistics.

A considerable proportion of IAMO's national and international profile is down to its academic staff's lecture activity throughout the world. This is particularly true in transition countries. Over the period 2005-13, almost 1,200 lectures were delivered in 62 countries, a good fifth of which took place in transition countries. Overall, the majority of lectures in 2005-13 were given abroad.

Third-party funding has become increasingly more important for research. The average yearly sum of third-party funding obtained in 2011-13, almost two million euros, was close to double that awarded in 2005-07 (see table). A noticeable trend of the last few years has been

the sharp increase in third-party funding closely linked to scientifically based policy advice. The proportion of research funding from federal coffers rose from 4 to 22 per cent between 2005-07 and 2011-13, an almost six-fold increase. The proportion of third-party funding provided by EU project monies was over 40 per cent for both periods, with a slight increase in 2011-13.

Our research has benefited from an expansion in the further education and support of young academics. In the period 2011-13 an average of six IAMO doctoral students per year successfully completed their theses, an almost five-fold increase on the period 2005-07.

Between 2005 and 2013, a total of 34 young academics at IAMO successfully defended their theses. Eighteen of these came from Germany and 16 from 11 other countries, predominantly transition countries (Ukraine: three; China: three; Russia: two; Albania, Armenia, Belarus, Bulgaria, Cameroon, Denmark, France and South Korea: one each). Over the same period, eight IAMO academics successfully completed their postdoctoral studies.

Between 2005-13, visiting academics from 47 countries carried out research at IAMO, representing an average of 35 study visits per year. 60 % of these were by researchers from transition countries, with Ukraine, Russia and China at the top of the list. Important countries from the heart of Europe, such as Hungary, Serbia, Czech

Republic and Poland, were also strongly represented too. Researchers awarded IAMO fellowships came from 24 countries in 2005-13, working mainly on their theses. On average there were 20 fellowships per year, a third of which were awarded to scholars from Ukraine, Russia and China, while Hungary, Albania and Slovakia accounted for a further fifth. Almost three-quarters of all fellowships went to researchers from transition countries. Both with its fellowships and programme of visiting academics, IAMO makes an important contribution to so-called "capacity building" in the academic communities of its partner countries.

Our public relations work is essential to ensure the visibility of our academic findings. Its three key pillars are events, press work and internet presence. These activities

Third-party funding obtained 2005-13 (in thousand euros)

	2005-07	2011-13¹⁾	Total 2005-2013¹⁾	Increase (%) 07/09-11/13
<i>Total</i>	1.072	1.939	12.387	81%
-DFG	493	80	2.980	-84%
-EU project funding	476	901	5.015	89%
-Federal government	42	426	1.489	913%
-Land/Länder funding	0,00	80	442	
-Foundations, other research funding ²⁾	60	378	2.230	534%
-Leibniz Association	0,00	3	10	
-Other funding sources	2	71	220	

Source: *Institutes own statistics.*

Notes.: *All totals and percentages have been rounded up or down.*

¹⁾ 2012 newly approved 3,763,000 euros, 2,008,000 of which are for project partners, ²⁾ from 2012 without other funding sources or Leibniz Association.

Prof. Dr Peter Weingarten

Head of the Institute for Rural Areas at the Thünen Institutet

20 years of IAMO – an impressive history. It began with the enthusiasm of all those involved in IAMO's early years, and a multitude of opportunities to play a part in the setting up of a new institute. Then the Institute continued to increase its profile and importance within the research landscape, so that today it has become an outstanding and internationally renowned research institution for agricultural economics. My heartiest congratulations!

And a personal note of thanks to Klaus Frohberg for having appointed back in 1996 an English-language student with whom I was to work closely...



Dr. Agata Pieniadz

Research Project Officer, European Commission, REA – Research Executive Agency, Brussels

I offer my warmest congratulations to all colleagues and friends at IAMO for the 20th anniversary! The Institute has grown in strength to become an important component in the European research community today. It has skilfully managed to expand its research activities from Eastern Europe to the global arena, offering many young academics from these regions the opportunity to gain higher qualifications. For me personally, it was a wonderful experience to spend the loveliest part of my life at IAMO. I wish the Institute even greater success for the next 20 years and beyond.

will be described in more detail in the final section, "Research communication". Here we might just sketch some of the developments in recent years. Since the beginning of 2011 IAMO has issued more than 70 press releases, in English, German or Russian depending on the subject. Some issues, such as financial speculation on agricultural raw materials markets, reforms of the Common Agricultural Policy (CAP), wheat markets in the Caucasus, the competitiveness of the European food economy, have been used in reports by daily and weekly papers, specialist journals and diverse online media. The publication of the first IAMO Policy Brief in January 2011 heralded the establishment of a new channel of communication at IAMO (for more details see "Research communication" section).

To facilitate exchange between science, business and politics, a wide variety of events have evolved at IAMO over the past few years, either organised by the Institute itself or in which IAMO was involved. Many of these promote socio-political discourse, information exchange and networking within the academic community. The events reach different groups of people, from scientific specialists and representatives from politics, administration and agriculture to the broader public.

IAMO regularly holds academic events, either as the sole organiser or in conjunction with other institutions. Since the beginning of 2011 there have been 60 of these: forums, conferences, symposia, workshops and lecture series. In these the Institute places great emphasis on the participation of academics from Central and Eastern

Europe as well as Central and Eastern Asia. The IAMO Forum (see separate article) is a particularly outstanding event.

Every year during Green Week in Berlin, the Federal Ministry of Food and Agriculture (BMEL) organises the Global Forum for Food and Agriculture (GFFA). Within this IAMO regularly plans and holds an agricultural policy symposium with high-ranking representatives from politics, agriculture and science, chiefly from transition countries. The 2014 GFFA Symposium, entitled, "Eastern Europe as a Key Region for Meeting the Challenges of Food Security" was jointly organised with the German Committee on Eastern European Economic Relations. In a panel discussion, the Russian and Ukrainian deputy ministers of agriculture, as well as scientists and business representatives, debated the development potential and risks in Eastern European agricultural production in front of an audience of 300.

IAMO also jointly organises other regular events with a very different focus, such as the international conference "Large Farm Management", which the Ukrainian Agribusiness Club hosts each year in Kiev (Ukraine), or the Halle Workshop on Efficiency and Productivity Analysis (HAWEPA), which takes place every two years in conjunction with the Halle Institute for Economic Research (IWH). In 2012, 40 renowned participants from 12 countries attended the fourth HAWEPA in Halle.

IAMO organises other events besides academic conferences. The Institute has been involved in the Halle Long Night of Sciences, the ScienceMeetsCompanies

Careers Fair and a variety of parliamentary evenings, events aimed chiefly at political and business leaders as well as the wider public. IAMO is also a regular presence at various internationally important agricultural fairs and exhibitions, such as *Agritechnica* and *EuroTier*.

Aims and tasks

The Leibniz Institute of Agricultural Development in Transition Economies (IAMO) focuses on the far-reaching economic, social and political processes of change in the agricultural and food sector, and in rural

areas. Its geographical area of research extends across Central, Eastern and South-Eastern Europe, including Turkey. The transition countries of Central and Eastern Asia have been added to this remit, with the main focus on China. In spite of great efforts and much success, the development of the agricultural and food sector in many of these regions still lags far behind that of Western industrial nations, and some of them are following their own, very specific development paths. Furthermore, a huge gulf is emerging between successful and stagnating regions within individual countries, as well as between countries themselves.



Expert panel at GFFA 2014 in Berlin

Large emerging nations such as Russia and China have risen to become "global players" on world agricultural markets. Given the potentially threatening food crises, we need to determine what must happen in these countries to promote sustainable growth and ensure long-term global food security in spite of the growing demands being placed on agricultural resources. Adapting agriculture and land use to climate change in our target countries – but not in these alone – also represents a major undertaking. Because of this, IAMO faces a very broad research challenge, both thematically and regionally.

With its thematic and geographical focus, IAMO is a unique global research institution. Since its establishment in 1994 it has been a member of the Leibniz Association as a non-university research centre. The Leibniz Association includes research institutes which are scientifically, legally and commercially independent, together with service institutions. Both these are jointly funded by the federal administration and the *Länder* to address current problems of national interest (www.leibniz-gemeinschaft.de).

The aim of IAMO's work is not just to help understand, but also manage the far-reaching processes of change to reduce ongoing development deficits in the agricultural and food sector, as well as in the rural areas of the Institute's geographical area of research. This goal gives rise to the three core tasks of the Institute:

- Internationally oriented research into agricultural and food economics including the development of rural areas.

- Exchange of ideas between the academic, business and political communities.
- Support for young academics.

