



ZEF Bonn
Zentrum für Entwicklungsforschung
Center for Development Research
Universität Bonn

Susanna Wolf

Number
70

**Private Sector Development
and Competitiveness in
Ghana**

ZEF – Discussion Papers on Development Policy
Bonn, May 2003

The CENTER FOR DEVELOPMENT RESEARCH (ZEF) was established in 1995 as an international, interdisciplinary research institute at the University of Bonn. Research and teaching at ZEF aims to contribute to resolving political, economic and ecological development problems. ZEF closely cooperates with national and international partners in research and development organizations. For information, see: <http://www.zef.de>.

ZEF – DISCUSSION PAPERS ON DEVELOPMENT POLICY are intended to stimulate discussion among researchers, practitioners and policy makers on current and emerging development issues. Each paper has been exposed to an internal discussion within the Center for Development Research (ZEF) and an external review. The papers mostly reflect work in progress.

Susanna Wolf: Private Sector Development and Competitiveness in Ghana, ZEF – Discussion Papers on Development Policy No. 70, Center for Development Research, Bonn, May 2003, pp. 29.

ISSN: 1436-9931

Published by:

Zentrum für Entwicklungsforschung (ZEF)
Center for Development Research
Walter-Flex-Strasse 3
D – 53113 Bonn
Germany
Phone: +49-228-73-1861
Fax: +49-228-73-1869
E-Mail: zef@uni-bonn.de
<http://www.zef.de>

The author:

Susanna Wolf, Department of Agricultural Economics, University of Ghana
(contact: suswolf@web.de)

Contents

Acknowledgements

Abstract	1
Kurzfassung	2
1 Introduction	3
2 Economic Development in Ghana	4
2.1 Macroeconomic Background for Private Sector Operations	4
2.2 The Contribution of Different Sectors	7
2.3 Export Performance and Regional Integration	12
3 Private Sector Promotion in a Democratic Environment	14
3.1 Investment Promotion Takes Shape	14
3.2 Obstacles to Private Sector Development Persist	15
3.3 Reforms for Private Sector Development and Increasing Competitiveness	18
4 Ghana's Competitiveness in Different Sectors	21
4.1 Real Exchange Rate Development	21
4.2 Revealed Comparative Advantage	22
4.3 Factor Productivity	24
5 Policy Conclusions	26
References	27

List of Tables

Table 1: Social Indicators for Ghana	4
Table 2: The Ghanaian Economy	6
Table 3: Sectoral Contributions to GDP	8
Table 4: The Sectoral Distribution of FDI in Ghana	11
Table 5: Ghana's Trade Development	12
Table 6: Ghana's Export Structure 2000	13
Table 7: Key Factors for Investment Decisions in Ghana	16
Table 8: Ghana's Top RCA Export Products, 2000	23
Table 9: Value Added per Employee and Wages per Employee by Sector	24

List of Figures

Figure 1: Ghana's Real Effective Exchange Rate (REER) and Inflation Rate (Consumer Price Index)	22
---	----

Acknowledgements

I would like to thank Dr. Karl-Wolfgang Menck and Dr. Ulrich Hiemenz for their comments and advise that helped to improve the quality of this paper. The paper provides background information for a more detailed study about investment determinants and export performance of Ghanaian enterprises which is supported by the Alexander von Humboldt-Foundation.

Abstract

Ghana has a relatively good international reputation with respect to political stability and macroeconomic reforms. However, its success with developing the private sector and attracting investment has at best been mixed. Therefore the new government that came into power in 2001 proclaimed a “Golden Age of Business”.

Competitiveness and private sector development are closely interlinked. On the one hand the factors that influence the competitiveness of a country are a precondition for private sector development. On the other hand only if the private enterprises act in a competitive manner and use their entrepreneurial possibilities to compete, support programmes for the private sector will be successful.

Competitiveness can be measured at different levels. The real exchange rate covers the competitiveness of a whole economy, it fluctuated significantly in Ghana over the past decade. The revealed comparative advantage index and value added per employee explore the relative competitiveness of different sectors. Especially for plastic and metal products they both show that Ghana is increasingly competitive.

Kurzfassung

Ghana hat hinsichtlich seiner politischen Stabilität und makroökonomischen Reformen eine relative gute internationale Reputation. Trotzdem war sein Erfolg bei der Entwicklung des Privatsektors und der Ansiedlung von Investitionen bestenfalls gemischt. Daher hat die neue Regierung, die 2001 ihr Amt antrat, ein goldenes Zeitalter für Unternehmen ausgerufen.

