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Fighting poverty after agricultural liberalization in Africa

The first Millennium Development Goal aims at reducing "by half the proportion of people living on less than a dollar a day and by half the proportion of people who suffer from hunger". Most of the work needs to be done in sub-Saharan Africa: 46% of the population live on less than one dollar a day, 31% of the children are underweight.[1] To an overwhelming degree these people can be found in rural areas. The weighted average shows that 70% of the people in sub-Saharan Africa work in the agricultural sector.[2] Agriculture must be involved in some kind of growth process. Otherwise the first Millennium Goal will not be reached.[3]

African agriculture is in a crisis. In many African countries the per capita food availability is declining.[4] A high population growth of 2.2% contributes to this (in sub-Saharan Africa 2004: 682.2 million, rising to 1,497.3 million in 2050).[5] The situation is dramatic in the highly populated, often mountainous areas with smallholder farms which suffer from a declining marginal product of labour. In short: without an increase in productivity, people work 12 hours a day on their land, but can reach only subsistence level, i.e. mere survival. If the population increases further, people will suffer from hunger (Brandt 2004: 13-18). Nevertheless, this crisis is not inevitable. Developing countries as a whole managed to increase per capita food availability by 19.3% between 1961 and 1991, while in Africa there was a 16.5% decline, which indicates a catch-up potential (Mitchell et al. 1997: 28). The special climatic circumstances in Africa play a role, but they explain this underperformance "only up to a point", because modern farming techniques can help to overcome these problems (Paarlberg 1999: 506-509).

1 The debate about the effects of liberalization on African agriculture

The aim of this article is to give an overview on the effects of liberalization on African agriculture, based on an extensive literature survey (see Hermanns 2005). The focus will be on the main reform elements and outcomes and on possible strategies to correct them.

During the past fifteen years, under IMF/World Bank supervision and with the consent of the donors, sub-Saharan African countries have liberalised their agricultural sectors. State trading enterprises were abolished, markets with private actors were established, other interventions that influences prices were abolished, notably fertilizer subsidies, and an overall cut in tariffs was envisaged. Export orientation was made possible by devaluations of exchange rates. These reforms, based on the *Washington Consensus on Agriculture* were launched because the IMF and World Bank argued that most state interventions failed in Africa.[6]

This thesis conceals a more complex reality. With regard to food crops, some East African countries were struggling with a well-intended overstretch of state operations, but problems of efficiently organising and financing them.[7] In many West African countries, food crop interventions were never properly financed to have any impact at all.[8] With regard to export crops, some state marketing boards were successful, not only in the West African cotton sector.[9] There were, however, shocking examples of smallholder exploitation[10], while there was a general tendency to tax export crops.[11]

The reforms in sub-Saharan Africa were inspired by neoclassical models, assuming that only fully competitive markets with many market participants and without any interference in the price building process, will achieve optimum welfare.[12] From this narrow perspective, the most fundamental problems in Africa are in theory first of all market failures which prevent ideal neoclassical markets to achieve full efficiency.[13] Secondly, it can be argued that the neoclassical ideal of perfect competition does not explain processes of economic growth, which are better described as dynamic structural change led by investments in increased productivity. Thirdly, there is evidence that market failures and structural problems cannot only be addressed by means that are in line with market principles. To save the honour of some experts, the reforms were not solely intended to turn ideal neoclassical models into reality, but, in addition, some of their elements (see below) make sense from a more pragmatic, dynamic liberal perspective.[14]

In other parts of the world, developing countries successfully intervened in agriculture and thereby reduced poverty, using minimum prices and government storage to achieve price stabilization[15], in addition to fertilizer subsidies and investments in irrigation, notably in Indonesia. Notwithstanding the IMF put pressure on Indonesia to liberalize comprehensively.[16] India intervened with roughly similar measures, under rain-fed circumstances (Smith/Urey 2002: 13-20). In Vietnam, which is praised as an example of a successful liberalization with poverty reducing effects, there was substantial state investment in

irrigation and extension before liberalization. State-owned companies are still "important" in internal trade between surplus and deficit regions, they "dominate" long-distance North-South trade and have a 96% share in export trade. They command much higher volumes, more assets and storage capabilities than private traders and wholesalers (Minot/Goletti 2000: 28-29, 65, 91). In Egypt, the state also intervenes. Domestically administered grain prices are rising. Since 1990 they are equivalent to or sometimes higher than world market prices. Subsidised food is supplied to the poor and overall budget costs amount to an acceptable 7.56% of total government expenditure. The IFPRI institute recommends re-negotiations at the WTO, so that flexible tariffs can be used in the future to maintain domestic price levels (Kheralla et al. 2000a: 5, 9, 147, 153-154).

It could be considered as a failure of academic discourse on the reforms in sub-Saharan Africa that authors highlight success indicators, while placing less emphasis on the market constraints and the basic problems agriculture is facing in Africa.[17] This signalled 'all is fine', but it is not convincing, because markets function as a system, implying that weaker parts weaken the whole system. In addition, authors did not analyse the export crop sector in more detail. Here post-reform policies in certain countries did not match neoclassic liberal prescriptions. In the export crop sector private enterprises were given exclusive territorial marketing rights.[18] For the advantages of this approach see below point 4.2.

Interestingly, some IMF/World Bank affiliated authors openly declared the failure of the liberal reforms and informed the public that the reforms had never been intended to help achieve higher growth rates.[19] Certain other contributors claim that the liberal reforms cannot be evaluated now, because reversals had occurred, while dramatizing some of these reversals and ignoring that these reversals were not widespread.[20] Authors, critical of the liberal agenda, present successful projects which changed input prices and have achieved increases in production by subsidizing seeds and fertilizers, an intervention into prices which is not accepted by the liberals.[21]

The debate is increasingly influenced by authors who focus on newly established liberal markets. From a Douglass C. Northian neoclassical institutionalist perspective, the development of formal and informal institutions is analysed, which may help to address market failure and reduce transaction costs, like brokers in Ethiopia, or other trust-based long-term relationships, for example, in Madagascar.[22] This approach has some advantages, because it recognizes market failures and the need to reduce transaction costs. Nonetheless, as a remedy for market failures often only liberal means are discussed, more specifically improved infrastructure and means to reduce transaction costs like grain exchanges and futures markets.[23] In addition, often neoclassical institutional economists are overtly optimistic and expect that

> "when provided with strong enough (price) incentives, rational economic agents will develop institutions to guide economic activity so as to overcome problems of market failure"[24].

They ignore the fact that there are forces which may constrain the development of institutions in Africa, and that state intervention can help overcome market failures and reduce transaction costs as well (Fafchamps 2004: 457). Indeed, the theory of transaction costs by Oliver E. Williamson allows for much more complex arrangements to overcome market failure than envisaged by neoclassic liberal theory.[25] This aspect is addressed in a recent approach focusing on economic coordination risks.[26] Lastly, events in Africa had an important impact on the debate. The famine in Ethiopia 2003 clearly showed the limits of the newly established private marketing system, and afterwards the debate started to be much more open and result-oriented.[27]

2 Three basic problems

There are three basic problems of crucial importance for African agriculture which all theoretical approaches must address, one is the market failure of credit markets, the other two are price-related problems.

2.1 Market failure of credit markets

The first and most fundamental problem in Africa is the market failure of credit markets. Typically, at the beginning of a new season African smallholder farmers have no money left to finance inputs that would help increase yields, such as seeds, fertilizer and other inputs like pesticides (Poulton et al. 1998: 89). But credit is difficult to obtain, because in many parts of Africa small farmers cannot mortgage their land, as it is managed by communal (i.e. community-based) land tenure schemes. In short: In most parts of Africa there is no private land ownership. Bankruptcy i.e. the farmer's loss of his land to the creditor will not be accepted. Equally, distress sales are not tolerated.[28] This system is the rational result of the extraordinarily risky circumstances of life in Africa.[29] Even liberal authors admit that this kind of market failure is widespread in Africa and will not change in the medium-term, while hindering the development of market institutions in the Northian liberal sense, which implies a much lower investment and welfare level (Collier/Gunning 1998: 17).

As a consequence, any kind of workable credit scheme can have a beneficial impact in Africa, but it is extremely difficult to establish such a scheme. For example, traders do not give seasonal credit to farmers, because, in the absence of

collaterals, producers may sell their output to someone else to avoid repayment ('strategic loan default').[30] For this reason, credit markets usually collapse in rural areas.[31] Some schemes do better, such as well-organised cooperatives, in the ideal case with good contacts to a bank or government institution providing credit, private contract farming schemes or – no longer compatible with neoclassic liberal views – private contract farming schemes provided by the state with exclusive marketing rights in certain regions as a form of security for providing credit. In the past, state marketing boards with exclusive marketing rights were used, and in a few cases they are still being used today.

What exactly is meant by exclusive marketing rights? If a state marketing board or a private firm has the marketing monopoly in the whole country or in a certain area, this implies that it has the exclusive right of buying the produce of the farmers at harvest time. This right is used as a form of security or collateral substitute to ensure repayment of fertilizer credit, which had been given to the farmer earlier during the planting season. At harvest the cost of the fertilizer is deducted from the value of the crop.[32]

2.2 Low and variable price levels for food crops

In the food crop sector, that is, maize, rice, cassava, millet, sorghum, beans, pulses etc., price levels are very low. This is caused by the lack of purchasing power of the people and their inelastic demand.[33] This has positive and negative effects. First of all, on the one hand, poor people can buy cheap food, so that any policy which aims at pushing prices up must – carefully – be adjusted to the reality of poverty in Africa. On the other hand, this is keeping farmers' incomes at a low level and generally inhibits agricultural development, because under these circumstances investment levels are correspondingly low.[34] Secondly, a characteristic price movement takes place. Prices are typically very low at harvest, because then supply exceeds demand and inelastic demand drives prices down. Later in the season high price peaks are often observed.[35] Although this varies from country to country, especially small farmers are hurt by these price fluctuations, because they are net-buyers of food during the year. Typically, in the lean season when prices are high they run out of stock.[36] Although this structural price-level and price-variability problem is difficult to counteract, there are various policy options to change the situation. The obvious option is to strengthen markets or to remove export barriers to stabilize prices during times of surpluses.[37] Other policies do not fit into liberal prescriptions: For example tariffs or price stabilization by public stock-keeping.[38]

This has implications for trade policy: In many African countries, the prices for basic food crops are sometimes even lower than low world market price levels for maize or rice, especially at harvest time and in remote regions. In principle, this speaks against the need for tariff protection, supporting IMF/World Bank arguments that low prices level are necessary in Africa in order to ensure that the poor can buy food, to keep wage levels low and to combat inflation.[39] Still, world market prices continue to influence and cap domestic market prices, because many African countries import food, although price transmission is not perfect, for example, because of tariffs or high transport costs which delink remote areas. Furthermore, prices for traditional African food crops like millet, sorghum and cassava are influenced to a lesser degree.[40] And, importantly, world market prices fluctuate and can reach very low levels. From this point of view, flexible tariffs, which can reach high peaks, make sense in order to protect a certain price level. For example, wheat prices were at a low level of US$ 105 t in December 1999 and the highest price between 1990 and 2000 was US$ 263 t. In order to achieve full price stabilization in this case a maximum tariff of 150 per cent would have been needed.[41] In addition, two examples below show that moderate tariffs may enhance growth in the agricultural sector. In the presence of net-food-buying smallholders it is essential, however, not to set tariffs too high.

Generally, world market prices for wheat, maize and rice can be characterized by shorter booms and longer periods of low prices. A declining tendency is especially visible since 1998 and if prices are inflation adjusted.[42] Prices are now so low that this causes cost recovery problems for small farmers all over the world.[43] For instance, if the (at the moment subsidized) fertilizer input prices are liberalized, it is estimated that only one (!) out of seven Indian states will have comparative advantages in a free rice market.[44] Mexican maize farmers, whose upper price limit is set by world market maize prices, receive massive NAFTA-related compensatory payments.[45] The general reason for declining world market prices is technological progress (actively stimulated by massive subsidies and high intervention prices in certain countries, while the surpluses have to be exported, with the support of export subsidies, to keep domestic prices high), while agricultural markets are relatively price inelastic (FAO 2004: 6-7; Gabre-Madhin et al. 2003: 7).[46]

2.3 Price fluctuations of export crop prices

In the cash crop sector, for example, African farmers can earn ten times more than from food crops (Brandt 2004: 41). But there too, well-known price-related problems occur. The decline and the fluctuations of world markets prices make it difficult to pursue more far-sighted investment strategies (FAO 2004: 10-13). Diversification into non-traditional cash crops is one way out, because the prices of these crops do not yet seem to decline. Nevertheless, traditional cash crops remain the most important option to reduce poverty in Africa quickly and with large effect (World Bank 2004: 131).