The Institute sees itself as a driving force of international research into agricultural economics. Outstanding research is the engine of the Institute's development, and it creates the conditions in which the other two core tasks can be performed. For instance, IAMO acts as a forum for exchange, and in this way it supports the cross-linking of research and dialogue between decision makers from the academic, political and business communities. In view of the unprecedented major challenges, delivering scientifically based policy advice is becoming an increasingly important part of IAMO's work. The Institute also uses its expertise and capacities to help academic scholars become fully qualified. Here there is a particular focus on supporting young academics from partner countries. Through its international orientation and cooperation with other teaching and research institutes, IAMO is helping to strengthen Halle's profile as a centre of science and research in Central Germany. Our close cooperation with Martin Luther University Halle-Wittenberg (MLU) – especially with the Institute of Agricultural and Food Sciences at the Faculty of Natural Sciences III, and the Economic Sciences Department at the Faculty of Law and Economic Sciences – is an important factor here.



Long Night of Sciences in Halle (Saale) with IAMO participation

Academic departments, research fields and key topic areas

IAMO's threefold research structure with the departments *Agricultural Policy*, *Agricultural Markets* and *Structural Development* (these are abbreviated descriptions) is derived from the orientation of its research. The basic conditions of agricultural policy and opportunities for shaping policy, markets in the agricultural and food sector, and the development of farms and structures in rural areas are all analysed by the Institute. Developments at the individual farm level and in rural areas, the creation of functioning agricultural markets, and the shaping of agricultural policy are all closely interlinked. Decisions relating to farm development and agricultural policy, as well as market processes also have an impact on human-environment interaction in rural areas. In addition they have an effect on the two key issues of the future: food security and food safety. IAMO's academic work is organised interdepartmentally into four key research areas which focus on major problem areas of agricultural development in Eurasian transition countries and emerging nations. The more intensive level of communication in key research groups counteracts any possible fragmentation of research. Besides positive bundling effects, greater individual responsibility of the key research groups allows efficient, result-oriented research management.

The idea behind the current medium-term agenda, which came into force in 2008, is to adapt the key research areas to the changing problems in those regions of the world

studied by IAMO. Increasingly, it is general questions of agricultural development in the context of globalisation and increasing divergence – between countries and also between structurally weak and dynamic regions – that are coming to the fore.

But even if, to take Central Europe as an example, transition-specific questions themselves are no longer of much significance, the socialist past still influences the development of the agricultural and food sector of that region. Here we could point to the unique dual farm structure of many EU accession states in Central and Eastern Europe as well as the high degree of vertical integration of food chains in many CIS-countries. The current medium-term agenda contains the following four key research areas:

- I. Policy reforms and institutional change
- II. Structural change and business growth
- III. Employment and livelihoods
- IV. Competitive strategies and market requirements

Institutional structure

IAMO is a public foundation. Its bodies are the board of trustees, the managing directorate and the scientific advisory board. The Institute is divided into three academic departments:

- External Environment for Agriculture and Policy Analysis; head of department is Prof. Dr Thomas Herzfeld

- Agricultural Markets, Marketing and World Agricultural Trade; head of department is Prof. Dr Thomas Glauben
- Structural Development of Farms and Rural Areas; head of department is Prof. Dr Alfons Balmann

The heads of the academic departments, together with the head of

- Administration and Central Services, Dipl. Ökon. Hannelore Zerjeski,

form the directorate of the Institute. Since January 2013, all four directors of the Institute have been on an equal footing as managing directors with collective responsibility.

In coordination with the board of trustees, this collegiate body manages the Institute's business and directs the long-term research and development planning at IAMO. The scientific advisory board advises the directorate and the board of trustees on academic matters and carries out regular evaluations of the Institute's work.

As of 1/10/2014 the following were members of the board of trustees: Head of Division Thomas Reitmann (Chairman; Ministry of Science and Economic Affairs of Saxony-Anhalt), Director Friedrich Wacker (Deputy Chairman; German Ministry of Food and Agriculture), Under-Secretary Anne-Marie Keding (Ministry of Agriculture and the Environment of Saxony-Anhalt), Head of Division Jobst Jungehülsing (German Ministry of Food and Agriculture), Prof. Dr Dr h.c. Dieter Kirschke (Humboldt University, Berlin), Prof. Dr Bernhard Brümmer

(Georg August University, Göttingen), Prof. Dr Michael Bron (Martin Luther University, Halle-Wittenberg) and Dr Reinhard Grandke (CEO of the German Agricultural Society (DLG) e.V.).

As of 1/1/2014, the following were members of the scientific advisory board: Prof. Dr Dr h.c. Dieter Kirschke (Chairman; Humboldt University, Berlin), Prof. Dr Bernhard Brümmer (Deputy Chairman; Georg August University, Göttingen), Prof. Dr Martina Brockmeier (Hohenheim University), Dr Heike Harmgart (European Bank for Reconstruction and Development, EBRD), Prof. Dr Laure Latruffe (French Institute for Research in Agriculture (INRA) – Rennes), Prof. Ada Wossink (University of Manchester), Dr Martin Banse (Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries (TI)), Prof. Dr Emil Erjavec (University of Ljubljana), Prof. Dr Imre Fertö (Corvinus University of Budapest), Prof. Dr Michael Grings (Martin Luther University, Halle-Wittenberg), Prof. Dr Hermann Lotze-Campen (Potsdam Institute for Climate Impact Research (PIK)) and Prof. William H. Meyers (University of Missouri).

Cooperation with university institutions

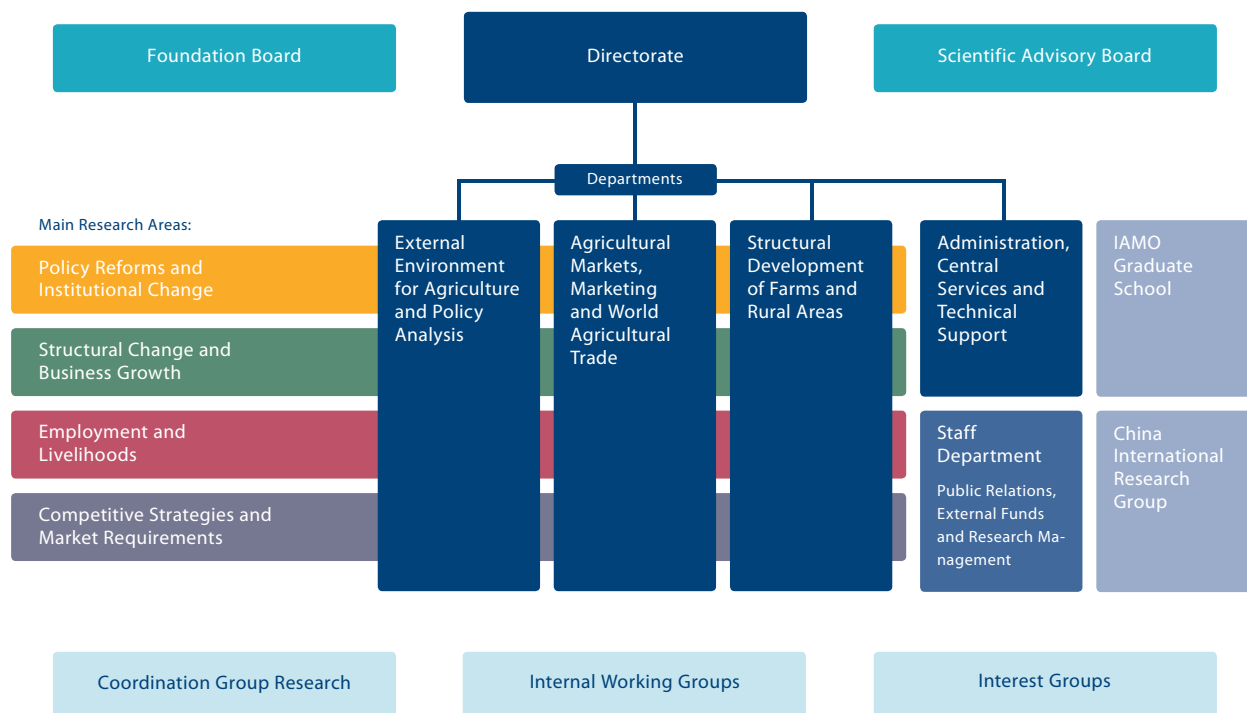
Since February 1998 IAMO and MLU have been working together under a comprehensive cooperation agreement, which includes joint appointments. IAMO's work is especially closely linked with the Institute of Agricultural and Food Sciences, which is part of the Faculty of

Natural Sciences III at MLU, and the Economic Sciences Department at the Faculty of Law and Economic Sciences. The heads of IAMO's academic departments take part in MLU's teaching and committee work. Many academic members of staff from IAMO with post-doctoral and doctoral qualifications are also involved in university teaching, and in the running of a nationwide PhD student programme. Staff links between MLU and IAMO are also strengthened by the fact that MLU's Prorector of Research and Student Education, Prof. Dr Michael Bron, sits on IAMO's board of trustees. Cooperation between MLU and IAMO assumed a new dimension when the ScienceCampus was opened in Halle in June 2012. The ScienceCampus aims to strengthen the interdisciplinary collaboration between the Halle-based Leibniz Institutes and the corresponding academic departments at Martin Luther University Halle-Wittenberg in the sphere of plant-based bioeconomy. It will also advance higher education in the Halle (Saale) region, as well as supporting knowledge and technology transfer in politics, business and public life.