Wettbewerbsfähigkeit und die Entwicklung des Privatsektors sind eng miteinander verbunden. Einerseits sind die Faktoren, die die Wettbewerbsfähigkeit eines Landes beeinflussen, auch eine Voraussetzung für die Entwicklung des Privatsektors. Andererseits werden Programme zur Förderung des Privatsektors nur erfolgreich sein, wenn die privaten Unternehmen sich im Wettbewerb behaupten und ihre unternehmerischen Möglichkeiten ausnutzen.

Wettbewerbsfähigkeit kann auf verschiedenen Ebenen gemessen werden. Der reale Wechselkurs bildet die Wettbewerbsfähigkeit einer gesamten Ökonomie ab und war in Ghana im letzten Jahrzehnt starken Schwankungen unterworfen. Der „revealed comparative advantage“ Index und die Wertschöpfung pro Arbeitnehmer untersuchen die relative Wettbewerbsfähigkeit einzelner Sektoren. Insbesondere bei Produkten aus Plastik und Metall deuten beide auf eine steigende Wettbewerbsfähigkeit Ghanas hin.

1 Introduction

To increase investment is one of the major goals of economic policy in many countries as it is seen as an important means to increase the standard of living. After a long period of reluctance the governments of most African countries hope to attract foreign direct investment and increase domestic investment.¹ Support for the private sector also ranks high on the agenda of donors such as the European Union (EU) in the Cotonou Agreement.

Although Ghana has a relatively good international reputation with respect to political stability and performance of capital markets its success with attracting investment has at best been mixed. Therefore the new government that came into power in 2001 has put special emphasis on private sector development and attracting foreign direct investment (FDI) by proclaiming a “Golden Age of Business”.

There are good reasons for this new attitude: There is empirical evidence that private investment in Sub-Saharan-Africa has a significantly stronger effect on growth than public investment because of higher efficiency in the private sector. And as official development assistance (ODA) declines the need for foreign capital has to be met increasingly by FDI (Hernandez-Cata, 2000).

Competitiveness and private sector development are closely interlinked. On the one hand the factors that influence the competitiveness of a country are a precondition for private sector development. On the other hand only if the private enterprises are competitive and use their entrepreneurial possibilities to compete, support programmes for the private sector will be successful.

To achieve the long-term vision for Ghana to become a middle-income country by 2020 a lot needs to be done. After an overview of the economic development in the past 20 years this paper looks at private sector development in different sectors of the economy. The obstacles for domestic and foreign investment are explained and different approaches to increase private investment are reviewed. Furthermore different measures of competitiveness – the real effective exchange rate, the revealed comparative advantage and factor productivity are analysed to draw some conclusion for future perspectives.

¹ See for example the New Partnership for Africa’s Development (NEPAD).

2 Economic Development in Ghana

2.1 Macroeconomic Background for Private Sector Operations

At independence in 1957 (Ghana was the first country of Africa to become independent from colonial rule) Ghana was the world's largest cocoa producer, per capita income was the highest of all Sub-Saharan African countries and external reserves were equivalent to three years of imports (Nowak et al., 1996). The country is well-endowed with natural resources (agriculture, forestry, gold, diamonds, bauxite, manganese) and has a potential for tourism (Republic of Ghana and European Community, 2002).

However, in 2002, Ghana belongs to the group of least developed countries with 40 % of its population living below the poverty line and a rank of 129 out of 174 countries on the Human Development Index. Infant mortality is 5.7% and life expectancy is 59 years. These figures are better than the average for sub-Saharan Africa but below average for developing countries (Republic of Ghana and European Community, 2002).

Table 1: Social Indicators for Ghana

Ghana	1990	1995	1996	1997	1998	1999	2000
Mortality rate, infant (per 100 live births)	6.6	5.7	-	5.5	-	-	5.8
Illiteracy rate, adult total ¹⁾	41.62	34.90	33.61	32.33	31.04	29.76	28.48
School enrolment, primary (% gross)	75.29	72.36	75.00	-	78.18	-	-
School enrolment, secondary (% gross)	36.44	33.60	32.34	-	37.28	-	-
Telephone mainlines (per 1,000 people)	2.90	3.60	4.30	5.70	7.50	8.00	11.70

Notes: ¹⁾ % of people ages 15 and above.