3 Effects of liberalization

3.1 Food crops

3.1.1 Price-levels

The microeconomic promise of liberal reforms is that private traders bid up formerly depressed prices, after the removal of state control (reform element 1, 'liberal internal markets'). This did, in general, not occur, for the structural reasons mentioned in point 3.2 above.[47] Therefore, in general, food crop prices are stagnating or even declining. A downward trend is, for example, documented for Ghana since 1984, for Zambia since 1987, for Ethiopia since 1990, for Kenya since 1988. After further statistical control, a negative trend has been confirmed for Ghana and Ethiopia.[48] The only confirmed case of a positive trend in food prices in response to liberalization occurred in Mali's 'Office du Niger' irrigated rice production area, where liberalization of the formally state controlled rice production and the abolition of an export ban (reform element 2, 'free trade') contributed to higher price levels because neighbouring, higher income countries started to buy rice.[49] In addition, small rice mills were introduced, which helped to reduce marketing costs and to increase the producers' share of the price (reform element 3, 'marketing costs').[50] Two examples of not so liberal policies in the food crop sector can be given:

Kenya liberalized it's marketing of maize and changed its pricing policy, but it is not an example of comprehensive liberalization: The declining price trend in maize is cushioned by the use of tariffs (1999 - June 2000: 75%, now 30%) and temporary buying activities of the food reserve agency. In Kenya, many small farmers judged the overall impact of the liberalization as positive, because on the one hand, they benefited from overall lower prices, as they are net food consumers. On the other hand, they benefited from the new price level of maize, which is not a 'free market price level', with prices sometimes above world market price levels (cf. table 1) (Jayne et al. 2001: 20). This suggests that even in countries with a poor population a compromise level could be found, which leaves production incentives intact at a higher level. While I do not deny that these policies can be interest group related (75% output is by large farms, 25% by smallholders), in this case at least they do not seem to be detrimental to smallholders (85% of smallholders can pay for fertilizers under these circumstances).[51]

Similarly, in Madagascar – an example of very comprehensive and early liberalization – a compromise level of price intervention with positive effects could be found. Because of higher tariffs in Madagascar, rice prices rose, stimulating rice production. After liberalization, imports declined by 3/4.[52] Still, the World Bank was opposed to a higher rice tariff (reform element 2, 'free trade'). Therefore, while in 1991 the rice tariff amounted to 30%, it was reduced to 10% in 1995. After that, it was increased again, using a 15% tariff plus a 20% value added tax, thus the effective tariff is now at 35% (2004) (Fafchamps/Minten 1998: 4-5; Stifel 2004: 3). In Madagascar, prices for rice rose by 42% due to this combination of liberalization and tariff protection. Smallholders in particular reacted by expanding output. Output in agriculture increased from 1% to 2%, in the rice sector from 2% to 3.6% (Barrett 1998: 747-748). In sum, relatively moderate but flexible tariffs can provide incentives to increase output.

3.1.2 Price variation

Price variations give important signals to market actors. For example, storage is encouraged by price variations, and the transport from surplus to deficit regions. In general, markets are expected to reduce price variations and this is interpreted as a sign of successful market functioning (Kheralla et al. 2002: 93). The thesis of IMF/World Bank affiliated literature is that price variations have been reduced since liberalization (Kheralla et al. 2001: 93-95). This suggests that market integration has been intensify-

TABLE 1

Prices for maize grain and maize meal, January 1996 - August 1998

	Ethiopia	Kenya	Zambia	Zimbabwe	South Africa	Mozambique
	US$ metric ton (average from Jan. 1996 - Aug. 1998)					
Wholesale price, surplus regions	97	190	133	119	113	101
Wholesale price, capital city	135	241	174	127	n/a	217

For comparison: US No. 2, yellow, f.o.b. U.S. Gulf ports, Friday, yearly averages 1996: US$/t 165.12; 1997: US$/t 117.24; 1998: US$/t 101.95. FAO International Commodity Prices (CIWP), http://www.fao.org.

Source: Jayne et al. 2001: 20.

ing automatically over time and that the problem with market integration will vanish in the next few years. In contrast, it is argued here that these fluctuations will prevail if markets are not strengthened. Furthermore, it can be observed that price variations may be so high and prices may be so unstable that this limits storage and even trading incentives. Now, there may be an overall decline of variations and there are some countries, for example, Benin (here markets were traditionally free from government interference) where markets are relatively well-integrated (Kheralla et al. 2002: 59). Similarly, in Kenya, the liberal marketing system seems to function quite well. Prices in deficit regions are declining more than in surplus areas.[53] However, empirical data show that in many countries high variations prevail.[54] For Tanzania it is concluded:

> "High seasonal price fluctuations discourage large-scale production of surpluses, and reduce the competitive position of Tanzania relative to other countries" (Coulter/Poulton 2001: 225; Putterman 1995: 315) (cf. table 2).

In Ghana, for example, price variations declined, while there are still inter-seasonal variations and inter-annually different levels.[55] Although there has been a vigorous response of private trading activity after liberalization, Malawi has seen an increase in price variation. Most of the traders in Malawi are incapable of using space/time arbitrage opportunities.[56]

TABLE 2

Average Monthly Maize Wholesale Price in Dar es Salaam, Tanzania, 1993-94 to 1995-96, Highs and Lows (T Shs)

Year	Low	Month	High	Month	Percentage of increase
1993-94	4,750	July	9,000	Jan-Feb	90
1994-95	5,250	Aug-Sept	14,500	January	176
1995-96	7,000	July	18,800	April	169

Source: Coulter/Poulton 2001: 223.

Why can price variation have welfare decreasing effects?

Price variation and poverty

Again using Madagascar as an example, the effects of price variations on poverty can be exemplified. In Madagascar, prices for rice rose by 42% due to liberalization and tariff protection, but price variation increased by 53%. About 63% of the rice producers are net-food-consumers who suffer from instable prices and high prices at the end of the season. This helps to explain the fact that poverty has increased after liberalization, despite positive trends in output.[57] In Madagascar, there are not only high inter-seasonal but also inter-regional price variations. For example, six month after harvest the Majunga-Plateau region suffers from prices which are 100% higher than in other regions.[58] Policy interventions influencing prices can have positive effects in this situation. In a simulation study it is calculated that a 20% decline of inter-seasonal storage costs (e.g. by using a storage subsidy) will lead to a 6.5% decline in lean period rice prices (10% fall in coarse grain prices) and an 2% income rise for the rural poor (while overall poverty declining by 1%).[59]

Price variation and use of fertilizer

Price variability can have negative effects on the use of fertilizer. This reason is advanced to explain why in Madagascar only 12% of farmers use fertilizer (Stifel/Randrianarisoa 2004: 31).[60] This causal relation is further confirmed by data from Ethiopia. Here people suffer from high inter-seasonal, inter-regional and inter-annual price differences (because market participants expect a drought or another good harvest). For example, due to good harvests between 2000 and 2002, the price levels for maize were very low with little seasonal peaks (with index numbers around 60). Before harvest in 2002, prices increased to 120 and reached 140 due to insufficient storage of the earlier surpluses and the bad harvest in the first half of 2003.[61] Indeed, after two years of very good harvests a dramatic crisis situation occurred in mid-2003 and 13.2 million people (19%) of the population were dependent on food aid (FAO/WFP 2004: 171). Due to inter-annually different price levels, it became difficult to plan investments in inputs, so that fertilizer input use declined, leading to a decline in production.[62] An additional outcome was a visible decline in demand for fertilizer credit, even though the government[63] increased the amount of credit available (FAO/WFP 2004: 5, 8, 21-22; Jayne et al. 1998: 18).

Other countries, such as Tanzania, face similar price problems which reduce fertilizer use like in Ethiopia since the liberalization of maize production. Unlike Ethiopia, Tanzania completely lacks a system of fertilizer credit after the state marketing board was abolished. Only 5% of farmers have access to formal credit schemes.[64] After removal of fertilizer subsidies, studies show that fertilizer use on maize is no longer profitable at current output price levels. As a consequence, the use of fertilizer decreased by half. Only 15% of the farmers use fertilizer (down from 27%), leading to a stagnation of maize production.[65] Although 'hammer mills' were introduced and provide means for cheaper and localized processing and help to reduce marketing costs (success of reform element 3), liberalization in Tanzania, like in other countries, led to a regionalization of production and to the problem that remote areas are no longer served by private traders and farmers had to return to subsistence production (Coulter/Poulton 2001: 226).

3.1.3 Marketing system

The liberal school argues that markets guarantee efficiency (reform element 1). Indeed, in many countries in Africa, the new incentives led to a vibrant and competitive trading system. In Kenya, for example, assemblers collect the produce by bicycle from relatively remote locations (Nyoro et al. 1999: 11, 45). In Benin, traders operate close to perfect competition, with very low profit margins, in Malawi the margins are somewhat higher, indicating less intense competition (Gabre-Madhin et al. 2001: 83). In Ethiopia, there are moderate concentration patterns, but still low profit margins (Dessalegn et al. 1998: 9; Gabre-Madhin 2001: 30, 46-47, 49). Individual examples show the abuse of market power. For example, traders networks may arrange for exclusive buying in certain territories (in Madagascar). Here, the entry of new traders will have beneficial effects.[66] Nevertheless, network rents are generally found to be low (in Madagascar and Malawi).[67] Although this reminds of perfect competition, markets in Africa do not achieve optimum efficiency (or efficiency in the dynamic sense)[68] for other reasons:

While the situations surely vary across countries, market systems are generally weak in Africa and the empirical findings confirm again and again weaknesses in storage, infrastructure, market information, quality control and traders' capabilities, including transport and access to credit (Jayne et al. 1997: 19-25; Gabre-Madhin et al. 2001: 87-91). In general, marketing costs are high in Africa, between 40 and 60%. Transport costs dominate, while the handling and travel costs to inspect quality and to sign contracts personnally are also important.[69] Contracts are difficult to enforce and there are no quality standards, which all contributes to the fact that traders arrange things personally, pay in cash, inspect quality locally and travel with their shipments.[70]

These aspects can be exemplified by Ethiopia, where the situation is dramatic: Storage is insufficient and of low quality, therefore losses are high.[71] The costs of storage are high, so that trading is done as direct as possible.[72] Most traders sell grain quickly, 29% of the traders store grain for a period of three to six months. Only 13% store it for six to twelve months and only 5% have inter-annual storage plans, while 36% of the traders sell after two to three months and 2% sell within one month (Dessalegn et al. 1998: 22). In principle, price variation increases incentives for storage. Indeed, these incentives exist in Ethiopia. Nevertheless, price risks may be so high that this again prevents investments (Dessalegn et al. 1998: 29; Negassa/Jayne 1997: 15). The transport of grain from surplus to deficit areas is clearly insufficient. Price differentials between these regions remain high.[73] The transport system's total capacity cannot handle times of peak demand (Gabre-Madhin 2001: 12). It is difficult for the traders to organize transport. Only 15.2% of the traders have their own transport vehicles. Even among the richest quarter of the traders this applies to only 45%. For this reason, 60% of the traders have to hire private transport services, 55% of the traders report that this takes one week, 12% answer two weeks. This is, of course, too long to quickly react to price differences.[74] It makes it very risky to react on opportunities to trade in grain. Therefore, traders sometimes refrain from doing so (Gabre-Madhin 2003). Moreover, it is very difficult for the traders to obtain credit. The average amount of credit obtainable for traders is so low that it is not possible for them to buy a vehicle, to build up storage or to store a meaningful amount of grain (Dessalgen et al. 1998: 21).

The activities of brokers have positive effects. They organize long-distance trade (200-1,200 kilometres) and bring sellers and buyers together. They own more capital and sometimes give credit to traders. They have established an informal grading system, use the telephone frequently and have good market information. They command 52% of the grain marketed, which is 16% of the total surplus marketed. Overall 26% of cereal production is marketed (Gabre-Madhin 2001: 39-43, 50). Most of trade is focused on the final consumer market in Addis Ababa and the most important deficit regions. Other regions are served in a less intense manner.[75] Everyone agrees that more infrastructure must be provided.[76] Small farmers have very little market power, especially at harvest time, because then there are many sellers and relatively few traders, while the smallholders have no option to sell at markets located further away.[77] Lastly, there is insufficient price information. Smaller traders in particular are not able to obtain it.[78]

In Ethiopia after liberalization, poverty did not decline to any meaningful degree. Empirical investigations have shown that a group of farmers with relatively plenty of land, labour and localized advantages have benefited from liberalization. A second group without these advantages have suffered from persistent poverty. It is concluded: "Has this growth been pro-poor. On average, yes. But, more correctly, it has been pro-some-poor." (Dercon 2001: 24-29, 34).