IAMO also works in close conjunction with many other universities, chiefly with faculties of agriculture and economics. Depending on the requirements of interdisciplinary research, other social science and humanities subjects may be brought in, e.g. human geography and history. As far as our partners in Germany are concerned, we have strong links with Berlin, Bonn, Göttingen, Hohenheim, Kiel, Munich and Münster. Since 2010 IAMO has even had a cooperation agreement with the

Humboldt University in Berlin. There are close relationships, too, with chairs of agricultural economics and institutes at agricultural and economics colleges and universities in our partner countries.

Amongst our partner universities abroad we should give special mention to the Higher School of Economics in Moscow (NRU HSE) and Moscow State University, both in Russia; in Ukraine, the National University of Life and Environmental Sciences of Ukraine (NULES), Taras Shevchenko National University and the National University "Kyiv Mohyla Academy", all in Kiev; in Uzbekistan, the Samarkand Agricultural Institute (SAI); in Poland, the University of Warsaw (UW); in the Czech Republic, the Czech University of Life Sciences in Prague (CULS) and Masaryk University in Brno; in Slovakia, the Agricultural University in Nitra (SAU); in Hungary, Corvinus University, Budapest and the Faculty of Environmental Sciences at Szent István University in Gödöllő; in Croatia, the University of Zagreb; in Serbia, the University of Belgrade; and in Albania, the Agricultural University of Tirana (AUT). We should also mention the Center for Agricultural and Rural Development (CARD) at Zhejiang University and Sichuan Agricultural University in China, as well as Hanoi University of Agriculture in Vietnam. In addition, IAMO maintains a wide range of scientific exchange with the LICOS Centre for Institutions and Economic Performance at the Catholic University of Leuven (KU Leuven), Belgium; in the Netherlands, Wageningen University; in Sweden, the Swedish University of Agricultural Sciences (SLU) in Uppsala and



Organigram of the Leibniz Institute of Agricultural Development in Transition Economies

the Centre for Environmental and Climate Research (CEC) in Lund; and in Switzerland, the Swiss Federal Institute of Technology in Zürich (ETH). In Great Britain, IAMO cooperates with the University of Edinburgh, the University of East Anglia in Norwich, Newcastle-upon-Tyne University in Newcastle and the University of Kent in Canterbury. In the USA we have close contacts with Stanford University, Ohio State University, Pennsylvania State University, Georgia State University, the University of Missouri and the University of Wisconsin in Madison.

Cooperation with non-university institutions

The numerous contacts with non-university institutions are also very important for IAMO's work. We collaborate with the Johann Heinrich von Thünen Institutes of Farm Economics, Rural Studies, and Market Analysis and Agricultural Trade Policy in Brunswick-Völkenrode (TI); the Leipzig-based Leibniz Institute for Regional Geography (IfL); the Leibniz Centre for Agricultural Landscape Research (ZALF) in Müncheberg; the Leibniz Institute for Agricultural Engineering Bornim e.V. (ATB) in Potsdam-Bornim; the Institute for the World Economy (IfW) in Kiel; the Institute for Economic Research (IWH) in Halle; and the Potsdam Institute for Climate Impact Research (PIK).

There are close relations with many non-university research institutions abroad, especially in in Central and Eastern Europe, Southern Europe and Eastern Asia. We have excellent and regular professional contact with institutes

in academies of sciences or agricultural sciences, regional research institutes and advisory boards, as well as agricultural economics research institutes that are subordinate to the corresponding ministries of agriculture. Of note here are: in the Czech Republic, the Institute of Agricultural Economics and Information (IAEI); in Hungary, the Research Institute of Agricultural Economics (AKI) in Budapest; in Poland, the Institute of Agricultural & Food Economics – State Research Institute – (IERiGZ PIB); in Russia, the All-Russian Research Institute of Agricultural Economics (VNIIESH) and the All-Russian Institute for Agrarian Problems and Information Theory (VIPIA), both in Moscow; in Ukraine, the Institute for Economics and Forecasting (IEF) at the National Academy of Sciences, the Ukrainian Agribusiness Club (UCAB) and the Institute for Economic Research (IER) in Kiev; in Belarus, the Institute of System Research in Agro-Industrial Complex (ISRA), National Academy of Sciences of Belarus (NASB) in Minsk; in Kazakhstan, the Analytical Center of Economic Policy in the Agricultural Sector (ACEPAS); in Armenia, the International Center for Agribusiness Research and Education (ICARE); in Georgia, the Georgian Center for Agribusiness Development (GCAD); in China, the Center for Chinese Agricultural Policy (CCAP) in Beijing, and the Institute of Botany in Kunming, both at the Chinese Academy of Sciences. IAMO's partners in Western and Northern Europe are: in Belgium, the Centre for European Policy Studies (CEPS) in Brussels; and in France, the National Research Institute of Science and Technology for Environment

**Prof. Dr Klaus Frohberg, Prof. Dr Monika Hartmann and Prof. Dr habil. Dr h.c. Peter Tillack
(founding directorate)**

20 years of the Institute of Agricultural Development in Central and Eastern Europe (IAMO) – What a success story! In the wake of the Wende, the scientific investigations into the transition processes which were to lead the countries of Central and Eastern Europe from a planned economy to a market one, broke new academic ground. The hopes of the founding fathers – to establish an institute which would integrate itself fully into the international landscape of agricultural economics and transition research – have been fulfilled. Looking back we can identify some important factors that have been crucial to this success.

First and foremost we should mention the staff. We were very lucky to be able to attract highly motivated colleagues, both researchers full of enthusiasm for their subjects and support staff. They all "pulled together" – in the direction of success. Important stimuli came from the scientific advisory board, too. Although individual aspects of the transition of economic systems are worked on at many academic institutions, IAMO's research area make it unique; there is no comparable institution in Western countries. Notwithstanding this, the huge demand from the political and business communities for scientific expertise led to intensive and thought-provoking competition with colleagues from other institutes. Finally we must highlight the generous support and constructive criticism that IAMO has received from the relevant ministries at both federal and Land level, as well as from the Leibniz Association. A visible sign of this to all are the first-class premises in which the Institute is able to conduct its work.

Over the last 25 years there has been much restructuring in the economies of Central and Eastern Europe which has been partly, but not exclusively, based on the scientific findings made at IAMO and other institutions. Some of these processes can even be considered complete, especially in Central Europe. This is why IAMO has recently placed a greater focus on countries outside of Europe and will continue to do so in the future. For this reason the Institute decided to change its name, although fortunately the acronym has remained the same. There are still many countries in which fundamental social and economic adaptation needs to take place. IAMO has assigned itself the task of monitoring and supporting this with its outstanding academic research. We wish the Institute continued success for the future.

and Agriculture (IRSTEA) and the French Institute for Research in Agriculture (INRA). Our partners amongst international organisations are the World Bank, the International Food Policy Research Institute (IFPRI) and various institutions of the European Commission, such as the Joint Research Centre in Seville (IPTS).

Supporting young academics

One of IAMO's three core tasks is to help develop the next generation of researchers. In particular, therefore, the Institute supports the study for doctoral and post-doctoral degrees. A large number of dissertation topics are also assigned for master's, diploma and bachelor's degrees. At the end of 2014, 48 theses were being supervised at IAMO.