Source: World Bank, 2002.

In short, from 1971 to 1983 the Ghanaian economy was constantly declining. Industrial production, that was dominated by state-owned enterprises, declined by more than 47 %, especially in mining and construction. By 1982-83 Ghana's economy had virtually collapsed. GDP per capita was only one third of the 1977 level and the inflation rate was more than 110 %. In 1983, a severe draught, a deterioration of the world cocoa price, the return of 1 million

Ghanaians from Nigeria added to these problems (Nowak et al., 1996 and Tsikata, 2001). Especially at the beginning of the Economic Reform Programme (ERP) in 1983 uncertainty about the credibility and sustainability has been high leading to low investment rates. The ERP aimed to improve the incentive structure especially for the private industrial sector through a reduction of price distortions, namely the liberalisation of the exchange rate and tariffs. As a result fiscal imbalances were brought under control and inflation was lowered significantly without a contraction in domestic demand (Nowak et al., 1996). With economic improvement also foreign aid to Ghana improved dramatically from US\$9 per capita to US\$ 49 per capita between 1983 and 1991 but this created serious aid-management problems (Tsikata, 2001).

A major effort was made towards privatisation of state-owned enterprises. They were involved in all sectors of the economy but in their majority were inefficient and overstaffed due to political interference. By 1980 the public sector accounted for 75% of formal employment. In 1988 the Divestiture Implementation Committee was established as earlier attempts to privatise state-owned enterprises had failed. In 1992 for the first time private traders were allowed to purchase the cocoa crop in competition with the state-owned Produce Buying Company. In 1994 divestiture receipts peaked due to the sale of Ashanti Goldfields, Ghana's most valuable company, and towards the end of the 1990s they increased again. Until 1999 70 % of the total number of existing state-owned enterprises were sold, partly to foreign investors but to 80 % to local entrepreneurs. However, thereafter the divestiture process slowed down and in 2002 only 2 state-owned enterprises were divested due to a review of the procedures. In general more small and medium-sized enterprises have been privatised, whereas the large companies providing infrastructure have so far not been divested. Partly this is due to the fact that they are not commercially viable or even have a negative net value and therefore difficult to sell. Government annual proceeds from privatisation were equivalent to an average of 8.5 % of total government revenue for 1991-98. Divestiture receipts were partly used to finance the fiscal deficit but a large share had to be used to serve previous liabilities of the enterprises. In addition to divestiture receipts newly privatised companies also generate tax revenues for the government and generate new employment (Appiah-Kubi, 2001 and Leite et al. 2000).

During 1987-91 private investment rates improved but after the fiscal shock in 1992 - with the general economic downturn - investment slumped as well. 1991-92 was again a very difficult year for Ghana with a drop in cocoa harvest, an unbalanced government budget due to increased wages and salaries for government employees after labour unrest and a decline in external finance. The return to a democratic system in 1992, in which Rawlings became an elected president was marked by political unrest. The election period was characterised by high government spending, which worsened macroeconomic imbalances and rekindled inflation (Leite, et al., 2000). This led to a collapse in savings and investment because of the low confidence into the banking system. Until 1994 consumption (both private and public) remained very high leaving savings at a negligible level. The increase in the investment level was mostly driven by public investment financed by aid. In 1994 the transformation of the exchange rate system from pegging to the Pound Sterling and later the US Dollar towards a market mechanism

was completed by accepting major obligations of the IMF Agreement (Killick, 2000, Leite, et al., 2000, and Nowak et al., 1996).

After the 1996 elections until 2000 the economy stabilised to some extent. Ghana's economy was growing by around 4 % per annum and gross capital formation stayed above 20 % of GDP, although FDI declined. The savings rate is still very volatile. Inflation was fluctuating over the entire period between 10 and 60 % (see Table 2). In 1998 low rainfalls caused some problems for agriculture but above all triggered an energy crises as most electricity has been generated from hydroelectric power from the lake Volta. At the turn of the century with the next elections the macroeconomic situation worsened again. Government borrowing was to a large extent domestic leading to high real interest rates. Domestic savings fell again and GDP growth was below 4 % in 2000 (see Table 2). The weak performance of Ghana's economy in the late 1990s was to a large extent due to the continued failures of macroeconomic policy in the context of fiscal balance, liquidity management plus the adverse terms of trade shock. Especially the failure to reduce the number of public servants that were often only reallocated from ministries to other public agencies and an increase in real wages of the public sector of 30 % during the 1990s resulted in persistent high budget deficits. All these factors resulted in an increase in real costs of borrowing, imminent depreciation through a highly appreciated exchange rate and uncertainty crowding out investment. Real sector developments (real interest rates, enterprise failure, and employment) indicate a fragile economy (CEPA, 2001).