3.2 Effects of liberalization on export cash crops

With regard to export crops, perfect competition does not ensure optimum efficiency either. When the impact of liberalization is discussed, this insight is often not put first. Most discussions emphasise that liberalization put an end to 'taxation' by state marketing boards in as far as farmers receive higher producer prices, by abolishing them (reform element 1). This reform element is complemented by an export-oriented exchange rate policy, to avoid overvaluation.[79] In the literature, for example, producer export price shares between 64 and 98% are mentioned to show the success of full liberalization episodes for Cameroon,

Malawi, Tanzania and Uganda. Countries singled out as non- or slow reformers have a lower share of 37 to 62%. Here, Benin, Côte d'Ivoire, Ghana and Senegal are listed.[80]

It would be too simple to judge from these figures the success of the reforms, because overall welfare effects do not depend solely on producer prices, but on the volume the smallholder can produce, given a certain producer price. Output can be expected to increase if smallholders have access to inputs such as seeds, fertilizer, pesticides (for cotton), water, and extension services. The following selected cases of liberalization can be presented:

In several cases there is evidence that the producers' share in prices is higher now than before the reforms. Uganda's coffee sector has been fully liberalised, producer export price shares are at 72%. Production has increased considerably. Still, a 'low input, low yield' production is common, because fertilizer is not available on credit. In addition, investments are lacking and coffee prices on the world markets have been low. [81] In short: liberalization was successful to some degree, but could deliver better results. Ghana's state marketing organization for cacao was partially liberalized (30% of the exports can be made by private firms, for example by farmers' collectives[82]). This led to a relatively high producer price (54% of export prices in 1997/98; 74% in 1999/00), which arguably shows that – partial – reform pressure can successfully decrease the taxation of smallholders (Trade Policy Review Ghana 2001: 63). But the above characterization of Ghana as non- or slow reformer seems to be unfair. Ghana's state marketing board had a positive effect on the increase of cacao production, and it is admitted that this happened even without full-scale liberalization (Akiyama et al. 2003: 23). This can be explained by the role of the board in the distribution of pesticides, new plants and training (Otal News 2004). But it is also due to its price stabilising function (minimum price, buyer of last resort in remote regions, world market price fluctuations are to a certain degree compensated for).[83] Notwithstanding, the IMF and World Bank continue to pressurize Ghana to privatize the marketing board, although this may result in 'low input, low yield' production and its corresponding decreases in welfare.[84]

Tanzania's fully liberalized cotton sector illustrates 'low input, low yield' production: Private buyers compete to buy from the growers, who receive a producer price of 64% after liberalization. Later, the producer price declined, in the Bunda district in 2000/01, an average of 50.38% was paid.[85] The welfare impacts are not impressive, because input credits are not given. Due to relatively high costs, fertilizer inputs are not used and correspondingly yields are very low, at 132 kg/ha, implying that the volume of sales and the corresponding income for each smallholder farmer is very low.[86] Interestingly, Tanzania's coffee sector shows that there are functioning, well organized cooperative structures. The Kilimanjaro Native Cooperative Union which has 90.000 members, whose activities, including input supply, are financed by a private bank on a continuous basis offers a good example (ITFCRM 2001: 13-16). Thus, in principle, cooperatives could work in Africa. Nevertheless, experiences vary across countries. In Uganda, cooperatives are weak and banks do not engage in that sort of activity (ITFCRM 2002: 24, 37). The example of Madagascar shows the relevance of transport costs in Africa. Coffee growers in accessible regions receive 60 to 70%, while those in remote regions receive only 40 to 50% (Akiyama et al. 2003: 20).

Mozambique tried from the outset to avoid full liberalization in the cotton sector and started by giving exclusive market rights to private 'concessionary'-firms. Later, for a short period, this system was changed to a fully competitive system, which collapsed and the former system was re-established. When full scale competition was introduced, credit repayment could no longer be assured, among other reasons because farmers received credit from one firm but sold to another (Ofico/Tschirley 2003: 7, 30). The 'concessionary'-firms were expected to distribute inputs to the farmers, while deducting its value at harvest. Still, private firms in Mozambique opted for a 'low input, low yield' strategy even under these monopolistic circumstances. They refused to support food crop production, although this was mentioned in the concession treaties with the government.[87] The government tried to push up producer prices to, for example, 69% in 1995/96, but private firms threatened bankruptcy and in 1998/99 a 43% producers' share was accepted (Wandschneider/Garrido-Mirapeix 1999: 29-31). In short: although a revival of production took place[88], liberalization could again deliver much better results.

In Zimbabwe, liberalization was successful, because two powerful actors started to compete. Privatized Cottco and Cargill are active and compete for the loyalty of producers. Cottco provides input credit and Cargill uses a barter scheme, where future inputs can be paid by the cotton harvested. Cargill reached a 20% market share. Unfortunately, because of the recent shortage of foreign currency, this system is collapsing (Poulton et al. 2004: 527, 530; Goreux/Macrae 2003: 14). What about West Africa's cotton? West African cotton producing countries first of all clearly prove that volumes of sales can compensate for lower producers prices. In Burkina Faso, the parastatal marketing board was privatized, but SOFITEX is as successful as before, providing input credit, while still having a marketing monopoly for 80% of the territory and being responsible for 3.5 million farmers (Dagris Information 2004). In the remaining parts of Burkina Faso, two small firms started their operations. In addition, producer organizations bought a 30% share of SOFITEX and now

manage it together with DAGRIS, the French holding company. This arrangement proved successful, but resembles the parastatal arrangement of the previous years. Producer prices vary and lie at an average of 51% (1997/98-2000/01).[89] In Mali, the parastatal marketing board CMDT has been successful and has not yet been liberalized.[90] Although there is government opposition, the IMF and World Bank want liberalization in Mali. Interestingly, a full-scale liberalization is envisaged in the medium term, implying that the Burkina Faso model is not yet accepted.[91] In Benin, liberalization was opposed by the government and most experts, who tried to preserve the formerly successful state marketing system, which had beneficial impacts not only in the cotton sector but also on the maize production in Benin, because cotton farmers used some of the fertilizer provided on credit to produce maize.[92] Notwithstanding, the IMF and World Bank impatiently pressurized for liberalization. Cooperatives were chosen to sell cotton in auctions, without establishing a system which could finance inputs.[93] This led to a collapse of input credit provision in 2000/01 (Trade Policy Review Benin 2004: 64). Now an innovative clearinghouse mechanism has been established which managed to restore input credit schemes.[94] In Côte d'Ivoire, after liberalization three private actors have been established, who act in different regions. In the North, the powerful cooperative URECOS-CI controls marketing and is using a 'forward contracting'-method similar to the one in Benin in order to ensure the availability of input credit (Goreux/Macrae 2003: 10-11).

In short: the Achilles heel of cash crop liberalization is 'low yield, low input' production and input credit provision. What lessons can be drawn? In some cases liberalization should not be pursued at all (in Mali it is not needed, yet it is planned, in Benin it was not needed, but conducted without patience and without considering the problem of input supply). If privatization cannot be avoided, successful structures should be preserved, even if exclusive marketing rights or dominant positions are involved (in Burkina Faso, the World Bank showed this flexibility, in Zimbabwe, large Cottco helped to make liberalization a success). Furthermore, it is not reasonable to push partial liberalization further if the intermediate state is already successful and going further may endanger input provision (thus, in Ghana no further liberalization is needed). The other cases illustrate the danger that both fully competitive private actors or private actors with territorial marketing monopolies tolerate 'low input, low yield' production (see: Uganda, coffee, Tanzania, cotton, Mozambique, cotton). Although there are cases of full liberalization, where a revival of production occurred (and even a clear increase in production in Uganda), smallholders often remain poor under these circumstances. The question of non-traditional exports cannot be discussed here.

5 Elements needed for achieving poverty reduction in African agriculture

To conclude, the most important insight is that markets are not achieving optimum welfare and broad-based poverty reduction in Africa. The suggestions of three recent reports[95] are already reflecting a broad-based consensus on what needs to be done (see point (3) below). My contribution here is to more succinctly confront more controversial issues of economic policy making in the points (1) and (2):

1. Firstly, IMF/World Bank must show more flexibility and deliver on its promise to modify its conditionality – and – its economic policy approach in practice. Clearly, one effect of liberalization is that remote regions are much less served by traders, for various reasons, and sometimes markets do not function at all. Therefore, state marketing boards must remain functional in certain very poor countries and in certain remote and poor regions, supported by development aid.

   This is the clear message from the newly established World Bank's Poverty and Social Impact Analysis (PSIA) studies. Unfortunately, it remains unclear if the donors and IMF/World Bank will hear their own message. Information on PSIAs are scarce, public access to the outcomes of the investigations is often delayed for political reasons. For example, the PSIA on Mali is long overdue, obviously because it may contain information supportive of the state marketing board for cotton there.[96] The PSIA analysing the impact of a possible privatization of Cotonchad in Chad showed that although the marketing board is inefficient, liberalization does not make sense, because neither transport nor market actors are sufficiently developed to link the farmers to the monetary economy. Therefore, it is concluded that the state marketing board should be preserved and reformed.[97] In a similar vein, the PSIA on Malawi's state marketing board ADMARC concludes that a private marketing system evolved in Malawi which serves some areas, but not the remote areas. The presence of outposts of ADMARC clearly benefits poor farmers because they provide fertilizers, seeds and sometimes buy and sell grain, contributing to a 20% higher food consumption of people living in its vicinity and a 100% higher spending on fertilizer (World Bank 2003a: 42-44). Although ADMARC produces deficits that are in the range of US$ 4 to 8 million, this is not much as compared to the US$ 70 million transfer to the poor in Malawi (and US$ 320 million in overall aid). Thus, its operation could easily be continued with current levels of development aid.[98] IMF/World Bank, however, are determined to fully privatize ADMARC. It is envisaged that its operations in remote areas should be restructured and transformed

into a narrowly targeted safety net for the poor, operated by NGOs and stripped of much of its original development functions, without evaluating whether the old structure might be used as a perhaps even cheaper and broader safety net.[99] The report argues that "social activities" should not "impede the development of an efficient maize market" (World Bank 2003a: 21). This argument in the neoclassical way associates markets with efficiency and reproduces the common argument that state operations will retard private market development (Kheralla et al. 2001: 6-7). This argument is unconvincing. In many countries, agricultural transformation and liberalization took part with government actors and private actors acting in parallel. See Egypt, Vietnam and China.[100] Why should this not work in sub-Saharan Africa? In Malawi, a vibrant sector of private traders has been established, despite ADMARC,[101] and there is no reason why the two should not co-exist for years to come.

Malawi is a very poor country, 25.4% of the population are malnourished (2000), there are 350,000 AIDS orphans. In the year 2002, 64% of the population was without regular food supply for six months (Chirwa 2004: 18). 70% of the smallholders have less then one hectare of land. Typically, they produce maize. Yields between 500 and 600 kg/ha are achieved, fertilizers are too costly (FAO/WFP 2003: 22). With fertilizers, yields of at least 1,900 kg/ha are possible (Smith 2001: 34). Nevertheless, IMF/World Bank and parts of the donor community, and recently even the EU, openly opposed and narrowed down the successful 'Starter Pack'-programme which provided fertilizer, seeds, including seeds to diversify away from maize, to 2.8 million people and helped to reach higher production levels. As a critique of this programme, the neoclassical reasoning was advanced that this amounted to a price distortion. In addition, it was regarded as too expensive and not targeted well enough at the extremely poor. All these arguments cannot be upheld. The programme was financed by British development aid, the overall costs were US$ 25.5 million. For more details see below.[102]

2. Secondly, this example shows, that it would be extremely useful for poverty reduction to allow a re-introduction of fertilizer subsidies or even a free distribution of fertilizer packages, not as a short term programme to introduce fertilizers to African farmers,[103] but as a long-term political option. Why long-term? Because it is not realistic to expect the low price levels on African food markets to change within the next 20 years, and these price levels do not support the use of fertilizers.[104] Fertilizer use is extremely low in Africa. Less than one third of the farmers use fertilizers.[105] Plant nutrients like phosphorus and nitrogen are depleted and at very low levels. This is a major constraint to plant growth for instance in West Africa, be it for cash crops or the food crops of subsistence farmers like millet, sorghum, cowpea, groundnut and maize.[106] With fertilization, significant yield increases can be reached: For millet, for example, in Niger yields declined to 160 kg/ha, with crop residues combined with fertilizers it can be increased to 1940 kg/ha (Buerkert/Bationo 2001: 136). Maize yields in Tanzania were 1,4 t/ha, with a package containing seed and fertilizer, 4,9 t/ha could be reached (Putterman 1995: 319).

To be sure, these demands only make sense as a long-term project of 'getting prices fair' combined with 'organic revolution techniques' which are supplemented by a moderate dosage of 'green revolution techniques'.[107] Importantly, for some crops organic farming methods show yield increases which can match or even outpace 'green revolution techniques' proven for example by the astonishing success of the SRI-system of rice intensification. Thus these techniques equally deserve to be spread (Uphoff 2002: 3).