In the twelve months from October 2013 to September 2014, five long-standing IAMO staff members submitted their theses to Martin Luther University and successfully defended them:

- "Impact of Policy Measures on Wheat-to-Bread Supply Chain During Global Commodity Price Peaks: The Case of Serbia" (Ivan Djuric)
- "Participatory Governance in Rural Development: Evidence from Ukraine" (Vasyl Kvartiuk)
- "Motives and Outcomes of Vertical Coordination from the Processors' Perspective. Insights from the Ukrainian Dairy Industry" (Maryna Mykhaylenko)

- "Milchproduktion zwischen Pfadabhängigkeit und Pfadabbrechung – Partizipative Analysen mit Hilfe des agentbasierten Modells AgriPoliS" (Dairy production between path dependency and path breaking – Participatory analyses using the agent-based model AgriPoliS) (Arlette Ostermeyer)
- "Land use change in Albania and Kosovo: Patterns, processes, and future developments" (Kuenda Laze)

Three external theses part supervised by IAMO staff were also successfully defended:

- "The Socioeconomic Assessment of Sloping Land Conversion Program in China"; University of Copenhagen (Zhen Liu)
- "Agricultural Management under competition, uncertainty and market interventions: Optimal investment and disinvestment decisions, risk management instruments and policy impact analysis"; Georg August University, Göttingen (Jan-Henning Feil)
- "Utilizing the depth of the Landsat archive to reconstruct recent land change in the Carpathian ecoregion"; Humboldt University, Berlin (Patrick Griffiths)

Two long-term IAMO staff members, Daniel Müller and Insa Theesfeld, who was appointed chair of Agricultural, Environmental and Food Policy at the Institute of Agricultural and Food Sciences of the Faculty of Natural Sciences III at Martin Luther University Halle-Wittenberg, completed their post-doctoral degrees in 2013:

Prof. Dr.-Ing. Matthias Kleiner

President of the Leibniz Association

Dear colleagues at Leibniz-IAMO. With its research topics, Leibniz-IAMO has enjoyed a dynamic development over its 20 years. From the Leibniz Institute of Agricultural Development in Central and Eastern Europe to the Leibniz Institute of Agricultural Development in Transition Economies. It is a Leibniz Institute in the best sense of the word, conducting basic research with concrete relevance for society, while its work is both interdisciplinary and international. My warmest congratulations!



Prof. Dr. Jörg Hacker

*President of the German Academy of Natural Sciences Leopoldina –
National Academy of Sciences*

On behalf of the National Academy of Sciences Leopoldina, as well as personally, I would like to offer my heartfelt congratulations to the Leibniz Institute of Agricultural Development in Transition Economies for its successful work over the last 20 years. In the context of global challenges of sustainable development, the interdisciplinary and transdisciplinary engagement with questions of land use is becoming ever more important, a fact of which the Leopoldina is becoming increasingly aware, too. For the challenges of the coming years I wish continued success to all staff at IAMO!

- "Post-Socialist land use change in Eastern Europe: Case Studies in Albania and Romania"; Humboldt University, Berlin (Daniel Müller)
- "Power and Leadership in Natural Resource Management – Institutional Analysis of Water Governance"; Humboldt University, Berlin (Insa Theesfeld)

In the period covered by this report, two IAMO academics were appointed adjunct professors by the Rector of Martin Luther University Halle-Wittenberg, Udo Sträter:

- Michael Kopsidis at the Faculty of Law, Economics and Business, Martin Luther University Halle-Wittenberg
- Martin Petrick at the Institute of Agricultural And Food Sciences, Faculty of Natural Sciences III, MLU

IAMO awarded the TOTAL E-QUALITY rating

With the award by the jury of the German TOTAL E-QUALITY association, IAMO was honoured in 2013 for its ongoing commitment to equal opportunities in staff management, an area in which it has been particularly successful. The TOTAL E-QUALITY rating for 2013-15 certifies that aptitude, potential and skills at work are recognised and fostered equally for men and women. The differing circumstances of IAMO employees are also taken into account, with a focus on supporting women in management positions. We will strive to facilitate compatibility of family and career, pursue staff recruitment and development based on gender equality, promote appropriate behaviour in the workplace,

and ensure that equal opportunities are reflected in the principles of the Institute. With this rating IAMO makes an individual commitment to continually monitor the implementation of its equal opportunities policy and ensure it becomes permanently enshrined in the Institute's working practices.

Currently there are a number of ongoing activities to promote equality. In July 2014 a female IAMO academic was admitted to the much sought-after Leibniz mentoring programme for female academics in Leibniz institutions. The objective of the programme is to support highly-qualified postdoctoral researchers as they work towards a management position or professorship. All the Leibniz institutes based in Halle have begun to coordinate their equal-opportunities efforts, for example by holding joint seminars and applying for third-party funding for further training for women.

Prizes and awards

Martin Petrick received the "Outstanding ERAE Journal Article 2013" prize from the European Association of Agricultural Economists. The award took place on 29 August 2014 during the 14th EAAE Congress in Ljubljana, Slovenia. This award credits Petrick for his outstanding agricultural economics research paper in the academic journal "European Review of Agricultural Economics" (ERAE). The winning article, entitled "Reversing the rural race to the bottom: An Evolutionary Model of Neo-endogenous Rural Development", examines the economic development of rural areas for the

first time from the perspective of so-called evolutionary game theory. This approach illustrates why regions remain permanently rich or poor, rather than aspiring to an end state of uniformity. It also outlines the conditions in which a government, mobilising the self-help of citizens in a region, can promote a transition from poor to rich. The article makes clear, however, that the chance of success is strongly dependent on the starting conditions and is in no way a likely possibility in all poor regions. The article can be viewed on the following web site: <http://erae.oxfordjournals.org/content/40/4/707>.



Martin Petrick



Florian Schierhorn

Florian Schierhorn was nominated for the 5th Nobel Laureate Meeting in Economic Sciences (5th Lindau Meeting of the Winners of the Sveriges Riksbank Prize in Economic Sciences). In a multi-stage selection process the young IAMO academic qualified for the Nobel Laureate Meeting, which took place on 19-23 August 2013 in Lindau on Lake Constance. A total of 480 leading researchers from more than 80 countries met with 18 Nobel Laureates to share knowledge and experiences across cultures and generations. The meetings have been held annually since 1951 in memory of Alfred Nobel; this was the fifth time a conference had taken place

specifically for economic scientists. Florian Schierhorn is researching how, given the growing world population, food production can be increased while keeping the negative impact on the environment to a minimum.

At a ceremony on 4 July 2014 Swetlana Renner was presented with the Luther Certificate by the university rector, Prof. Dr Udo Sträter, for her outstanding research on the "Flexibility of businesses: A theoretical and empirical analysis". In her thesis, the young academic applied newly developed methodologies to examine the extent and determinants of flexibility on Polish farms. Swetlana Renner's work addresses the question of how small family farms during the transition period in Poland were able to survive on the market in spite of their relatively low productivity. The findings of her study show that such farms have more flexible production systems than large agricultural enterprises and are able to adapt more easily to changes in market conditions.

Training for doctoral students: IAMO Graduate School, seminars and Doctoral Certificate Programme

As part of the "Pact for Innovation and Development", which corresponds to the excellence initiative of the federal government and the *Länder* to promote science and research at German universities, the Institute established the IAMO Graduate School in 2007. Starting out for four years as a pilot measure, since 2010 it has pooled training for doctoral students at IAMO.



Swetlana Renner

All doctoral students at the IAMO Graduate School participate in the "Doctoral Certificate Programme" (www.agraroeconomik.de), jointly established and run by IAMO, the Johann Heinrich von Thünen Institute (TI) and institutes of agricultural economics at several German universities. The "Doctoral Certificate Programme" offers the first structured training in Germany, and now in Austria too, for doctoral students in the areas of agricultural and food economics and rural development. The systematic teaching of essential theory and method aims to increase the quality of students' education and improve efficiency when working on dissertation

topics. Doctoral study is the third stage of a consecutive study programme, following bachelor's and master's degrees in agriculture, food and the environment. The PhD study course is jointly run by the Agricultural and Food Economics Faculty at Christian Albrecht University in Kiel, the Faculty of Agriculture at the Rhine Friedrich Wilhelm University of Bonn, the Albrecht Daniel Thaer Institute of Agriculture and Horticulture at the Humboldt University in Berlin, the departments of Agricultural Sciences, Ecotrophology and Environmental Management at Justus Liebig University Giessen, IAMO, the

Faculty of Agricultural Sciences at Hohenheim University, the Institute of Agricultural and Food Sciences at MLU, the department of Ecological Agricultural Sciences at Kassel University, the Faculty of Agricultural Sciences at Georg August University in Göttingen, the Faculty of Economic Sciences and Center of Life and Food Sciences Weihenstephan, Munich Technical University, the University of Natural Resources and Life Sciences in Vienna and the Thünen Institute, Brunswick. The PhD course is based on a modular system. From October 2013 to September 2014 IAMO professors and staff helped



Swetlana Renner's award (2nd from r.)

organise academic events relating to the following modules:

- "Agent-based Modelling in Agricultural and Resource Economics"
- "Efficiency and Productivity Analysis I – Deterministic Approaches"
- "Foundations of Agricultural Economics: Selected Topics"
- "Introduction to Geographic Information Systems and Spatial Data Analysis"

In close cooperation with the PhD students, the IAMO Graduate School also offers specific further education seminars at the Institute, for which IAMO invites outside speakers. Over the period covered by this report there were seminars on the topics of "Time Management in Doctoral Research: Aligning time and goals" and "Academic Writing".