Table 2: The Ghanaian Economy

	1990	1995	1996	1997	1998	1999	2000
GDP per capita (constant 1995 US\$)	346	373	382	390	399	408	413
GDP growth (annual %)	3.33	4.00	4.60	4.20	4.70	4.41	3.70
Inflation, consumer prices (annual %)	37.26	59.46	46.56	27.89	14.62	12.41	25.19
Gross domestic savings (% of GDP)	5.47	11.61	21.19	9.85	18.59	19.39	15.33
Gross capital formation (% of GDP)	14.44	20.02	29.17	30.43	31.46	35.37	31.20
Gross capital formation (annual % growth)	6.58	-10.70	55.00	1.80	13.20	16.80	-34.10
FDI, net inflows (% of GDP)	0.25	1.66	1.73	1.21	0.75	0.81	2.21
Listed domestic companies, total	-	19	21	21	21	22	22
Aid (% of gross capital formation)	66.17	50.34	32.22	28.93	40.65	37.64	51.66
Electricity production (annual % growth)	-	0.08	8.46	3.46	-27.19	4.39	-

Source: World Bank, 2002.

The decline in Ghana's terms of trade at the end of the 1990s further deteriorated the fragile macro-economic situation. The trade deficit peaked in 1999 but was reduced thereafter by a sharp depreciation. Ghana's trade regime has been liberalised considerably over the past decades.

The investment climate has been constantly improving with a declining inflation rate except in 2000 where it rose again (see Table 2). Literacy and access to telecommunication are constantly increasing thereby creating the necessary preconditions for investment (see Table 1 + 2). In addition the share of the population living below the poverty line has been reduced by 10 % in the past decade. The internal security situation is good compared to many neighbouring countries and the change in government has been widely accepted within the population (Republic of Ghana and European Community, 2002, and Leite et al., 2000).

School enrolment in primary education is relatively high, rising from 74 % in 1992 to 83 % in 1999 leading to a constant decline in the illiteracy rate (see Table 1). However, secondary school enrolment remains with 41 % relatively low despite some improvement. Furthermore a large rural – urban gap exists which results in limited access for the poor to secondary, vocational and tertiary education (Republic of Ghana and European Community, 2002).

2.2 The Contribution of Different Sectors

Traditionally agriculture has the largest share in total GDP with cocoa being the major export crop of the country for the last century. Even compared to other Sub-Saharan African countries the share of agricultural value added in total GDP is high. Meanwhile the service sector contributes more to GDP. Industry, including manufacturing, is still the smallest sector although it has been growing most rapidly over the past 10 years. However from 1997 the shares of all sectors in GDP have been relatively constant (see Table 3 and Leite et al, 2000).

The structural change implied by the ERP lead mainly to a declining share of agriculture in GDP. In 2001 its growth rate increased to 4 % which is only slightly below the overall growth rate. This growth is mainly driven by the good performance of the crops, livestock and forestry sector whereas the cocoa sector declined. Especially in the forestry sub-sector growth has been above the average for the agricultural sector, but this might not be sustainable given the rapid deforestation in Ghana. However, structural reforms in the cocoa industry encouraged greater private sector activity, especially in the buying and processing of cocoa. Agriculture still employs the majority of the population, especially in rural areas. As smallholder farmers produce about 80 percent of Ghana's agricultural output using rudimentary methods there is a large potential to increase productivity in agriculture (ISSER, 2002, pp. 99, and Leite et al., 2000).