All in all, an increase in productivity with the help of fertilization will have many beneficial effects: More food gets on the market, so it is classified as a "pro-market intervention" (Poulton/Dorward 2003: 42, 46). It implies better nutrition and increased food security, while food prices (and inflation and wages for export production) remain low, while post-harvest price peaks will perhaps be more moderate because of the ability of farmers to store more grain, and because more grain gets on the market.[108] For Malawi, a model shows that a universal 20% fertilizer subsidy reduces poverty, because it keeps prices low while driving up rural wages (Dorward et al. 2003: 16).[109] A World Bank PSIA study for Madagascar shows that a 20% fertilizers subsidy would improve the income of the rural poor by 2.5% and lead to lower food imports which more than compensate for the subsidy costs (Stifel/Randrianarisoa 2004: 32-33, 37).

Justifying such a programme is easy, for Europeans and Americans play a central part in the causal chain by subsidising yield and production increases on a massive scale, driving world prices down (Gabre-Madhin et al. 2003: 6-12). For this reason, for instance, the Japanese Sasakawa institution is suggesting an OECD Agricultural Subsidy Compensation Fund which should receive a certain percentage of OECD national subsidies and then redistribute free fertilizer to Africa, Asia and Latin America. A 5% charge could collect US$ 18 billion.[110] Similarly, recently long-term investments into fertilizer subsidies were put back on the political agenda by Dorward et al. (2004: 82) and by the Sachs Report (Investing in Development 2005: 70).[111] It comes close to a sensation that the World Bank's

Africa Region Department commissioned a review of its fertilizer strategy. The corresponding study is sceptical, but concludes that fertilizer subsidies make sense "when there is a clear prospect of significant gains in productivity in the medium to long run." (Crawford et al. 2005: 38). In the recently published World Bank's Africa Action Plan it is mentioned that action must be taken to increase fertilizer use. Analytical work and concrete recommendations to African governments are promised, but the term subsidies is not mentioned (World Bank 2005: ix, 43, 84).

'Starter Pack'-Example: Development aid for Africa amounted to US$ 20 billion in 2003 (DAC 2004: 202). If one doubled Malawi's 'Starter Pack' (see above), and financed this programme for poor smallholder farmers in all 51 states in sub-Sahara Africa, this would cost due to scale effects significantly less than US$ 2.5 billion. As many as 142.8 million smallholders would benefit and 17 million additional tons of maize (worth US$ 1.7 billion[112]) could be harvested.[113] This version of a 'Starter Pack' would mean between 200 and 300 kg more to eat[114] for a small farm family of six persons (two parents, one grand parent, three children) who need between 1,500 and 2,100 kg cereals a year.[115]

3. Thirdly, to complement increased production by improved availability of fertilizer, it is important to strengthen markets.

   Many options which aim to strengthen markets are compatible with liberal approaches: (a) The market power of farmers can be enhanced with simple processing (e.g. threshing) equipment, by strengthening farmers' cooperatives, access to transportation services and farmers' storage capabilities (Kheralla et al. 2001: 346-347). Efforts can be made to insure risks in Africa, for example, drought risks. Morocco, for instance, which provides credits through a public agricultural development bank, uses a risk insurance based on a rainfall index. Nevertheless, the programme has to be subsidized by the state, because private sector insurance premiums are too costly.[116] (b) Traders benefit from better access or ownership of means of transport (Kheralla et al. 2002: 111). Better access to bicycles (where suitable for use) would make help assemblers travelling to remote farms and more scale-efficient trucks for big traders would help to drive transport costs down.[117] The Ethiopia case suggests that there should be a state truck emergency reserve to be rented by traders in times of peak demand. It may make sense to establish a credit system to provide 'medium size' traders with better means of transport.[118] (c) Storage: existing storage facilities can be improved. Many traders rely on small scale and home storage. Simulation studies show that subsidized storage helps to lower price peaks and reduces poverty (Stifel/Randrianarisoa 2004: 29).[119] (d) Quality control and grading should be improved, but is difficult because an enormous variety of seed material is used.[120] Measurement instruments can be improved, security improved (police), credit and bank services can be made more accessible.[121] From an institutionalist perspective, it is suggested to build up a grain exchange in Ethiopia in order to formalize the existing system of brokers (Gabre-Madhin 2001: 86). In competitive circumstances with many small actors, traders' associations or networks or even brotherhoods may be strengthened. This may facilitate economic exchange by reducing transaction costs.[122] Traders' associations may agree on market days, while there is, of course, the danger that these networks can be abused to make more profit (Fafchamps 2004: 450, 481). Some authors stress the relevance of property rights, 'the credibility of rules' and a functioning court system, but, for example, a court system is unlikely to help, because the transaction value is very low.[123] (e) Better infrastructure reduces marketing costs, increases producer prices and improves market integration (Fafchamps/Gabre-Madhin 2001: 66). Similarly, simple processing equipment (small rice mills, maize 'hammer mills'[124]) reduces marketing costs and enables farmers and traders to produce maize in a cheap and localized manner.[125] (f) In general, more credit for traders would be good. (g) The credit problem from the farmers' perspective has already been mentioned above.

   Secondly, the state can interfere in prices on a moderate scale to strengthen markets. Many authors agree that there must be a policy response to the problem of price instability, but here liberal means are suggested, forward contracts, futures markets (Kheralla et al. 2002: 115). The World Bank is experimenting with private risk insurance instruments (ITFCRM 1999). The following policies will not be accepted by the neoclassical liberal approach: Direct government interference into prices may help to change the situation. This is exemplified by the World Food Programme, which deliberately acts like a state marketing board in Ethiopia. It buys and stores grain locally, with the explicit aim to stabilize low prices, and it distributes grain in the deficit regions (FAO/WFP 2004: 32-33). This can buffer to some degree the effects of very low prices and therefore stimulate private investment into the food system. Of course, it is important that decisions on price stabilization be made by technocrats without interference by government and interest groups and with best information available (FFSSA 2004: 36): "'Getting prices right' is complicated" but not completely impossible, and stable food prices can improve welfare (Timmer 1996: 55).[126] It remains to be seen if the 'reversals' in Zambia and Zimbabwe, which both re-introduced state marketing boards in the food crop sector, are able to finance the operations and are capable

to follow a wise pricing policy and a fairer distribution of benefits.[127] There is the danger that interest groups may use government intervention for their own benefit, but it is similarly sure that many measures mentioned here are not prone to interest group abuse and that some states are more trustworthy than others, especially if they are put under pressure to follow principles of good governance and receive help to build up accountable and well-manned institutions.

Liberals and their critics agree that certain basic services must be provided by the state. A publicly financed price information system is essential to encourage grain flows between the regions. In Ethiopia, this is financed by donors (IGAD 2005; RATIN 2005). Agricultural research systems need to be funded on a continuous basis. It is suggested to establish them on a regional level.[128] It is absolutely essential to improve infrastructure, but this is costly (Mutume 2002). It makes sense to invest in large and small scale irrigation and extension services.[129] And it is not wrong to help farmers diversify, even into cash crops, but first and foremost diversification is a successful strategy to enhance food security. Therefore it must not follow the World Bank definition which defines it as responsiveness to price signals.[130] Moreover, it is suggested that the government establishes independent agencies to monitor markets, to collect market data and to even interfere if difficulties occur (Kheralla et al. 2001: 168).

Will this achieve agricultural transformation and poverty reduction in Africa? The history of agricultural transformation shows that in many cases government policies played a role at some stage. National research and extension was strengthened, investment in road infrastructure took place and there were interventions to stabilize prices and to subsidize input supply and credit (Dorward et al. 2004: 80). Still, there is more to transformation – often it requires not only beneficial price developments on the output and input side but also wage increases in rural areas. In India during 1980-83, for example, there was period of strong productivity growth which outpaced labour force growth leading to higher income levels. The basis for this productivity growth partially lay in the spread of tubewell irrigation, subsidized fertilizer, roads and markets (Smith/Urey 2002: 13-20). In Vietnam, transformation occurred in the nineties in an economic environment where private traders and wholesalers acted parallel to bigger state-owned enterprises. During this period, a 33 per cent yield increase occurred while price/fertilizers ratios halved and nominal farm gate prices increased by 20.4% annually. Fertilizers had a 29 to 33% share in the costs of production. In addition, exports helped to induce price increases and to reduce price variability (Minot/Goletti 2000: 15, 18, 31).

4. All in all, it seems possible to achieve poverty reduction and agricultural transformation in Africa, but many supporting cornerstones are urgently needed, because the circumstances are certainly not rosy. In close to all cases full liberalization means opportunities for welfare improvements foregone, therefore policy flexibilities on different levels are needed. This does imply sometimes less and sometimes more deviations from neoclassicism in order to realize a more optimal economic policy. These measures will work only if African countries are provided with a sustained engine of growth. It is therefore of similar importance to remove developed countries' protectionism and subsidies, especially for a product particularly well-suited for conditions in many African countries, cotton. The WTO Hong Kong ministerial conference in December 2005 simply must achieve this. Why? Between 1998 and 2001, when cotton prices fell to a record low, cotton production in the United States grew by more than 40% and export volumes doubled. It is estimated that this price collapse cost US$ 200 million loss in annual export revenues for six African countries. During the time of rising cotton prices, between 1993 and 1998, in those countries poverty decreased by 16% (FAO 2004: 25). Lastly, African countries should retain the policy space in the WTO to support agriculture, to use state trading enterprises and to use high tariffs during times of low world market prices (Wiggerthale 2004).

Endnotes:

[1] Data for 2001. See: United Nations Statistical Division: In: http://unstats.un.org/unsd/mi/mi_worldregn.asp. I would like to thank: Prof. W. Schug, Dr. Harald Grethe, Dr. Bernhard Walter, Dr. Michael Brüntrup, Prof. Andreas Bürkert, Marita Wiggerthale, Jürgen Maier, Jürgen Knirsch, Peter Fuchs, Antje Schultheis and the Working Group on Trade of the Forum Environment and Development. Special thanks go to Christina Kamp, Prof. Hassan Givsan, Christine Zumkeller, Prof. Martin Kronauer, Prof. Wolfgang Hein and Klaus Matthies.

[2] Data for sub-Saharan Africa: Brandt 2004: 23.

[3] The World Bank quotes calculations which show that a 10% increase of yield lead to a decrease of 6-10% of people, who have less than US$ 1 per day. Without a productivity increase in agriculture the MDGs in the field of poverty reduction cannot be reached (World Bank 2003: 41).

[4] See table in ECA Key Indicators 2002: 12; and the data in Zeller/Johannsen 2005 in their point 2.2.1 in this issue.

[5] Data from State of World Population 2004: 106, http://www.unfpa.org/.

[6] Kydd/Dorward 2001: 467; World Bank 1981: 36, 58-59, 61, 64; Weltentwicklungsbericht 1986: 77; World Bank 1994: 77; World Bank 1997: 5.

[7] This applies to East African countries, like Tanzania, Zimbabwe and Zambia. Putterman 1995: 315; Jayne et al. 2002: 1970; Jayne/Jones 1997: 1510-1511, 1517; Jayne et al. 1994: 13, 17; Howard/Mungoma 1996: 3.

[8] For example Mali's OPAM. Coulter/Poulton 2001: 228. For Burkina Faso's OFNACER see Ruijs 2002: 1-5, 20, 245-247.

[9] The now privatized Kenya Tea Board was successful. KTDA Information 2004; Mali's CMDT and Burkina Faso's CTDT cotton marketing board were successful. Badiane et al. 2002: 11. Benin's SONAPRA, cotton, was successful and contributed to higher maize production. Kheralla et al. 2001: 149. For Côte d'Ivoire's CFDT's positive impact see Bassett 2001.

[10] Ghana's COCOBOD was corrupt and 1986 producers received only 37% of the world market price. Kuapa Kokoo Informationen 2004. Malawi's coffee growers received a producer price of 10%. Buccola/McCandish 1990: 362.

[11] Producer export price shares were 50 to 60% in the seventies. In addition often two-digit inflation rates led to an erosion of purchasing power of smallholders and there was a considerable overvaluation of exchanges rates. In Cote d'Ivoire for these reasons the real producers prices in 1991 were 50% under 1970 levels (Bassett 2001: 150). For exchange rates and inflation see Ghulati et al. 1985: 9. Fertilizers subsidies and other measures could not fully compensate for this. For Cote d'Ivoire Widner 1993: 37-39. See Bates 1981: 15-16; Weltentwicklungsbericht 1986: 74-75; Ellis 1992: 105-106; Schiff/Valdes et al. 1992: 18. The bias against agriculture is no longer there in developing countries, save Malawi (Jensen et al. 2002: 9, 22).

[12] Elliot Berg did conclude in World Bank (1981) that even government/private marketing arrangements are unworkable, contrary to the wisdom at this point of time. See Eicher/Baker 1982: 56. Direct references to the neoclassical Pareto model can be found in publications on African agriculture (Townsend 1999: 50).

[13] For example, missing markets, imperfect information and high transaction costs (Townsend 1999: 50).

[14] For example, Townsend (1999: 12-14) discusses both static and dynamic aspects of promoting growth and admits that in there are difficulties to get price incentives stimulate investments and productivity increases in Africa, that is, a dynamic development path.