Besides structured training for doctoral students, the IAMO Graduate School specifically involves IAMO academics who already have PhDs, giving them the opportunity to develop further their fields of research and gain experience in research management. It regularly offers teaching modules, which are open to all those on the Doctoral Certificate Programme and are specifically tailored to doctoral students' needs. The IAMO Graduate School also serves as a point of contact for all PhD students. Since March 2010 the IAMO Graduate School has been a full member of the International

Graduate Academy (InGrA) of Martin Luther University Halle-Wittenberg. InGrA supports the setting up of all forms of structured doctoral programmes, coordinates the existing programmes and helps create a productive research environment, while taking into account the university's internationalisation and equal opportunities strategies (<http://www.ingra.uni-halle.de/>).

Together with the agricultural economics professors of business, agricultural market theory, agricultural business management, and agricultural, food and environmental policy at MLU's Institute of Agricultural and Food Sciences, IAMO also runs a PhD student seminar. This seminar acts as a forum for scientific exchange about research questions, methodological approaches and findings.

International China Research Group at IAMO

In 2008 the International China Research Group was set up at IAMO on a fixed-term basis to work on the topic "Economic Growth and Social Equilibrium in Rural China". The international research group is chiefly geared towards the structural and sustained international cross-linking of IAMO's research activities, with a focus on the analysis of economic and social processes in rural areas of the People's Republic of China. To begin with the group consisted only of IAMO staff. In 2011 these were joined by academic colleagues from Göttingen, Wageningen and Beijing. At the same time the Centre's future was secured when it received permanent funding from the budget.

At the end of 2014, the research group was working on twelve projects. The thematic spectrum runs from the effects of inter-farm cooperation and real estate law on farm development, and questions of social, health and education policy to the impact of Chinese environmental programmes on the ecological situation and rural living conditions. The individual projects are helping to identify approaches for addressing the sharp increase in social and environmental problems in rural China. The main issues here are targeted policy measures and the shaping of a growth-inducing economic environment. In the period October 2013 to September 2014 one external PhD was successfully completed in the China Group. As of 30 September 2014, six internal and two external PhD projects on China were ongoing.

Findings from the Rural Education Action Project (REAP), for example, show that successful learning at elementary schools in rural China is often impeded by the children's inadequate nutrition. The research project, which is being undertaken jointly with the Center for Chinese Agricultural Policy (CCAP) and researchers from Stanford University, is evaluating which state measures are necessary to improve the quality of nutrition and thus the personal development of children and young people. Another project is examining how the allocation of welfare in rural China is developing and how reallocation programmes are affecting this.

Another team in the IAMO China Group, in cooperation with geographers and biologists from China and

the USA, is researching determinants and effects of land-use changes in tropical southern China. Although a rapid loss of forest land was reversed in 1980, the increase in forest land is mainly being attained by planting fast-growing utility trees, plantation-style, which have little ecological value. Repeated visits by the researchers to China have proven to be essential to their objective research work. Likewise, guest visits to IAMO by foreign, especially Chinese, colleagues are important for orienting research adequately to current developments. For example, the group is working together with colleagues from Sichuan Agricultural University on the rental market for agricultural land. This project is examining the use of market mechanisms for land distribution, which has great potential to lead to more efficient agricultural production that saves resources. More details can be found on the web site: <http://www.iamo.de/china-group/home.html>.

Guests and fellowships at IAMO

The further training and education of academic scholars is one of IAMO's core tasks. As mentioned above, IAMO focuses chiefly on supporting young academics from its partner countries. Of great importance in this regard are study visits by researchers, which can range from a few weeks to two years. Besides being involved in joint publications, those who come for long-term visits also concentrate on their doctoral studies, financed by external and IAMO grants, and third-party funded



Prof. Dr Dr h.c. Csaba Csaki

Member of the Hungarian Academy of Sciences

Congratulations to IAMO for twenty years of excellence

First of all, and on behalf of the academic community of the region too, I must congratulate IAMO for two decades of outstanding achievements in research into agricultural transition in Central and Eastern Europe, as well as in Central and Eastern Asia. The Institute has made an outstanding academic contribution with its analysis of the very complex transition from a centrally planned agriculture to a free-market one, and in this way the Institute has become one of the leading research institutions in this field.

Twenty years ago, there was very little research into transition in the agricultural sector either in the East or West, despite there being a large need for knowledge. The founding of IAMO was the right response to filling this gap. Since its foundation IAMO has been a centre of scientific analysis of agricultural transition and the Institute has published an ever increasing number of high-quality studies, which represent key contributions to transition research. The focus of IAMO research has always aligned itself to progress in the transition countries. At the start, the fundamental problems of transition were in the spotlight. Then, attention was mainly fixed on preparations for the Eastern Enlargement of the European Union and addressing the challenges that this threw up for all concerned. Today, IAMO's field of study is expanding further eastwards as far as China and Vietnam. The Institute is also at the forefront of organising and coordinating large EU and international projects. In our own field of study we have always enjoyed working in cooperation with various members of the IAMO team.

Moreover, IAMO has always been a hub for conveying recent research findings relating to questions of agricultural transition. Its publications are known worldwide and the annual IAMO Forum is a massively important meeting point for academics and policymakers from Western and Eastern Europe, as well as from other countries. The work IAMO undertakes to train young agricultural economists from the region cannot be valued highly enough. Twenty years ago the discipline of agricultural economics was dominated by a descriptive approach with only a limited methodological background. There was a large need to train young agricultural economists to international academic standards. IAMO was, and still is, the ideal place to satisfy this demand, and the Institute is universally known for the excellent opportunities it offers young researchers.

During the twenty years of IAMO's existence I have always been in close contact with the Institute. In its set-up phase I had many an opportunity to discuss the forthcoming challenges with Professor Klaus Froberg. His vision for the Institute was decisive for IAMO's development. For two periods I was also a member of IAMO's scientific advisory board and had close professional contact with Professor Tillack, another member of the Institute's founding directorate. It was likewise a pleasure for me to be able to support IAMO in its first evaluation, while I was also granted the opportunity to take part as a plenary speaker or moderator at various IAMO Forums.

All in all, IAMO is a perfect example of a centre of excellence that combines high-quality research with outstanding training and education, thereby supporting the scientific and political development in transition countries. I wish the Institute many more successes and further progress in the future.

projects. From October 2013 to September 2014, 20 fellows worked at IAMO, chiefly on their theses. Over the same period 27 predominantly young visiting academics carried out research here. The fellows and visiting academics came from a total of 21 countries. By working together closely on international, third-party funded research projects, young researchers from partner countries integrate themselves into the international academic community. Former IAMO staff, both from Germany and partner countries, are now working in international organisations such as the EU and World Bank, or they have acquired management positions in their respective national agricultural administrations. An even larger number of them are continuing their academic careers back in their home countries.

Development of third-party funding

Projects with third-party funding 2014 (October 2013-June 2014)

I. Newly approved research projects with third-party funding

- Project title: SchumpeterFellowship/Zusätzliche Mittel für das Teilprojekt "Agricultural cooperatives as economic crisis-absorbers: The role of cooperative ownership and governance" – **VW Schumpeter II**

Funding source: VW Stiftung

- Project title: Development of an analytical tool for long-term (2050+) projections and analysis of various scenarios related to food security, climate change, etc. – **Case study 2050**

Funding source: EU

- Project title: Betriebliches Kompetenzmanagement im demografischen Wandel Vorhaben: Betriebliches Kompetenzmanagement zur Integration ausländischer Fachkräfte in der Landwirtschaft – **Alfa Agrar**

Funding source: BMBF – Bundesministerium für Bildung und Forschung

- Project title: Determinants of Diet and Physical Activity; Knowledge Hub to integrate and develop infrastructure for research across Europe – **DEDIPAC KH**

Funding source: BMBF – Bundesministerium für Bildung und Forschung

- Project title: Programm Konfliktprävention in der Region Südkaukasus/Zentralasien und Moldau 2014 **ReCCA** – Regional Economic Cooperation in Central Asia

Funding source: DAAD

- Project title: Chefredakteurtätigkeit von Dr. Daniel Müller für das Journal of Land Use Science – **Journal Müller**