Table 3: Sectoral Contributions to GDP

	1990	1995	1996	1997	1998	1999	2000	2001
Agriculture, value added (% of GDP)	44.85	38.78	38.96	35.78	36.01	35.78	35.30	35.90
Agriculture, value added (annual % growth)	-2.02	3.70	5.20	4.30	5.10	3.89	2.10	3.70
Industry, value added (% of GDP)	16.77	24.29	23.58	25.67	25.27	25.41	25.40	25.20
Industry, value added (annual % growth)	6.94	4.02	4.73	6.37	3.21	4.87	3.77	4.0
Of which:								
Manufacturing, value added (% of GDP)	9.76	9.33	8.63	9.05	8.99	9.02	9.02	9.20
Manufacturing, value added (annual % growth)	5.88	1.63	3.47	7.47	4.08	4.61	3.74	7.60
Services, etc., value added (% of GDP)	38.38	36.94	37.47	38.55	38.72	38.81	39.30	38.90
Services, etc., value added (annual % growth)	8.50	4.26	4.05	3.54	4.75	4.74	5.09	4.30

Source: World Bank, 2002.

The share of manufacturing in GDP has even declined somewhat in the past decade. This was due to the fact that the competitiveness of the manufacturing sector was low because of years of protection and shortage of imports. Most enterprises had obsolete machinery, outmoded production practices and inadequate management techniques and therefore could not respond adequately to increased competition. Labour productivity is generally low and Ghanaian manufacturing firms are considered as being little innovative. Partly this is attributed to the low quality of schooling. Although the enrolment rates have increased considerably the level of skills and competences is very low (Killik, 2000, p. 62). The majority of workers only complete primary school education and even those who achieve a university degree are not trained in accordance with the current needs in the industrial sector. The subsequently needed internal trainings produce additional costs and can more easily be afforded by larger companies (Hoeft, 2001, p. 165ff). Another reason is the relatively high share of (partly) state-owned enterprises e.g. in textiles, wearing apparel and leather products, chemicals, iron and steel products and paper and paper products which performed extremely bad. In contrast the privatised enterprises have increased the quality of their products, have entered the export market more frequently and increased real wages. Furthermore their investment rate was above average (Appiah-Kubi, 2001).

One further problem of the manufacturing sector is the low capacity utilisation (at 37 % in 1990) which discourages new investment. One of the few growing sub-sectors are non-ferrous metal products and textiles, clothing and leather products whereas beverages, wood products, chemical products, iron and steel, and paper products have been declining. In turn the mining sector and services have been more successful. However mining, business and financial services and utilities were also the sectors with the largest share of state-owned enterprises (more than 70 %) and received therefore significant new investment during the divestiture process (Pattillo, 1998, Aryeetey, 1994, Aryeetey and Harrigan, 2000, p. 27, and Appiah-Kubi, 2001).

In 2000 and 2001 the manufacturing sub-sector again showed a relatively poor performance with growth rates below average. The shortfall in foreign exchange severely affected production as manufacturing in Ghana is generally highly import dependent. The manufacturing sector was also negatively affected by the high rate of inflation that increased costs of production but lowered demand. Especially the high costs of credit that only fell marginally in 2001 made it difficult for most manufacturing firms to access credit for expansion. To increase long term growth prospects the development of the manufacturing sector through investment in physical as well as human capital is crucial. Especially for an improved export performance it is crucial to overcome the infrastructural bottlenecks particularly in electricity and transport. As these sectors as well as telecommunications are still dominated by state-owned enterprises their efficiency is not sufficient (OECD/AfDB, 2002, p. 156, ISSER, 2002, p. 126f and Leite et al., 2000).

In the industrial sector mining and quarrying still contributes more than 5 % to GDP although its output had been growing slower than the whole industrial sector on average in recent years and even declined in 2001. The poor performance of mining was due to a decline in gold mining because of the closure of some mines and labour unrest in one of the mines (ISSER, 2002, p. 132).

The structural changes also increased the share of services in GDP, especially distributive trade. In the services sector investment is associated with lower sunk costs and shorter turnover periods which makes investment in this sector more flexible and reversible. The services sector continued to grow above average with 5 % or more during 1999 to 2001. Growth occurred especially in the tourism and telecommunication sub-sectors. However, the services sector is still dominated by government services that contribute more than 10 % to GDP (ISSER, 2002). But as the government increases its efforts to reduce public spending it can be expected that the sub-sector will grow slower than the rest of the economy. Trade (retail and wholesale) and hotels and restaurants also contribute significantly to GDP. The transport, storage and communications sub-sector as well as the finance, insurance and real estate sector only contribute less than 5 % to GDP each. As these sectors are vital for facilitating trade and capital accumulation they should grow faster than average GDP but in the past 5 years that was only true for transport, storage and communication (ISSER, 2002, p. 144).