[15] Overview in Dorward et al. 2004a; Gabre-Madhin et al. 2003.

[16] Indonesia Food Policy Program 2002: 10; the success of BULOG is due to fertilizer subsidies, investments in irrigation, tariff protection and price stabilization policies (Timmer 1996).

[17] See the overviews by Kheralla et al. 2000: 12-14, 19-21; Kheralla et al. 2002: 154-157. This is not an unfair accusation, further points could be added: Although it is possible to evaluate the reforms, unplausible arguments are used to prove that this is not possible yet. Price variations are mentioned but not their effects. The structural problem of low producer prices is not stressed and the decline of fertilizer use is painted rosy. Although some of the problems are acknowledged, it is concluded "that liberalization itself has not jeopardized food security or agricultural growth." Kheralla et al. 2002: 112; cf. also 7-9, 69-74, 93, 111-112; the discussion is more open in WB's Townsend 1999: 7-8, 13, 14.

[18] This phenomenon is thematized for Mozambique by Pitcher (1996, 1998). The mainstream research reacted late. See Poulton et al. 2002 published in World Development two years later. Poulton et al. 2004. See with special focus on Cotton Goreux/Macrea 2003.

[19] "A priori, general structural adjustment loans were not intended to necessarily spur growth in agriculture, but rather to improve overall economic performance." (Akiyama et al. 2003: 14).

[20] For this argument Kheralla et al. 2002: 6-9, 152-153. The use of moderate tariffs and a temporary intervention of the food reserve in Kenya is regarded as 'reversal', although a liberal marketing system has been established, by Jayne et al. 2002: 1971.

[21] See the Malawi 'starter pack' program. Levy 2003; Harrigan 2005; Dorward et al. 2004: 82-83.

[22] Gabre-Madhin 2001. For Madagascar Fafchamps/Minten 1998: 17-18; detailed: Fafchamps 2004.

[23] A responsible, non-corrupt state, a stable institutional framework, rule of law, removal of trade barriers, using private risk insurance instruments, improving infrastructure and price information are mentioned in Townsend 1999: 50, 124-130; a formal grain exchange is demanded in Gabre-Madhin 2001.

[24] Quote from Poulton et al. 1998: 87-88; and see Townsend 1999: 50.

[25] For example, risk reducing vertical coordination arrangements (Williamson 1985: 20-29).

[26] Coordination risks in Africa are leading to a level of economic activity, which would be higher without those risks. Typology in Dorward/Kydd 2002: 3-4; see Poulton/Dorward 2004.

[27] See for an optimistic account of the reforms Gabre-Madhin 2001; but see Gabre-Madhin 2003. See the much more broad research work on agricultural transformation by Dorward et al. 2004; and Gabre Madhin et al. 2003.

[28] For Côte d'Ivoire Bassett 2001: 20, 102; Poulton et al. 1998: 93; Fafchamps 1999: 92.

[29] "The magnitude and range of shocks that affect rural populations in the Third World is without comparison in developed countries. (...) death strikes at random a large proportion of the population; trade with the rest of the world is difficult so that many commodities are rationed or unavailable and local prices are erratic (...) In response to these extremely difficult conditions, rural societies have developed sophisticated ways to cope with risk. (...) Furthermore, rural societies often prohibit individually rational options such as distress land sales, labour bonding, and debt peonage, because they would generate unacceptable inequality and social tension in the long run." (Fafchamps 1999: 92).

[30] Even in Benin which has been liberal for a long time in the food crop sector traders give no seasonal credit (Gabre-Madhin 2001: 3, 59; Fafchamps 2004: 479). On strategic loan default Jayne et al. 2002: 1980.

[31] Fafchamps 2004: 479.

[32] Poulton et al. 1998: 88.

[33] World Bank 2000: 146 (and 18); Delgado 1992: 450-451; Ruijs 2002: 243-245; for Tanzania Putterman 1995: 315; Kheralla et al. 2002: 70; Townsend 1999: 7-8, 13, 14; Gabre-Madhin et al. 2003: 5.

[34] At the end of 1992 the value of total capital stock in the primary sector in Africa is US$ 138 billion and in the field of storage and processing US$ 77 billion, in comparison with US$ 846 billion and US$ 477 billion in Asia. FAO 1996: 31-32.

[35] Coulter/Poulton 2001: 225; Putterman 1995: 315; Gabre-Madhin et al. 2003: 4-6.

[36] For Madagascar Barrett 1998: 747-748.

[37] Coulter/Poulton 2001: 224; Gabre-Madhin et al. 2003: 34.

[38] Public stock-keeping in big cities is mentioned by Coulter/Poulton 2001: 225.

[39] In 'semi open' economies internal agricultural prices determine wage levels. Delgado 1992: 450; World Bank 2000: 128.

[40] See Baffes/Gardner 2003; Senegal: Kerry et al. 1996: 34; Tanzania: World Bank 2000: 142-143.

[41] Sharma 2002: 5; Price data from World Bank Commodity Market Briefs 2005.

[42] The booms and slumps observation is taken from Cashin et al. 2000: 204; monthly nominal and inflation adjusted (US CPI) price data for wheat, maize and rice starting from 1980 confirm the thesis above in a casual overview. For example, since March 1998 Maize prices are continuously and clearly below US$ 250 t (exception is

a very short period between January and June 2004). Surely, in the 1980s, during the subsidy wars between US and EU similar low price periods can be found. Nevertheless, looking at the period after 1998 and at yearly averages there is a declining trend, which is less pronounced for rice and wheat. I would like to thank HWWA's Klaus Matthies for the price data.

[43] There are exceptions: In Vietnam small farmers did not suffer due to productivity increases. Minot/Goletti 2000.

[44] Gosh 2004: 117.

[45] The Procampo program supports low-income families with 40% of their income. Details in World Bank 2001: 4-5, 9-10; World Bank 2004: 4.

[46] FAO 2004: 6-7; Gabre-Madhin et al. 2003: 7.

[47] Barrett and Carter (1994) in Jayne/Jones 1997.

[48] Data until 1995. Jayne et al. 1996: 12, 48. For Ethiopia after 1995 price rose, but from 2000 on they declined again (FAO/WFP 2004: 22).

[49] Between 1985 and 1998 rice production increased from 214.000 mt to 688.000 metric tons, implying that rice self sufficiency increased to 90% in Mali, from 50% before. Dembélé/Staatz 1999: 17-19.

[50] Jayne et al. 1996: 12; see for similar successful effort in Zimbabwe with a broad distribution of small-scale maize mills, which made local milling possible and reduced processing costs significantly (Jayne et al. 1994: 15-16). In Tanzania distribution seemed to have been successful too. To put this in perspective, four modern scale efficient private 'roller mills' work at full capacity there (Coulter/Poulton 2001: 224).

[51] Nyoro et al. 1999: 17, 27-32; Crawford et al. 2005: 9. Nevertheless, this policy is, across the board, termed as 'patronage' policy. See Jayne et al. 2002: 1975. Production in thousand metric tons: 1980: 1620; 1985: 2430; 1990: 2289; 1995: 2699; 2000: 2160; 2001: 2775. Faostat Database Kenya Maize Production. In Zimbabwe the distribution of benefits is less fair. Jayne et al. 1994: 8-9.

[52] Barrett 1994: 7-9, 20. Due to the reform growth in agriculture increased from 1% to 2%, in the rice sector from 2% to 3,6%. Barrett 1998: 747.

[53] There is only one exception, the Eldoret region, here price spreads increased (Nyoro et al. 1999: 30-31).

[54] For Ethiopia high seasonal and interregional variations are found, which are in 1/3rd of the cases higher than 20%, in general there is a high volatility (Kheralla 2002: 93). High variations are shown for parts of Ghana in Badiane/Shively 1998: 421.

[55] The prices vary between peaks of 10 and 30 cedi/kg, the trough levels vary between 5, then 10, then 8 cedi/kg (Badiane/Shively 1998: 421).

[56] In Malawi ADMARC still operates, but this does not hinder the activities of private traders (Kheralla et al. 2002: 90). For details on markets in Malawi see Kheralla et al. 2001: 93-95.

[57] Barrett 1998: 747-748; Barrett 1994. For Madagascar only 10% inter-regional variation is reported in Kheralla et al. 2001: 93-95. This is contradicted by other authors (Badiane et al. 1998: 26, 31; Moser et al. 2005: 16-17).

[58] The markets are regarded as segmented. Badiane et al. 1998: 26, 31.

[59] Stifel/Randrianarisoa 2004: 27.

[60] For the general argument see Dorward et al. 2004a: 80; Jayne et al. 1997: 20.

[61] Price data in FAO/WFP 2004: 22; Gabre-Madhin 2003; further price data in Negassa/Jayne 1997: 44-49.

[62] In general, it is assumed that a value cost ratio of 2 will induce farmers to use fertilizers. After the abolition of fertilizers subsidies 1997 this ratio fell on average from 3,74 to 1,69. Ethiopian farmers continued to use fertilizers, because most of them have very small farms and they need high production levels to produce enough food to survive. (Demeke et al. 1998: 20)

[63] Ethiopia uses a unique credit system which relies on a system of cooperatives. It is even possible to confiscate property, if credit is not paid back. This led to high re-payment rates of 80%, without a state (or private) marketing monopoly. (Demeke et al. 1998: 14-16, 18)

[64] Excluding informal sources like relatives (World Bank 2000: 41).

[65] Kheralla et al. 2002: 32; Putterman 1995: 320; World Bank 2000: 7. In Tanzania the use of fertilizer fell from 1985-89: 124,000 t to 1996-97: 65,000 t (World Bank 2000: 42). "Crop budget analysis suggests, that at current prices, fertilizer use on maize is simply not profitable in many situations, though the result depends on soils, rainfall, and proximity to markets." (World Bank 2000: 43, 145).

[66] It is reported that due to these networks in certain regions only one buyer is active (Moser et al. 2005: 11-12, 19).

[67] Only for Benin a network effect could be found, but it is not helping to raise margins per unit (Fafchamps 2004: 319).

[68] "While these traders behave competitively in a static sense, they have dynamic disadvantages due to the fact that their small scale, limited resources and educational limits their capacity to innovate." Gabre-Madhin et al. 2001: 3; Jayne et al. 1997: 14; Akiyama et al. 2001: 205.

[69] Nyoro et al. 1999: 1. Furthermore there are storage costs, commissions, costs for bags and labour costs for re-bagging (Gabre-Madhin et al. 2001: 76).

[70] Fafchamps 2004: 10; from an empirical studies' view Gabre-Madhin et al. 2001: 76-77.

[71] Dessalegn et al. 1998: 23-24; the warehouse have an average capacity of 100 t and are of poor quality. There are large government storage facilities which are rented to traders, but only halve of their space is used. Quoting from a 1993 study. (Gabre-Madhin 2001: 13-14)

[72] Especially because unloading from a truck is necessary. This is in most cases avoided. (Gabre-Madhin 2001: 14)

[73] "According to the study made by GMRP on the response of Ethiopian cereal markets to liberalization (Asfaw and T.S. Jayne 1997), grain wholesale price differentials between markets in deficit and surplus areas have generally declined since the reform of March, 1990. Findings of the study show that while wholesale prices in deficit markets declined by 6-36%, those of surplus markets increased by 12-48% in real terms. Despite this positive trend since the market liberalization of 1990, the magnitude of the price differentials between producing and consuming areas appears to be still considerable compared to the transfer cost of grain between markets." (Dessalegn et al. 1998: 27); see Negassa/Jayne 1997: 9-10; and: "The results of this analysis indicate that the transition to a more deregulated market environment in Ethiopia has not significantly affected grain price uncertainty." (Jayne et al. 1998: 18).

[74] Dessalegn et al. 1998: 23-24. In addition, the prices at the Addis Abeba market fluctuate, one reason for this is that trading occurs only at three days in the week (Dessalegn et al. 1998: 24).

[75] Dessalegn et al. 1998: 17; Gabre-Madhin 2001: 12.

[76] Dessalegn et al. 1998: 35; Commission for Africa 2005: 230.

[77] In addition, they must pay back fertilizer credit at harvest time (Dessalgen et al. 1998: 14).

[78] Tschirley et al. 1995: 2-3; Dessalegn et al. 1998: 25.

[79] World Bank 2000: 8, 22-23; IMF Tanzania 2004: 5-6, 17, 67.

[80] The overview numbers are not clearly related to countries and crops (Kheralla et al. 2000: 13).

[81] See the following numbers for production and value of production: 1985-1989: 152.232 (t), US$ (thousand) 315.665; 1995-2000: 204.541

(t); US$ (thousand) 252.880 (FAO Uganda 2003: 14). See for the argument presented above: FAO Uganda 2003: 14. The low investment levels are mentioned in Paarlberg 1999: 503.

[82] COCOBOD Information 2004.