Funding source: Journal of Land Use Science

- Project title: **FarmAgriPolis 2.0** – Ein Unternehmensplanspiel zum Erleben des Agrarstrukturwandels

Funding source: Landwirtschaftliche Rentenbank

II. Ongoing projects with third-party funding

- Project title: Fortfolgeantrag: Agroholdings im Agrar- und Ernährungssektor in GUS-Ländern: Entstehungsgründe, Funktionsweise und Entwicklungsperspektiven – **Agroholdings II**

Funding source: DFG Sachbeihilfe

- Project title: Between Path Dependence and Path Creation: The Impact of Farmers' Behavior and Policies on Structural Change in Agriculture – **StruWaMi**

Funding source: DFG Sachbeihilfe

- Project title: Third sector organisations in rural development: A theoretical and empirical analysis – **VW Schumpeter**

Funding source: VW Stiftung Schumpeter Fellowship

- Project title: The Global Food Crisis – Impact on Wheat Markets and Trade in the Caucasus and Central Asia and the Role of Kazakhstan, Russia and Ukraine – **VW MATRACC**

Funding source: Volkswagen Stiftung

- Project title: Exploring the potential for agricultural and biomass trade in the Commonwealth of Independent States – **AGRICISTRAD**

Funding source: 7. Forschungsrahmenprogramm der EU

- Project title: International comparisons of product supply chains in the agri-food Sectors: Determinants of their competitiveness and performance on EU and international markets – **COMPETE**

Funding source: 7. Forschungsrahmenprogramm der EU (IAMO ist Koordinator)

- Project title: Implications and policies for South East Asia of Reducing Emissions from Deforestation and Forest Degradation – **I-REDD+**

Funding source: 7. Forschungsrahmenprogramm der EU

- Project title: Economic and natural potentials of agricultural production and carbon trade-offs in Kazakhstan, Ukraine, and Russia – **EPIKUR**

Funding source: Wissenschaftsgemeinschaft Leibniz (WGL)

- Project title: Verbundvorhaben KULUNDA: Wie verhindert man die nächste "Global Dust Bowl"? – Ökologische und Ökonomische Strategien zur nachhaltigen Landnutzung in Russischen Steppen – **KULUNDA**

Funding source: BMBF – Bundesministerium für Bildung und Forschung

- Project title: RURAGRI: MULTAGRI – Governance ländlicher Entwicklung durch Maßnahmen zur multifunktionalen Nutzung landwirtschaftlicher Flächen
Teilprojekt: Landnutzungskonflikte und Auswirkungen landwirtschaftlicher Entwicklungspfade in unterschiedlichen ländlichen Gebieten – **MULTAGRI**

Funding source: BMBF – Bundesministerium für Bildung und Forschung

- Project title: Deutsch-Ukrainischer Agrarpolitischer Dialog – **APD Ukraine**

Funding source: BMEL – Bundesministerium für Ernährung und Landwirtschaft

- Project title: Globale Ernährungssicherung und die Getreidemärkte Russlands, der Ukraine und Kasachstans – **GERUKA**

Funding source: Bundesanstalt für Landwirtschaft und Ernährung

- Project title: Wissenschaftscampus Halle
Teilprojekt: Sekundäre Inhaltsstoffe in Getreidekaryopsen als Qualitätsmerkmal: Analyse potenzieller gesundheitsfördernder Effekte sowie Verbraucherakzeptanz und Zahlungsbereitschaft – **WiCa Anthocyanin**

Funding source: Land Sachsen-Anhalt

- Project title: Wissenschaftscampus Halle
Teilprojekt: Pflanzenbasierte Innovationen und Klimawandel – Einschätzung und Bewertung risikobedingter unternehmerischer Anpassungsprozesse sowie ihre Wirkungen auf den Märkten – **WiCa Innovationen**

Funding source: Land Sachsen-Anhalt

- Project title: The role of environmental, socioeconomic, institutional, and landcover/landuse change factors to explain the pattern and drivers of anthropogenic fires in post-Soviet Eastern Europe: A case study comparison of Belarus, European Russia, and Lithuania – Drivers of Anthropogenic Fires due to LCLUC in Post-Soviet Eastern Europe to NASA-ROSES A.2-Land-Cover/Land-Use Change For Early Career Scientists – **NASA Fires**

Funding source: Michigan Technological University

III. Projects with third-party funding that finished in 2014

- Project title: Institutional Analysis of Decentralization and Options of Stakeholders for Participation in Agro-rural Policy Design – **Decentralization I+II**

Funding source: DFG Sachbeihilfe

- Project title: Econometric evaluation of CAP impacts in Germany – **CAP Impacts**

Funding source: DFG Sachbeihilfe

- Project title: Market Structure and Organization in Agri-Food Value Chains: An Application to the German Dairy Sector – **Dairy Struc**

Funding source: DFG Sachbeihilfe

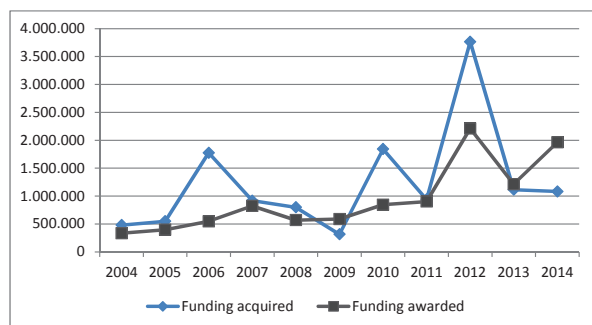
- Project title: Analyse der Auswirkungen staatlicher Maßnahmen in der Landwirtschaft auf die Preise für landwirtschaftliche Erzeugnisse und Nahrungsmittel in Serbien – **PPP Serbien**

Funding source: BMBF via DAAD

- Project title: Seeing is Learning: Eyeglasses, Eye-facts and Improving Vision for Better Educational Outcomes – **Eyeglasses**

Funding source: Stiftung Auge

Development of third-party funding



Source: Institute's own statistics.

Notes: All totals and percentages have been rounded up or down.

2012 newly approved 3,763,000 euros, 2,008,000 of which for project partners, From 2012 without other funding sources or Leibniz Association.

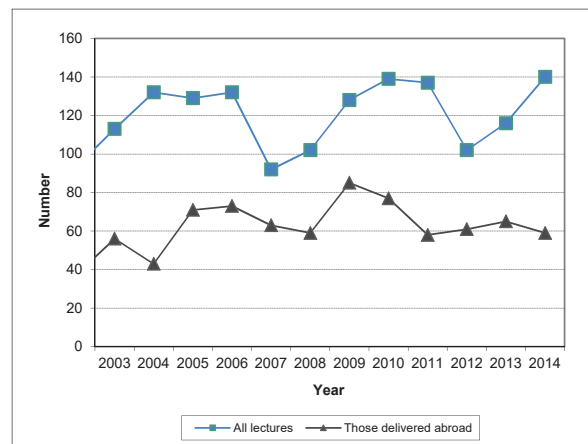
IAMO lecture activity

Besides publishing their work in journals, another important activity of IAMO staff is the presentation and discussion of research findings at national and international conferences, forums and workshops. A large proportion of lectures by IAMO staff are delivered at international events. In the period 1/1/2014-25/6/2014 the costs of 17 of the 32 lectures given were fully covered by the organisers (8), third parties (8), or other sources (1). There was mixed financing for three lectures, while expenses for 12 lectures were entirely covered by IAMO's budget.

Conferences and seminars

Conferences and seminars are essential for IAMO to be able to fulfil its third core task, which is to act as a forum for the exchange of scientific ideas in all questions of agricultural development in transition countries. The events organised by the Institute represent an important platform for scientific exchange, both on a national and international scale. Besides greater academic collaboration, the meeting of academics with decision-makers from the food industry and politics often provides an impetus for restructuring in the agricultural and food sectors in partner countries. Here we should also highlight the fact that in the field of

Development of IAMO lectures



Source: Institute's own statistics.



agricultural economics IAMO makes an important contribution to so-called scientific "capacity building" in research and teaching in our partner countries, and has a crucial role in developing long-term viable networks.

Important events in 2015

Expert panel on agricultural policy at International Green Week 2015

The agricultural policy symposium 2015 organised by IAMO in conjunction with the German Committee on Eastern European Economic Relations took place as part of the Global Forum for Food and Agriculture (GFFA), which ran from 15-17 January at Green Week 2015 in Berlin. The topic of the symposium, which was held on January 15, was the "Value chain driven development of rural areas in Eastern Europe – Perspectives for food, fuel and fibre." The host of the GFFA is the Federal Ministry of Food and Agriculture.