Domestic firms in Ghana finance new investment (start-up and expansion) mostly from previous savings not from borrowing. Bank lending is only a source for investment in plant and machinery by medium and large scale firms. In the period 1991-93 the annual level of investment in surveyed firms was only 10 % of the value of the capital stock and therefore not sufficient to maintain the capital stock (CSAE/ Department of Economics, 1995). Although the number of small enterprises rose (1984-93), they were mainly in low-productivity activities, which were aimed at local markets (Lall and Wignaraja, 1996).

One of the major constraints for the private sector is its limited access to finance. During 1987 to 92 the availability of credit to the private sector was around 4 % of GDP which is much lower than in other African countries. High real interest rates make it more attractive to buy government bonds than invest in risky businesses. Also the banks with their very strict approach and requests of collateral make it difficult especially for small and medium enterprises to get a loan. In recent years a number of special credit programmes were put in place, especially in the area of microcredit but so far they are not sufficient to meet the demand (Aryeetey et al. 2000).

Also the labour market poses a significant problem for the Ghanaian economy, especially in rural areas, where more than 90 % of workers are self employed. Average earnings are very low but due to the low education level productivity is also very low even compared to other African countries. This results in labour costs that are relatively high and hence massive unemployment (Hoeftner, 2001). Especially formal sector employment decreased heavily since 1960, mainly due to the retrenchment in the public sector in the earlier phase of the ERP but also in the private sector. Therefore entry into the formal sector is very difficult. Although labour regulations have been liberalised after 1983 the relatively strong unions in the manufacturing sector have secured high wages in the formal sector (Gyan-Baffour and Betsey, 2001). In contrast wage flexibility in the informal sector is much higher which provides job seekers with easier access. However, due to the rigidities in the formal sector there is a downward pressure on informal earnings that increases the formal-informal wage gap (Gyan-Baffour and Betsey, 2001).²

With respect to FDI Ghana hasn't been as successful as one would expect given the stable political environment. Although it has improved somewhat its share in world FDI inflows has been much lower than its share in world GDP leading to rank 107 of UNCTAD's Inward FDI Performance Index for 1998-2000 (UNCTAD, 2002b). At the end of the 1980s the share of private investment in GDP increased from 2.9 in 1983 to 8.7 % in 1990 because of major FDI in the gold mining sector. But FDI has declined dramatically after a peak in 1994. According to figures by the Ghana Investment Promotion Centre (GIPC) there was a second peak in 1997 with inflows of 631 M. US\$ to a severe low of 97 M US\$ in 2001. Of these 97 M US\$ 30 % are coming from Ghanaians living abroad after a massive campaigning including a Home-Coming

² In this context the informal sector is defined as employment in establishments employing less than 5 workers (ISSER, 1995).

Summit in July 2001. The decline in FDI can partly be attributed to a wait and see attitude before the elections.

Since the establishment of GIPC in 1994 1309 investment projects have been implemented. The investment figures don't include mining as this is handled by another ministry. The services sector has received more than half of the investment capital involved. Here producer services and communication (management consulting, Internet providers, mobile phone providers) play a dominant role. Although the number of projects in the tourism sub-sector was relatively high with 148 it received only 1.8 % of invested capital from September 1994 to December 2001, which means that tourism enterprises are usually relatively small. Second in importance is the manufacturing sector in terms of established projects as well as capital involved (19.3 %). However, in the first half of 2002 the importance of the manufacturing sector has been increasing with more than 40 % of the projects and 63 % of the invested capital. Agriculture played only a minor role for foreign investors with about 10 % of projects and capital from 1994 to 2001 and its share even declined in the first half of 2002. To some extent foreign investors are also involved in the building and construction sector as well as trade (see Table 4) (GIPC, 2002 and Grant, 2001).