[83] Trade Policy Review Ghana 2001: 63; COCOBOD Information 2004.

[84] The selling of government shares is mentioned as structural condition in IMF Letter of Intent 2002: Ziff. 29. The offer for sale is mentioned in IMF Letter of Intent 2003: Ziff. 4. Subsequently, this is not mentioned again. IMF Letter of Intent 2004: Ziff. 7. See: http://www.imf.org.

[85] The first figure is for 1996/97 from Townsend 1999: 181; the second Bunda District share from Shao 2002: 30.

[86] The yield for Tanzania lies at 132 kg/ha below the African average yield of 342 kg/ha (2003/04). Yield data from: USDA Cotton 2004: 11; for the Bunda District Shao 2002: 33. This picture is confirmed for Tanzania as a whole in Goreux/Macrae 2003: iv, 53.

[87] Ofico/Tschirley 2003: 3; Wandschneider/Garrido-Mirapeix 1999: 31. Yields are at 155 kg/ha, below African average of 342 kg/ha (2003/04). USDA Cotton 2004: 11. The income of cotton smallholders lies at US$ 94 or US$ 34 for a year. Pitcher 1998: 134.

[88] Production lies at 110,000 bales, see for more data USDA Cotton 2004: 11.

[89] After liberalization the positive trends continued. Thousand metric tons: Production: 1985/86: 46; 1998/99: 110; Export 1985/86: 44; 1999/00: 113. See Badiane et al. 2002: 11. Producer prices show no clear trend, between 1988/89 and 1993/94 their average was 51%. Badiane et al. 2002: 12. The new producer prices are higher: 1995/96: 38.30%; 1996/97: 51.95;%; 1997/98: 51.03%; 1998/99: 69.05%; 1999/00: 58.23%; 2000/01: 46.03%; 2001/02: 72.24%. SOFITEX 2004: 26. For 1996/97 the numbers differ. 35% f.o.b. is presented in Townsend 1999: 181. Average yield are 457 kg/ha, which is above the African average of 342 kg/ha (2003/04). Yield data from USDA Cotton 2004: 11.

[90] Mali managed it to continuously increase production and export of cotton. Thousand metric tons: Production: 1985/86: 86; 1998/99: 196; Export 1985/86: 60; 1999/99: 196. See Badiane et al. 2002: 11. Producer prices are 1996/97 at 44% f.o.b. Townsend 1999: 181. Afterwards they increased slightly to 48% (1997/98-2000/01). In 1988/89 they were at 46%. Badiane et al. 2002: 12. Yields are 475 kg/ha, which is above the African average of 342 kg/ha (2003/04). Yield data from USDA Cotton 2004: 11.

[91] In the short term three or four private firms should get exclusive territorial marketing rights. In the medium term full competition is envisaged. (IMF Mali 2003: 10-11; Mali 2004: 10).

[92] Baffes 2001: 181; Kheralla et al. 2001: 333-334. Benin is the biggest cotton producer in West Africa with 2000/01 exports of thousand metric tons 131 (Badiane et al. 2002: 11). Production increased substantially (thousand metric tons) 1979/80: 26; 1992/1993: 162 (World Bank 1994a: 54). Producer prices are on the rise: (1988/89-1993/94) 52%, (1994/95-1996/97) 41% auf 59% (1997/98-2000/01) (Badiane et al. 2002: 12). For the season 1996/97 f.o.b. 37% is given by Townsend 1999: 141. Cotton farmers use substantially more fertilizer on maize (Kheralla et al. 2001: 149).

[93] Information from Dr. Michael Brüntrup, Deutsches Institut für Entwicklungspolitik.

[94] Private actors pay, partially, in advance for a volume of cotton they want to buy. With this money, a clearinghouse institutions provides input credit to cooperatives who in turn promise to sell their cotton to the private buyers. The privatization of SONAPRA has not yet been fully achieved. (Goreux/Macrae 2003: 20-21).

[95] NEPAD Agriculture 2003; Commmission for Africa 2005; Investing in Development 2005.

[96] In December 2003 there was already a workshop on the Mali PSIA, planed date for publication was June 2004, but this was delayed until today. In IMF conditions it is stipulated that in September 2004 a consultant should start to work out a privatization plan. (IMF Mali 2004a: 10; Social Justice Committee 2005: 7).

[97] See: "the almost complete absence of private markets constitutes the most evident institutional problem: there is no market for credit (especially for medium-long term credit, while a few NGOs make an uncoordinated effort to private small scale micro-credit in a few selected areas), there is no market for inputs, for agricultural equipment, there is a very limited and closed market for transport services and so forth." (Pedualla 2003: 28).

[98] For the data, not the conclusion see Smith 2001: 10-11, 19, 41.

[99] Fine targeting can have hidden costs, therefore broad targeting can be an alternative (van de Walle 1998: 231).

[100] Egypt: Kheralla et al. 2000a: 60; Vietnam: Minot/Goletti 2000: 28-29, 65, 91; China: Hermanns 2001.

[101] Research on private traders in Malawi by Gabre-Madhin et al. 2001: 83-84.

[102] See for more details Harrigan 2005: 19; Devereux 2002. See for this, partially neoclassic, critique of the 'Starter Pack' Smith 2001.

[103] This is the classical argument pro-fertilizer subsidies. If optimum use levels are reached, subsidization can be discontinued. Ellis 1992: 141. This does not work in Africa. Farmers simple stop to use fertilizers after subsidies are phased out, because it is too costly. Crawford et al. 2005: 19.

[104] "Typically, African smallholders are forced to sell their maize at much lower prices (often 30-50 percent lower) than farmers in OECD countries, while also paying two to three times more for fertilizer than the world price." (Sasakawa Africa Association 2002: 2).

[105] In Afrika fertilizer use generally is very low (Kelly/Naseem 1999: 4). Less than 1/3 of the farmers use fertilizers in Afrika, in some countries the numbers are very low: Ghana 14% (1987); Madagascar 12% (2001); Tanzania 15% (1994); Cameroon 22% (1990); Benin 50% (1998); Ethiopia 33% (1995); Kenya 61% (1996); Malawi 35% (1998); Zambia 31% (1996); Zimbabwe 19% (1989) (Kheralla et al. 2002: 31-32).

[106] Buerkert/Hiernaux 1998: 379; Buerkert et al. 2001: 1.

[107] Rock phosphate fertilization is accepted by IFOAM and EC organic farming norms. Phosphate fertilization successes on maize are shown in FAO 2004a. For certain soils and crops an additional moderate application of nitrogen and superphosphate is needed in order to clearly improve yields (Buerkert et al. 2001: 8, 13).

[108] In 'semi open' economies food prices act as 'wage good' and determine wages and even inflation (Delgado 1992: 450, 453; World Bank 2000: 128: Devereux 2003: 11).

[109] Dorward et al. 2003: 16.

[110] It is suggested, that 40%, or US$ 7.2 billion, is distributed to sub-Saharan Africa (Sasakawa Africa Association 2003: 3).

[111] Dorward et al. 2004: 82; Investing in Development 2005: 70.

[112] Price US$ 100 t, March 2005. Commodity Price Pink Sheets World Bank, May 2005.

[113] I simply double the data from the 'Starter Pack' example Levy 2003: 5; Harrigan 2005: 21-22.

[114] Here too, I double the data in Harrigan 2005: 14.

[115] Data from Pretty/Hine 2001: 51.

[116] Bryla et al. 2003: 11-14; Dorward et al. 2004: 14.

[117] Fafchamps/Gabre-Madhin 2001: 66; Gabre-Madhin 2001: 91; Nyoro et al. 1999, pp. 11, 45.

[118] First part of the sentence is my own idea. Credit system demanded for Ethiopia by Dessalegn et al. 1998: 34.

[119] Small scale and home storage was investigated in Benin and Malawi by Gabre-Madhin et al. 2001: 88.

[120] Grading makes long-distance, impersonal trading possible (Fafchamps/Gabre-Madhin 2001: 65; Kheralla et al. 2002: 167). For the argument in the second part of the sentence Fafchamps 2004: 482.

[121] Fafchamps 2004: 482; Fafchamps/Minten 1998: 25; f.e. faster cheque clearing (Fafchamps/Minten 1998: 25).

[122] Kheralla et al. 2002: 167. Traders networks reduce transaction costs, because it gives better access to information and risk sharing, it reduces costs of search, quality control and contract enforcement (Fafchamps/Minten 1998: 25; Fafchamps 2004: 441).

[123] Fafchmaps 2004: 459-460; Gabre-Madhin et al. 2001: 90; Fafchamps/Gabre-Madhin 2001: 64.

[124] Jayne et al. 1994: 15-16; for Zimbabwe Jayne et al. 1994: 15-16; for Tanzania Coulter/Poulton 2001: 224.

[125] Fafchamps/Gabre-Madhin 2001: 66.

[126] Jayne et al. 1998, p. 18. A public regulation role for food reserve agencies is envisaged by FFSSA 2004: 36; against "excess stock build-ups" it is argued in World Bank 1997: 63. See for the debate on the hunger crisis in Malawi: ActionAid 2002: 5-6; IMF Malawi 2004a: 13-19. Afterwards the EU made the financing of Malawi's food reserve a priority. MWH Consultants 2003: 47.

[127] See for Zimbabwe's reintroduction of the GMB in Jayne et al. 2002; on Zambia Howard/Mungoma 1996: 6, 18-19, 25-31; since 2001 the state marketing board operates again Times of Zambia 2003.

[128] Jayne et al. 1997: 28; Kheralla et al. 2002: 169.

[129] FFSSA 2004: 68; Commission for Africa 2005: 316; Jaeger 1992: 40.

[130] Kheralla et al. 2001: 346-347; World Bank 2004a: 1; Levy/Barahona 2002: 27.

Bibliography:

ActionAid (2002): Death by Starvation in Malawi: The link between macro-economic and structural policies and the agricultural disaster in Malawi. Policy Brief, June 13, 2002, http://www.actionaidusa.org

Akiyama, T./Baffes, J./Larson, D. F./Varangis, P. (2001): Market Reforms: Lessons from Country and Commodity Experiences. In: Akiyama, T. et al. (eds.): Commodity Market Reforms. Washington, D.C.: The World Bank

Akiyama, T./Baffes, J./Larson, D. F./Varangis, P. (2003): Commodity Market Reform in Africa: Some Recent Experience. World Bank PRWP 2995, March 2003, http://www.worldbank.org

Badiane, O./Goletti, F./Lapenu, C./Mendoza, M./Minten, B./Ralison, E./Randrianarisoa, C./Rich, K./Zeller, M. (1998): Structure and conduct of major agricultural input and output markets and responses to reforms by rural households in Madagascar. Washington, D.C.: IFPRI, http://www.eldis.org

Badiane, O./Dhaneshwar, G./Goreux, L./Masson, P. (2002): Cotton Sector Strategies in West and Central Africa. World Bank PRWP No. 2867, Washington, D.C.: The World Bank, July 2002, http://www.worldbank.org

Badiane, Ousmane/Shively, Gerald E. (1998): Spatial integration, transport costs, and the response of local prices to policy changes in Ghana. In: *Journal of Development Economics*, Vol. 56, 1998, pp. 411-431

Baffes, John (2001): Policy Reform Experiences in Cotton Markets. In: Akiyama, T. et al. (eds.): Commodity Market Reforms. Washington, D.C.: The World Bank

Barrett, Christopher B. (1994): The Impact of Agricultural Liberalization on Commodity Price Distributions: Evidence from Madagascar. University of Wisconsin-Madison, Staff Paper No. 380, September 1994, http://www.aae.wisc.edu/www/pub/sps/stpap380.pdf

Barrett, Chistopher B. (1998): Immiserized Growth in Liberalized Agriculture. In: *World Development*, Vol. 26, No. 5, 1998, pp. 743-753

Brandt, Hartmut (2004): Probleme und Tendenzen der Agrarpolitiken in Subsahara-Afrika. Berichte und Gutachten 8/2004. Bonn: DIE

Bassett, Thomas J. (2001): The Peasant Cotton Revolution in West Africa. Cote d' Ivoire, 1880-1995. Cambridge: Cambridge University Press

Bryla, E./Dana, J./Hess, U./Varangis, P. (2003): The Use of Price and Weather Risk Management Instruments. ITFCR Conference Paper, http://www.itf-commrisk.org/

Buerkert, Andreas/Hiernaux, Pierre (1998): Nutrients in the West African Sudano-Sahelian zone: losses, transfers and role of external inputs. In: *Zeitschrift für Pflanzenernährung und Bodenkunde*, 161, 1998, pp. 365-383

Buerkert, Andreas/Bationo, Andre (2001): Soil organic carbon management for sustainable land use in Sudano-Sahelian West Africa. In: *Nutrient Cycling in Agroecosystems*, 61, 2001, pp.131-142

Buerkert, A./Bationo, A./Piepho, H. P. (2001): Efficient phosphorus application strategies for increased crop production in sub-Saharan West Africa. In: *Field Crops Research*, 72, 2001, pp. 1-15