In view of the large potential of agricultural production in the countries of Eastern Europe, which has not yet been fully tapped, international experts highlight this region as a chance to satisfy the rising demand for food, bioenergy and renewable resources of all kinds. By focusing on the value chains for food, fuel and fibres, the speakers on the expert panel will discuss the opportunities for, and impediments to, the development of rural areas in Eastern Europe by playing a part in meeting the growing global need for food, energy and raw materials.

IAMO Forum 2015

In cooperation with the Potsdam Institute for Climate Impact Research (PIK), the Institute is organising the IAMO Forum 2015, entitled "Agriculture and Climate Change in Transition Economies". The conference is being held from 17-19 June 2015 in Halle (Saale). Climate change has a huge impact on biodiversity, with far-reaching consequences for agriculture. It threatens global food security. At the same time, agricultural production itself contributes massively to greenhouse gas emissions. International scientists and business representatives will discuss the effects of climate change on agricultural production and how agriculture impacts on global warming. The Forum will also examine suitable strategies for agriculture to adapt to climate change. The main objective is to reduce emissions, if not to avoid them altogether. The connections between climate change and agriculture will be examined with a particular focus on the transition economies of Eastern Europe, the former Soviet Union and Eastern Asia. Further information on the IAMO Forum 2015 can be found at www.iamo.de/forum2015.

Publications

Academic staff at IAMO publish their findings in academic journals, monographs, anthologies and discussion papers. A complete list of publication can be found on IAMO's web site on the Internet (www.iamo.de). In the



Carl-Albrecht Bartmer

President of the German Agricultural Society (DLG)

Congratulations from the DLG President on IAMO's 20th anniversary

With its outstanding academic work, IAMO has analysed and researched the developments in Eastern Europe over the last 20 years. This has not only made an essential contribution to supporting the transition of these countries into modern, free-market states; the Institute has in addition developed a wide variety of networks in academia, politics and agriculture. A large number of German and international IAMO students have now formed a network allowing wide-ranging access to public administrations, businesses and organisations in the various partner countries. IAMO is anything but an ivory tower. On the contrary, it sees itself as a research institution with a role to support agriculture, whose key findings in the field of international agricultural economics research must not only meet academic standards but also be practically applicable.

We wish IAMO all the best for the coming years and look forward to further successful collaborations.

period covered by this report, the Institute's publication activity has taken a positive development (for an overview of the period 2005-13 see the section "IAMO in the ascendant – The facts"). This is particularly true of refereed articles with an impact factor, which are listed on the Science Citation Index (SCI) and the Social Science Citation Index (SSCI). It is clear, therefore, that IAMO's internal quality management for publications continues to be effective.

IAMO Discussion Papers

As of 31 December 2014, The IAMO Discussion Paper series contained the following new publications, which can be downloaded for free as pdf files from the IAMO web site (<http://www.iamo.de/nc/iamo/publikationen/discussion-papers.html>):

BÍRHALÁ, B.-M., MÖLLERS, J. (2014): Community Supported Agriculture. Is it driven by economy or solidarity?, *IAMO Discussion Paper No. 144*, Halle (Saale).

PETRICK, M., OSHAKBAEV, D., WANDEL, J. (2014): Kazakhstan's wheat, beef and dairy sectors: An assessment of their development constraints and recent policy responses, *IAMO Discussion Paper No. 145*, Halle (Saale).

POMFRET, R. (2014): Trade costs and agricultural trade in Central Asia, *IAMO Discussion Paper No. 146*, Halle (Saale).

PREHN, S., GLAUBEN, T., LOY, J.-P., PIES, I., WILL, M. G. (2014): The impact of long-only index funds on price discovery and market performance in agricultural futures markets, *IAMO Discussion Paper No. 147*, Halle (Saale).

PREHN, S., BRÜMMER, B., GLAUBEN, T. (2014): Gravity Model Estimation: Fixed Effects vs. Random Intercept Poisson Pseudo Maximum Likelihood, *IAMO Discussion Paper No. 148*, Halle (Saale).

KOPSIDIS, M., BROMLEY, D. W. (2014): The French Revolution and German Industrialization: The New Institutional Economics Rewrites History, *IAMO Discussion Paper No. 149*, Halle (Saale).

PETRICK, M. (2014): Modernising Russia's cattle and dairy sectors under WTO conditions: Insights from East Germany, *IAMO Discussion Paper No. 150*, Halle (Saale).

HOFMAN, I., VISSER, O. (2014): Geographies of transition: The political and geographical factors of agrarian change in Tajikistan, *IAMO Discussion Paper No. 151*, Halle (Saale).

Studies on the Agricultural and Food Sector in Transition Economies

In the series of publications *Studies on the Agricultural and Food Sector in Transition Economies*, IAMO publishes monographs and conference reports dealing with questions of agricultural economics in Central and Eastern Europe, as well as other transition countries. All publications from volume 22 onwards can be downloaded as pdf files for free from our web site (www.iamo.de/dok/sr_vol###.pdf). To date 30 conference reports or volumes and 47 monographs have appeared in the series.

LAZE, K. (2014): Identifying and understanding the patterns and processes of forest cover change in Albania and Kosovo, *Studies on the Agricultural and Food Sector in Transition Economies*, Vol. 74, Halle (Saale).

RENNER, S. (2014): Flexibilität von Unternehmen – Eine theoretische und empirische Analyse (Flexibility of businesses: A theoretical and empirical analysis), *Studies on the Agricultural and Food Sector in Transition Economies*, Vol. 75, Halle (Saale).

DJURIC, I. (2014): Impact of policy measures on wheat-to-bread supply chain during the global commodity price peaks: The case of Serbia, *Studies on the Agricultural and Food Sector in Transition Economies*, Vol. 76, Halle (Saale).

LOY, J.-P. (ed.) (2014): Marktwirtschaftliche Koordination: Möglichkeiten und Grenzen. Symposium anlässlich des 75. Geburtstages von Prof. Dr Dr h.c. mult. Ulrich Koester (Free-market coordination: opportunities and limits. Symposium to celebrate the 75th birthday of Prof. Dr Dr h.c. mult. Ulrich Koester), *Studies on the Agricultural and Food Sector in Transition Economies*, Vol. 77, Halle (Saale).

Research communication

IAMO not only presents its work to the scientific community for discussion, it also advises the wider public about research findings and current trends in agriculture and the food economy, and provides information tailored for policymakers in business and politics. Besides

its media work and the publication of the *IAMO Policy Briefs* and the newsletter, the IAMO press office maintains the Institute's internet presence and organises events.

In the period October 2013 to September 2014 there was a broad spectrum of high-level events with representatives from politics and business, to which academic staff members from IAMO were invited. For example, The German-Russian Agricultural Policy Dialogue, a cooperation project of the German Ministry of Agriculture, held a seminar on 21 November 2013 in the Federal Council of the Russian Federation on the topic of "Land management". One member of IAMO's academic staff, Alexander Prishchepov, was invited to present his research findings on agricultural land use in Russia since 1990.

IAMO Director Thomas Glauben and the business ethics specialist, Ingo Pies, from Martin Luther University Halle-Wittenberg, took part as experts in an internal Deutsche Bank conference on the topic "Price development of agricultural raw materials" on 16 April 2014 in Frankfurt (Main). Besides academics, the co-chairman of the board of Deutsche Bank, Jürgen Fitschen, had invited representatives of civil society organisations, the financial sector, business and politics.

On the invitation of the Genossenschaftsverband e.V. (Federation of Cooperatives), IAMO academics Axel Wolf and Wolfgang Weiß took part in the event "Organisation of public services in rural areas via the creation of efficient network and cooperation structures" on

18 June 2014 at the Saxony *Land* headquarters in Berlin. The Federation of Cooperatives had produced a study on the topic, whose findings were discussed with representatives from rural areas and academics. Via the Leibniz Association Axel Wolf had already engaged in conversations on this topic with Bundestag deputies on 20 and 21 May 2014 as part of the series of events "Leibniz in the Bundestag".

At the heart of the issue was the question of what role agriculture plays in the demographic change and public service provision in peripheral rural areas.

In connection with the 6th Foreign Trade Conference of the Agricultural and Food Economy, a Forum was held in Berlin on 25 June 2014 on the Research Association project begun in 2012: "COMPETE International Comparisons of Product Supply Chains in the Agri-Food Sectors: Determinants of their Competitiveness and Performance on EU and International Markets". On the guest list at the COMPETE forum were stakeholders and policymakers from European food supply chains, as well as from politics and science. Project coordinator Heinrich Hockmann (IAMO) presented current research findings, highlighted future challenges and delivered policy recommendations.