Table 4: The Sectoral Distribution of FDI in Ghana

Sector	September 1994 – December 2001				January – June 2002			
	Number of Projects		Initial Investment Capital		Number of Projects		Initial Investment Capital	
		%	M US\$	%		%	M US\$	%
Manufacturing	345	27,49	329,4	19,31	23	42,59	13,25	63,28
Service	373	29,72	936,46	54,90	15	27,78	3,23	15,42
Tourism	148	11,79	30,5	1,79	5	9,26	0,31	1,49
Build.&Const.	102	8,13	116,84	6,85	4	7,41	1,72	8,21
Export Trade	90	7,17	15,57	0,91	1	1,85	0,03	0,13
Agriculture	102	8,13	183,17	10,74	3	5,56	0,49	2,35
General Trade	95	7,57	93,89	5,50	3	5,56	1,91	9,11
TOTAL	1,255	100,00	1,705,82	100,00	54	100,00	20,94	100,00

Note: the data only include FDI that is dealt with by GIPC and therefore does not include the mining sector.
Source: Ghana Investment Promotion Centre (GIPC), 2002.

The majority of the FDI projects are joint foreign-Ghanaian (912 projects out of 1309). The major sources of foreign investment are Great Britain (141 projects), India (119 projects) and China (117 projects). Further important investors are the US, Lebanon and Germany. From other African countries only Nigeria and South Africa invest in Ghana. Almost 80 % of the projects are located in the Greater Accra region (GIPC, 2002). Due to its historical role as the Ashanti headquarters and regional market centre Kumasi ranks second especially because a number of early FDI located there (Grant, 2001).

2.3 Export Performance and Regional Integration

Both exports and imports account for an increasing share of GDP over the last decade but in recent years exports declined even in absolute terms. Over the period from 1990 to 2001 the value of exports almost doubled but the value of imports increased even faster (see table 5). The fluctuations in exports are mainly driven by changing prices for its main export products gold and cocoa. However, empirical studies show that the increase in labour demand in the exportable sector has overcompensated the decline in employment in the importable sector due to trade liberalisation (Gyan-Baffour and Betsey, 2001).

Table 5: Ghana's Trade Development

	1990	1995	1996	1997	1998	1999	2000	2001
value of exports (Mio. USD)	891	1724	1669	1635	1795	1719	1598	1618
annual growth rates of exports % ¹⁾	-2.7	17.2	-	-2	9.7	-4.2	-7	1.3
value of imports (Mio. USD)	1199	1907	2108	2326	2563	3480	2973	2986
annual growth rates of imports, % ¹⁾	-0.4	13.2	-	10.3	10.2	35.8	-14.6	0.5
value of exports of services (Mio. USD)	79	139	144	152	427	454	490	-
value of imports of services (Mio. USD)	226	332	364	395	548	576	527	-
tourism expenditures (Mio. USD)	81	233	249	266	284	304	386	448

Note: ¹⁾ in 1990 column growth rates from 1980 to 1990, in 1995 column growth rates from 1990 to 1995.

Source: UNCTAD, 2002 a.

The high fluctuation in imports around 1999 was due to a large increase and subsequent drop in imports of vehicles due to a change in customs duties in 2000. Ghana is a net importer of services. However services also play a growing role in exports with increasing travel receipts (WTO, 2001).

The export structure of Ghana is still highly concentrated towards minerals (gold, 613 Million USD and aluminium, 161 Million USD) and agricultural products (raw cocoa, 307 Million USD) but these are the sectors with the poorest performance (see Table 6). Although Ghana's exports receive preferential treatment from its main trading partner - the European Union, under the Cotonou agreement it has not been able to diversify its exports. For example exotic fruits and vegetables, where other African, Caribbean and Pacific (ACP) countries have increased exports significantly, account for less than 3 % of Ghana's exports to the EU. Also in the case of wood products mainly raw wood is exported (7.3 %) with only a tiny fraction (0.7 %) exported in the form of furniture in 2000 (European Commission, 2001). It is interesting to note that the share of exports to other African countries increased from 13 % in 1994 to 17 % in 1999 mainly due to increased exports towards ECOWAS³. ECOWAS countries are also an important destination for non-traditional exports of Ghana (WTO, 2001).

³ ECOWAS – Economic Community of West African States

Table 6: Ghana's Export Structure 2000

Product group	SITC classification	Million USD
All food items	0 +1 + 22 + 4	512
Agricultural raw materials	2 -22 -27 -28	108
Fuels	3	82
Ores and metals	27 +28 +68	199
Manufactured goods	5 to 8 -68	156
Unallocated *	9 + rest	613

Note: * in Ghana the unallocated category consist mainly of non-monetary gold
Source: UNCTAD 2002a.