Cashin, Paul et al. (2000): How Persistent are Shocks to World Commodity Prices. IMF Staff Papers Vol. 47, No. 2, 2000, http://www.imf.org

Chirwa, Ephraim W. (2004): Effects of Economic and Trade Policy Reforms on Food Security in Malawi. Wadonda Consult Working Paper, May 2004, http://www.geocities.com/echirwa/wacohp.htm

COCOBOD Information (2004): Cocobod Ghana, http://www.cocobod.org/Publish/liberalizatin/page1.html

Commission for Africa (2005): Our Common Interest. Report of the Commission for Africa. 2005, http://www.commissionforafrica.org

Coulter, Jonathan/Poulton, Colin (2001): Cereal Market Liberalization in Africa. In: Akiyama, T. et al. (eds.): Commodity Market Reforms. Washington, D.C.: The World Bank

Crawford, E. W./Jayne, T. S./Kelly, V. A. (2005): Alternative Approaches for Promoting Fertilizer Use in Africa, with Particular Reference to the Role of Fertilizer Subsidies. MSU, Department of Agricultural Economics, Draft, February 10, 2005. In: http://www.nrinternational.co.uk/uploads/documents/BP1D2100205.pdf

DAC (2004): Development Assistance Committee. Development Cooperation Report. Paris: OECD

Dagris Information (2004): Dagris Information, http://www.dagris.fr

Delgado, Christopher L. (1992): Why Domestic Food Prices Matter to Growth Strategy in Semi-Open West African Agriculture. In: *Journal of African Economies*, Vol. 1, No. 3, 1992, pp. 446-471

Dembélé, Niama Nango/Staatz, John M. (1999): The Impact of Market Reform on Agricultural Transformation in Mali. MSU, Department of Agricultural Economics Staff Paper No. 99-29, East Lansing: MSU, http://www.aec.msu.edu/agecon/fs2/ag_transformation/atw_dembele.pdf

Demeke, M./Said, A./Jayne, T. S. (1997): Promoting Fertilizer Use in Ethiopia: The Implications of Improving Grain Market Performance, Input Market Efficiency, and Farm Management. Grain

Market Research Project Ethiopia. Working Paper 5, March 1997, http://www.aec.msu.edu/agecon/fs2/Ethiopia/index.htm

Dercon, Stefan (2001): Economic Reform, Growth and the Poor: Evidence from Rural Ethiopa. Oxford: Centre for the Study of African Economies, WPS/2001-8, http://www.csai.ox.ac.uk/workingpapers

Dessalegn, G./Jayne, T. S./Shaffer, J. D. (1998): Market Structure, Conduct, and Performance: Constraints of Performance of Ethiopian Grain Markets. Grain Market Research Project Ethiopia. Working Paper 8, January 1998, http://www.aec.msu.edu/agecon/fs2/Ethiopia/index.htm

Devereux, Stephen (2002): Safety Nets in Malawi: The Process of Choice. Conference Paper, Sussex: Institute of Development Studies, March 2002, http://www.ids.ac.uk/ids/pvty/Social-Policy/CP5.pdf

Devereux, Stephen (2003): Policy Options for Increasing the Contribution of Social Protection to Food Security. Forum for Food Security in Southern Africa, June 2003, http://www.odi.org.uk/Food-Security-Forum/Publications.html

Dorward, A./Kydd, J./Morrison, J./Urey, I. (2002): A Policy Agenda for Pro-Poor Agricultural Growth. Imperial College London, Department of Agricultural Sciences, March 2002, http://www.imperial.ac.uk/agriculturalsciences/

Dorward, A./Morrison, J./Poulton, C./Tchale, H. (2003): Disaggregated Impacts of Agricultural Policy Reform on Rural Households in Malawi. OECD Global Forum on Agriculture: Designing and implementing pro-poor agricultural policies. Paris, December 2003, http://www.oecd.org

Dorward, A./Farrington, J./Priya, D. (2004): Making Agricultural Markets Work for the Poor. DFID, September 2004, http://www.dfid.gov.uk

Dorward, A./Kydd, J./Morrison, J./Urey, I. (2004a): A Policy Agenda for Pro-Poor Agricultural Growth. In: *World Development*, Vol. 32, No. 1, 2004, pp. 73-89

ECA Key Indicators (2002): UN Economic Commission for Africa. Population, Agriculture and Environment: Some Key Indicators. 09.12.2002, http://www.uneca.org

Eicher, Carl K./Baker, Doyle C. (1982): Research on Agricultural Development in sub-Saharan Africa. A Critical Survey. MSU, http://www.aec.msu.edu/agecon/pubs.htm

Ellis, Frank (1992): Agricultural Policies in Developing Countries. Cambridge: Cambridge University Press

Fafchamps, Marcel (2004): Market Institutions in sub-Saharan Africa. Theory and Evidence. Cambridge: MIT Press

Fafchamps, Marcel/Gabre-Madhin, Eleni (2001): Agricultural Markets in Benin and Malawi. World Bank PRWP No. 2736, December 2001, http://www.worldbank.org

Fafchamps, Marcel/Minten, Bart (1998): Relationships and Traders in Madagascar. MSSD Discussion Paper No. 24, July 1998, Washington, D.C.: IFPRI, http://www.ifpri.org

FAO (1996): Technical Background Documents 6-11. World Food Summit, 13-17 November 1996, Rome: FAO

FAO (2004): The State of Agricultural Commodity Markets 2004. Rome: FAO, http://www.fao.org

FAO (2004a): Use of Phosphate Rock for Sustainable Agriculture. Rome: FAO, http://www.fao.org

FAO Food Outlook (1998): November 1998. Rome: FAO, http://www.fao.org

FAO Food Outlook (2005): June 2005. Rome: FAO, http://www.fao.org

FAO Uganda (2003): WTO Agreement on Agriculture: The Implementation Experience – Developing Country Case Studies, div. Countries. Rome: FAO, http://ww.fao.org

FAO/WFP (2003): FAO/WFP. Crop and Food Supply Assessment Mission to Malawi. 8. July 2004, http://www.fao.org/giews/english/alert/index.htm

FAO/WFP (2004): FAO/WFP. Special Report. Crop and Food Supply Assessment Mission to Ethiopia, 12. January 2004, http://www.fao.org/giews/english/alert/index.htm

FFSSA (2004): Forum for Food Security in Southern Africa. Achieving Food Security in Southern Africa: Policy Issues and Options, FFSSA Synthesis Paper, http://www.odi.org.uk/food-security-forum

Gabre-Madhin, Eleni (2001): Market Institutions, Transactions Costs, and Social Capital in Ethiopian Grain Markets. IFPRI Research Report 124, http://www.ifpri.org

Gabre-Madhin, Eleni (2003): Famine in Ethiopia: When Markets Don't Work. IFPRI Forum March 2003, http://www.ifpri.org

Gabre-Madhin, E./Ffchamps, M./Kachule, R./Soule, B./Goura, K. (2001): Impact of Agricultural Market Reforms on Smallholder Farms in Benin and Malawi. Vol. 2. IFPRI Collaborative Research Project, February 2001, http://www.ifpri.org

Gabre-Madhin, E./Barrett, C. B./Dorosh, P. (2003): Technological Change and Price Effects in Agriculture: Conceptual and Comparative Perspectives. MTID Discussion Paper No. 62, April 2003, http://www.ifpri.org

Goreux, Louis/Macrae, John (2003): Reforming the Cotton Sector in sub-Saharan Africa. Africa Region Working Paper Series No. 47, March 2003, http://www.worldbank.org/afr

Gosh, Nilabja (2004): Impact of Trade Liberalization on Returns from Land: A Regional Study of Indian Agriculture. In: Guha-Khasnobis, Basudeb (ed.): The WTO, Developing Countries and the Doha Development Agenda. New York: Palgrave MacMillan/United Nations University

Harrigan, Jane (2005): Food Insecurity, Poverty and the Malawian Starter Pack: Fresh Start or False Start? University of Manchester, Institute for Development Policy and Management. Social Protection of Chronic Poverty, Conference 23-24 February 2005, http://www.sed.manchester.ac.uk/idpm/research/

Hermanns, Uwe (2001): Der WTO-Beitritt Chinas mit Schwerpunkt Landwirtschaft und Subventionen. In: *Nord-Süd aktuell*, Vol. 15, No. 2, 2001, pp. 277-300

Hermanns, Uwe (2005): IWF und Weltbank zwischen Neoklassik und der Krise auf den afrikanischen Agrarmärkten. St. Augustin: Tradefocus Verlag, http://www.tradefocus.de

Howard, Julie A./Mungoma, Catherine (1996): Zambia's Stop-and-Go Revolution: The Impact of Policies and Organizations on the Development and Spread of Hybrid Maize. MSU Agricultural Economics Working Paper No. 26, 1996, http://www.aec.msu.edu/agecon/fs2/psynindx.htm

IGAD (2005): Market Information System Djibuoti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Uganda, http://www.igadmis.net/mis/index.asp

IMF Ethiopia (1998): IMF. Ethiopia. Enhanced Structural Adjustment Facility. Medium-Term Economic and Financial Policy Framework Paper, 1998/99-2000/01, http://www.imf.org

IMF Malawi (2004): IMF. Malawi: First Review Under the Three-Year Arrangement (...). IMF Country Report No. 03/344, November 2003, http://www.imf.org

IMF Mali (2003): IMF. Mali. 2003 Article IV Consultation – Staff Report (...) IMF Country Report No. 04/11, January 2004, http://www.imf.org

IMF Mali (2004): IMF. Mali Letter of Intent (...). May 20, 2004, http://www.imf.org

IMF Tanzania (2004): IMF. Tanzania: Selected Issues and Statistical Appendix. IMF Country Report No. 04/284, September 2004, http://www.imf.org

Indonesian Food Policy Program (2002): Indonesian Food Policy Program. Food Security and Rice Price Policy in Indonesia: Reviewing the Debate. Working Paper No. 12, June 2002, http://www.macrofoodpolicy.com

Investing in Development (2005): Investing in Development. New York: United Nations

ITFCRM (1999): Dealing with Commodity Price Volatility in Developing Countries: A Proposal for a Market-Based Approach. Discussion Paper, September 24, 1999, http://www.itf-commrisk.org/

ITFCRM (2001): Tanzania Coffee Price Risk Management. Phase 2 Report, August 2001, http://www.itf-commrisk.org/

ITFCRM (2002): Uganda Coffee Price Risk Management. Phase 2 Report, February 2002, http://www.itf-commrisk.org/

Jaeger, William K. (1992): The Effects of Economic Policies on African Agriculture. Washington, D.C.: The World Bank

Jayne, T. S./Takawarasha, T./van Zyl, J. (1994): Interactions between Food Market Reform and Regional Trade in Zimbabwe and South Africa: Implications for Food Security. MSU International Development Working Papers No. 48, http://www.aec.msu.edu/agecon/fs2/papers/recent.htm

Jayne, T. S./Mukumbu, M./Duncan, J./Staatz, J./Howard, J./Lundberg, M./Aldridge, K./Nakaponda, B./Ferris, J./Keita, F./Sanankoua, A. K. (1996): Trends in real food prices in six sub-Saharan African countries. Michigan State University International Development Working Papers No. 55, http://www.aec.msu.edu/agecon/fs2/index.htm

Jayne, T. S./Shaffer, J. D./Staatz, J./Reardon, T. (1997): Improving the Impact of Market Reform on Agricultural Productivity in Africa: How Institutional Design makes a Difference. MSU International Development Working Papers No. 66, http://www.aec.msu.edu/agecon/fs2/index.htm

Jayne, T. S./Negassa, A./Myers, R. J. (1998): The Effect of Liberalization on Grain Prices and Marketing Margins in Ethiopia. MSU International Development Working Papers No. 68, http://www.aec.msu.edu/agecon/fs2/index.htm

Jayne, T. S./Yamano, T./Nyoro, J./Awuor, T. (2001): Do Farmers Really Benefit from High Food Prices? Balancing Rural Interests in Kenya's Maize Pricing and Marketing Policy. Draft Working Paper 2 B, Tegemeo Agricultural Monitoring and Policy Analysis Project, MSU, Egerton University, April 28, 2001, http://www.aec.msu.edu/agecon/fs2/kenya/

Jayne, T. S./Govereh, J./Mwanaumo, A./Nyoro, J. K./Chapoto, A. (2002): False Promise or False Premise? The Experience of Food and Input Market Reform in Eastern and Southern Africa. In: *World Development*, Vol. 30, No. 11, 2002, pp. 1967-1985

Jayne, T. S./Jones, Stephen (1997): Food Marketing and Pricing Policy in Eastern and Southern Africa: A Survey. In: *World Development*, Vol. 25, No. 9, 1997, pp. 1505-1527