Besides events, press releases and publications such as the Policy Brief and the Newsletter are of great importance for research communication. All IAMO press releases appear in German and English, some in Russian as well. They are distributed via our own mailing list of just over 500 contacts, the Science Information

Service and IAMO's web site. The addresses include the media, ministries, universities and associations. In particular, the topics of financial speculation on agricultural raw materials markets, reforms of the Common Agricultural Policy (CAP), the competitiveness of European food chains or the findings of the IAMO Forums of GFFA expert panels at Green Week in Berlin were picked up and reported on by the media. In the section "IAMO in the media" at www.iamo.de, you can view a selection of articles from the popular and industry press.

The *Policy Brief* series, established in 2011, summarises – in no particular order and in plain language – socially relevant research findings by IAMO. Since the series began until October 2014, 20 Policy Briefs have been published. The Policy Briefs are aimed at representatives from politics, business and the media, as well as anyone with an interest in the subjects they cover. In 2014 eight Policy Briefs had appeared by October. In 2014 alone the subjects covered ranged from analyses of new EU agricultural policy support measures, growth blockages in the large cereal-farming states of the former Soviet Union, to presenting a policy agenda for the development of Kazakhstani agriculture. The Policy Briefs are published in German and English, and some in Russian, and can be downloaded for free at www.iamo.de.

The IAMO Newsletter is sent out as an email four times per year to almost 2,000 recipients, informing specialists and members of the public about the Institute's new research projects, IAMO staff research visits, events, awards, successful PhDs and current publications. The

Newsletter is available to read in German and English on our web site www.iamo.de, where you can also sign up to receive it.

Besides hosting expert panels at the Global Forum for Food and Agriculture during International Green Week, Agrotechnica and EuroTier, every year on the Long Night of Science IAMO opens its doors to interested visitors from Halle and the surrounding area. More details on events can be found in the section "IAMO in the ascendency – The facts' in this IAMO Portrait".

Our web site is currently undergoing a complete overhaul. Those interested can currently visit www.iamo.de, where in German and English they can find out about the Institute's news, events, research projects and publications. Important information relating to agriculture

and the food economy in the regions investigated by IAMO can be found here, including subject-related documents and internet links. A variety of publications, such as volumes from the IAMO series "Studies on the Agricultural and Food Sector in Transition Economies", the IAMO Discussion Papers and Policy Briefs can be viewed free at the web site and are available for download. The web site also offers access to the Annual Reports and the IAMO Yearbooks, as well as the Institute's press releases and Newsletters.

The press office is your first point of contact for all questions relating to IAMO. We will be very happy to tell you more about the Institute's research activity or put you in touch with members of our academic staff. The press office can be contacted by email at press@iamo.de, or by telephone: +49 345 2928-330 or -329.



View of inner courtyard at IAMO

How to find us

» *by car*

From the south: Leave the A9 motorway at the Rippachtal junction, and take the A38 towards Merseburg. At the Halle-Süd triangle change onto the A143 and follow this road until the Halle-Neustadt/Halle-Zentrum exit. Then take the B80 for about 8km towards Halle until you get to Rennbahnkreuz. At the entrance into town get into the left-hand lane and go straight on along the B80 towards Kröllwitz/Universität. Turn left at the ice-rink and follow Blücherstraße to the end. Then turn right. At the end of the avenue turn left into Theodor-Lieser-Straße. IAMO is in the building on the right-hand side.

From the north: Take the A9 motorway (Berlin-Munich) as far as Halle/Brehna. Follow the B100 towards Halle until you reach the outskirts of the city (traffic lights at Dessauer Brücke). Get into the right-hand lane and turn left, still on the B100 to Zentrum and Magdeburg. Turn right immediately into the B6 towards Magdeburg and then take the next exit (Zoo, Wolfensteinstraße). Carry on along Wolfensteinstraße (underpass, several traffic lights, Reilstraße/Große Brunnenstraße crossing) until you reach Burgstraße. Turn right and take the next available left turning over Saalebrücke. Once over this bridge take the first right turning, drive back under the bridge and continue along the embankment of the Saale. Turn left at the next crossroads into Weinbergweg towards Universität, and follow the road until the next set of lights. Continue straight ahead into Walter-Hülse-Straße. The IAMO building is on the right-hand side. Turn right into Theodor-Lieser-Straße and IAMO is now in front of you.

From the north-west: Coming from Magdeburg take the A14 (direction Leipzig or Dresden) to the Halle-Peißen exit, then take the B100 to Halle. See "From the north" for further directions.

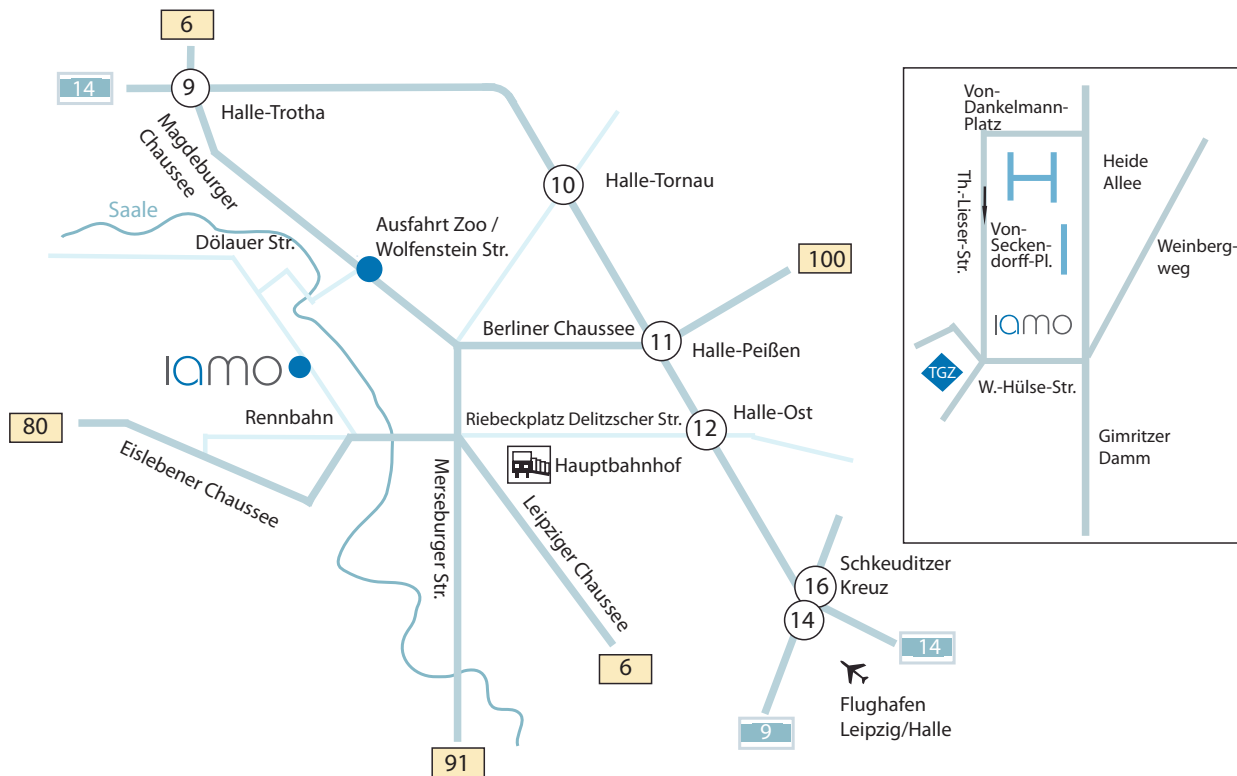
From the west (on the B80): Follow the B80 until the Rennbahnkreuz. At the entrance into town get into the left-hand lane and continue along the B80 towards Kröllwitz/Universität. Turn left at the ice-rink and follow Blücherstraße to the end. Then turn right. At the end of the avenue turn left into Theodor-Lieser-Straße. IAMO is in the building on the right-hand side.

» *by train*

Leave the station by the main exit and follow signs to the tram stop "Riebeckplatz/Hauptbahnhof". From here take tram number 4 towards Kröllwitz. Alight at the Weinberg Campus stop (about 15 minutes from the station). The Institute is on the left-hand side of the road as you get out.

» *by plane*

Leipzig-Halle airport is 20km from Halle. A regular shuttle train takes you to the main station. See "By train" to find the way from there.



Publisher's note

IAMO's publications also include the series of in-house *Discussion Papers*, the series *Studies on the Food Sector in Transition Economies*, and the *Institute's Annual Report*.

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