Jensen, H. T./Robinson, S./Tarp, F. (2002): General Equilibrium Measures of Agricultural Policy Bias in Fifteen Developing Countries. TMD Discussion Paper No. 105. Trade and Macroeconomics Division, Washington, D.C.: IFPRI, October 2002, http://www.cgiar.org/ifpri/divs/tmd/dp.htm

Kelly, V./Naseem, A. (1999): Macro Trends and Determinants of Fertilizer Use in sub-Saharan Africa. MSU International Development Working Papers No. 73, http://www.aec.msu.edu/agecon/fs2/index.htm

Kheralla, Mylene/Delgado, Christopher/Gabre-Madhin, Eleni/Minot, Nicholas/Johnson, Michael (2000): The Road Half Traveled: Agricultural Market Reform in sub-Saharan Africa. Washington, D.C.: IFPRI, October 2000, http://www.ifpri.org

Kheralla, M./Löfgren, H./Gruhn, P./Reeder, M. (2000a): Wheat Policy in Egypt. Adjustment of Local Markets and Options for Future Reforms. Washington, D.C.: IFPRI

Kheralla, M./Minot, N./Kachule, R./Soule, B. G./Berry, P. (2001): Impact on Agricultural Market Reforms on Smallholder Farmers in Benin and Malawi. Vol. 1. IFPRI Collaborative Research Project, February 2001, http://www.ifpri.org

Kheralla, M./Delgado, C./Gabre-Madhin, E./Minot, N./Johnson, M. (2002): Reforming Agricultural Markets in Africa. Baltimore, London: John Hopkins University Press for IFPRI

Kuapa Kokoo Information (2004). Kuapa Kokoo in Ghana – Beispiel für fair gehandelten Kakao, http://www.geographiedidaktik.de/Untermat/Ghana/ghana.html

Kydd, Jonathan/Dorward, Andrew (2001): The Washington Consensus on Poor Country Agriculture: Analysis, Prescription and Institutional Gaps. In: *Development Policy Review*, Vol. 19, No. 4, 2001, pp. 467-478

Levy, Sarah (2003): Starter Packs and Hunger Crises. A Briefing for Policymakers on Food Security in Malawi. University of Reading, September 2003, http://www.rdg.ac.uk/ssc/workareas/development/mala_fip.html

Levy, Sarah/Barahona, Carlos (2002): Main Report of the Evaluation Programme. 2001-02 Targeted Inputs Programme (TIP), http://www.rdg.ac.uk/ssc/workareas/development/mala_fip.html

Minot, Nicholas/Goletti, Francesco (2000): Rice market liberalization in Vietnam. IFPRI Research Report 114, http://www.ifpri.org

Mitchell, D. O./Ingco, M. C./Duncan, R. C. (1997): The World Food Outlook. Cambridge: Cambridge University Press

Moser, C./Barrett, C. B./Minten, B. (2005): Missed opportunities and missing markets: Spatio-temporal arbitrage of rice in Madagascar. January 2005, http://aem.cornell.edu/faculty_sites/cbb2/workingpapers.htm

Mutume, Gumisai (2002): Building an efficient road network. In: *Africa Renewal*, Vol. 16, No. 2-3, September 2002, http://www.un.org/ecosocdev/geninfo/afrec/vol16no2/162reg4.htm

MWH Consultants (2003): MWH Consultants. Evaluation of the European Communities Country Strategy for Malawi. Vol. 2. Final Report, http://europa.eu.int/comm/europeaid/evaluation/reports/acp/951641_vol2.pdf

Negassa, A./Myers, R./Gabre-Madhin, E. (2004): Grain Marketing Policy Changes and Spatial Efficiency of Maize and Wheat Market in Ethiopia. MTID Discussion Paper No. 66, February 2004, http://ww.ifpri.org

Negassa, A./Jayne T. S. (1997): The Response of Ethiopian Grain Markets to Liberalization. Grain Market Research Project Ethiopia. Working Paper 6, January 1997, http://www.aec.msu.edu/agecon/fs2/Ethiopia/index.htm

NEPAD Agriculture (2003): Comprehensive Africa Agriculture Development Programme, http://www.nepad.org/2005/files/marketaccess.php

Nyoro, J. K./Kiiru, M. W./Jayne, T. S. (1999): Evolution of Kenya's Maize Marketing Systems in the Post-Liberalization Era. Working Paper No. 2a, Tegemeo Agricultural Monitoring and Policy Analysis Project, Egerton University, University of Michigan, June 1999, http://www.aec.msu.edu/agecon/fs2/kenya/

Ofico, Afonso Osorio/Tschirley, David (2003): An Overview of the Cotton Sub-Sector in Mozambique. National Research Institute/MSU, February 2003, http://www.imperial.ac.uk/

agriculturalsciences/research/sections/aebm/projects/cotton_downloads/sysovmoz.pdf

Otal News 2004: Cocoa News 2004, http://www.otal.com/commodities/cocoa.htm

Paarlberg, Robert (1999): Politics and Food Insecurity in Africa. In: *Review of Agricultural Economics*, Vol. 21, No. 2, 1999, pp. 499-511

Pedualla, Salvatore (2003): Cotton Sector Reform in Chad: An Institutional Analysis. PSIA Chad, Washington, D.C.: The World Bank, http://povlibrary.worldbank.org/files/14781_Cha_Ctn_Instl_Sum_Oct02_Cotton_Sector_Final_Inclusive_of_Maps_and_Summary_IA.doc

Poulton, C./Dorward, A./Kydd, J. (1998): The Revival of Smallholder Cash Crops in Africa: Public and Private Roles in the Provision of Finance. In: *Journal of International Development*, Vol. 10, No. 1, 1998, pp. 85-103

Poulton, Colin/Dorward, Andrew (2003): The Role of Market Based Economic Development in Strengthening Food Security. Forum for Food Security in Southern Africa, August 2003, http://www.odi.org.uk/Food-Security-Forum/Publications.html

Pretty, Jules/Hine, Rachel (2001): Pretty, Jules, Hine, Rachel. Reducing Food Poverty with Sustainable Agriculture. Report, Centre for Environment and Society, University of Essex, February 2001, http://www2.essex.ac.uk/ces/

PSIA Malawi (Sharma, Manohar/Tsoka, Maxton/Payongayong, Ellen/Benson, Todd) (2003): Assessment of the Impact of ADMARC on the welfare of Malawian Households. Final Report. Washington, D.C.: The World Bank, February 2003, http://www.worldbank.org/psia

Putterman, Louis (1995): Economic Reform and Smallholder Agriculture in Tanzania: A Discussion of Recent Market Liberalization, Road Rehabilitation, and Technology Dissemination Efforts. In: *World Development*, Vol. 23, No. 2, 1995, pp. 311-326

RATIN (2005): Regional Agricultural Trade Intelligence Network, http://www.ratin.net/

Sasakawa Africa Association (2002): Feeding the Future Newsletter, Issue 18, November 2002, http://www.saa.tokyo.org

Sasakawa Africa Association (2003): Feeding the Future Newsletter, Issue 19, July 2003, http://www.saa-tokyo.org

Smith, William James (2001): Spending on Safety Nets for the Poor: How much, how many? The Case of Malawi. Africa Region Working Paper Series No. 11, Washington, D.C.: The World Bank, http://www.worldbank.org/afr/wps/index.htm

Smith, L. E. D/Urey, I. (2002): Agricultural Growth and Poverty Reduction: A Review of Lessons from the Post-Independence and Green Revolution Experience in India. October 2002, http://www.imperial.ac.uk/agriculturalsciences

Sharma, Ramesh (2002): Quantifying appropriate levels of the WTO bound tariffs on basic food products in the context of the Development Box Proposal. FAO Commodity and Trade PRWP No. 3, October 2002, http://www.fao.org

Shao, John R. (2002): Shao, John R. Agriculture and Market Liberalization in Tanzania: Problems of Cotton Production and Marketing in the Bunda District. Tanzania Development Research Group, Tanzania Agriculture Situation Analysis, November 2002, http://www.tzonline.org

Social Justice Committee (2005): PSIA Overview 2005, http://www.s-j-c.net/English/ejustice/psia/psiaoverview.html

SOFITEX (2004): World Bank. 30 Years of Successful Cotton Production. Long Version. Reducing Poverty Conference, Shanghai 2004, http://www.worldbank.org/wbi/reducingpoverty/case-Burkina-Cotton-Production.html

Stifel, David (2004): Note on the Revision of the Madagascar PSIA Multi-Market Model to incorporate the FMG Depreciation, http://poverty.worldbank.org/files/15035_stifel_psia_depreciation_revise_note.pdf

Stifel, David/Randrianarisoa, Jean Claude (2004): Rice Prices, Agricultural Input Subsidies, Transactions Costs and Seasonality: A Multi-Market Model Poverty and Social Impact Analysis (PSIA) for Madagascar. Washington, D.C.: The World Bank, http://poverty.worldbank.org/files/15035_madagascar_multimarket.pdf

Times of Zambia (2003): Times of Zambia. State disburses K500 million to buy maize in Choma. August, 6, 2003 - September 11, 2003, http://www.times.co.zm

Timmer, Peter C. (1996): Does Bulog Stabilise Rice Prices in Indonesia? Should it try? Bulletin 32 No. 2, August 1996, pp. 45-74

Townsend, Robert F. (1999): Agricultural Incentives in sub-Saharan Africa. World Bank Technical Paper No. 444, Washington, D.C.: The World Bank

Trade Policy Review div. countries (div. issues): WTO. Trade Policy Review of GATT/WTO Members. Geneva: WTO, div. Issues, http://www.wto.org

Uphoff, Norman (2002): The System of Rice Intensification Developed in Madagascar. Presentation, updated March 5, 2002, http://ciifad.cornell.edu/sri/

USDA Cotton (2004): Cotton World Markets and Trade, http://www.fas.usda.gov/cotton/circular/2004/11/toc.htm

Varardo, Barbara/Ezemenari, Kene/M'Baipor, Lucienne (2003): Poverty and Social Impact Analysis Chad Cotton Sector Reform. Ex-ante Qualitative Analysis – First Phase. July 2003, PSIA Chad, Washington, D.C.: The World Bank, http://povlibrary.worldbank.org/files/14668_Cha_Ctn_Mixed_Rep_Jul03_Complete_PSIA_Report.doc

Wandschneider, Tiago Sequeira/Garrido-Mirapeix, Julio (1999): Cash Cropping in Mozambique: Evolution and Prospects. Maputo, Mozambique: Food Security Unit Mozambique, European Commission, August 1999, http://europe.eu.int/comm

Weltentwicklungsbericht (1986): Weltbank. Weltentwicklungsbericht. Washington, D.C.: The World Bank

Wiggerthale, Marita (2004): Food Security and Agricultural Trade in the WTO Context: An Introduction. In: H-Böll-Stiftung, Global Issue Papers No. 13, Nov. 2004, http://www.fairer-agrarhandel.de

World Bank (1981): Accelerated Development in sub-Saharan Africa. An Agenda for Action. Washington, D.C.: The World Bank

World Bank (1994): Adjustment in Africa. Washington, D.C.: The World Bank

World Bank (1994a): World Bank. Benin. Toward A Poverty Alleviation Strategy. Report No. 12706-BEN, August 5, 1994, Washington, D.C.: The World Bank

World Bank (1997): World Bank. Rural Development. From Vision to Action. Washington, D.C.: The World Bank

World Bank (2000): World Bank. Agriculture in Tanzania Since 1986. Follower or Leader of Growth. World Bank Country Study, June 2000, http://www.worldbank.org, see also http://www.tzonline.org

World Bank (2001): World Bank. Mexico Land Policy – A decade after the Ejido Reform. June 15, 2001, http://www.worldbank.org

World Bank (2002): World Bank. Reforming Agricultural Markets in Malawi. A Case Study on Poverty and Social Impact Analysis. Washington, D.C.: The World Bank, undated, likely date given, http://poverty2.forumone.com/files/13139_malawi_agrimarkets.pdf

World Bank (2003): Reaching the Rural Poor. A renewed strategy for rural development. Washington, D.C.: The World Bank

World Bank (2003a): Reforming the Malawi Agricultural Development and Marketing Corporation (ADMARC). PSIA Malawi, Washington, D.C.: The World Bank, December 1, 2003, http://povlibrary.worldbank.org/files/15009_malawi_admarc_psia.pdf

World Bank (2004): World Bank. Mexican Corn: The effects of NAFTA. Trade Note, September 24, 2004, http://www.worldbank.org

World Bank (2004a): World Bank. Agricultural Diversification for the Poor. Guidelines for Practitioners. Agriculture and Rural Development Discussion Paper 1. Washington, D.C.: The World Bank, http://www.worldbank.org

World Bank (2005): World Bank. Meeting the Challenge of Africa's Development: An Action Plan. Washington, D.C.: The World Bank, Sept. 7, 2005, http://www.worldbank.org

World Bank Commodity Market Briefs (2005): World Bank Commodity Market Briefs 2005, http://www.worldbank.org

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