The share of non-traditional exports has constantly increased to 30 % by the end of 2000 (Republic of Ghana and European Community, 2002). Horticultural exports increased by more than 20 percent a year during 1992-98. The exported amounts of fish/sea food and game/wildlife also increased in 2001 compared to 2000. Furthermore tourism contributes 11 % to foreign export earnings with growing rates (ISSER, 2002, pp. 101+144 and Leite et al., 2000, p. 75). With an export concentration index of 0.39 in 2000 Ghana is one of the more diversified exporters in Africa (UNCTAD, 2002a). To diversify the economy further additional investment in competitive sectors is needed.

For Ghana the Economic Community of West African States (ECOWAS) is the most relevant regional integration scheme. Despite problems of overlapping membership and distribution of tariff revenue the attempt to create bigger markets and to cooperate in various fields is growing. As market size is an important determinant of investment that aims to serve the local market the process of regional integration should have a significant impact on investment. As this additional investment might concentrate in the more advanced member countries because of agglomeration effects some distributional problems might occur.

Ghana is in a very good position to serve the whole ECOWAS market due to political stability and a relatively good infrastructure. The 2002 budget statement therefore states the intention to “make Ghana the natural destination for investment in the ECOWAS sub-region” (paragraph 21). Already exports of simple manufactures such as cooking utilities to other ECOWAS countries contribute significantly to total exports. As the politically unstable situation continued in Nigeria over a long period investors from Europe started to redirect their operations towards Ghana. If regional integration in ECOWAS is developed further Ghana offers the possibility to serve the large Nigerian market from a location that is less risky.

3 Private Sector Promotion in a Democratic Environment

3.1 Investment Promotion Takes Shape

There have been several attempts to foster FDI in Ghana since independence. Already in 1959 the Pioneer Industries and Companies Act which granted a ten-year tax holiday was established. It was followed by various other laws and investment plans and in 1994 the Ghana Investments Promotion Centre was created to increase both domestic and foreign investment. Imports of machinery and equipment and foreign-exchange transaction were further liberalised. It also includes a comprehensive array of income tax incentives and investment guarantees (Tsikata et al., 2000, p. 32).

The Ghana Investment Promotion Centre (GIPC) is a one stop point for new investors but depending on the sector there are also the Minerals Commission for mining, the Ghana National Petroleum Corporation (GNPC), the Ghana Stock Exchange for portfolio investment and the Free Zone Board for enterprises that export more than 70 % of their production. The number of expatriates that might be employed depends on the invested capital. The restriction to hire foreigners is considered to be an obstacle by 36.8 % of FDI firms. To register an enterprise 0.5 – 2 % of the invested capital has to be paid as fee, and this is also required when investment is increased later. Foreign investors encounter delays in approval procedures. There has been some progress but compared to some Asian states Ghana lacks behind (Tsikata et al., 2000).

The National Board for Small Scale Industries (NBSSI), which was established in 1985 is targeted towards domestic small and medium enterprises. Support provided includes capacity building, provision of relevant information and credit assistance. A significant number of new enterprises were created with the assistance of NBSSI in the area of textile design, bakery, shoe making, honey production and beads making. However, demand for the services is higher than its capacity (ISSER, 2002, p. 138f).

Also the EU trade preferences under the Lomé and Cotonou Agreement had the aim to increase investment in the ACP countries as they increase the competitiveness of ACP products compared to products from other developing countries when they are exported to the EU market. However, this only applies to products where EU tariffs and non-tariff barriers are still high as in the case of textiles, fishery products, and some fruits and vegetables (also canned). Therefore in the non-traditional export sector in Ghana several European firms did invest because of preferential market access. However, because of restrictive rules of origin which are applied to these preferences Asian firms that have invested in other developing countries for example in the textiles sector haven't done so in the ACP states.

Ghana achieved some success in privatisation in the recent years, selling a \$112 million share in Ashanti Goldfields to foreign investors through an international placement of shares. Ghana's preferred pattern is to find a combination of foreign partners and local holders by offering minority stakes on the stock market (UNCTAD, 1998). Until 1999 the divestiture of 233 state-owned enterprises has been authorised. Many of the privatized enterprises have been modernized and increased employment. For example Tropical Glass is now one of the leading producers of beer bottles in West Africa and Tema Steel Company has increased its capacity utilisation from 2 % in 1990 to 90 % in 1997 (Divestiture Implementing Committee, 2002).

Overall a number of macroeconomic instabilities and regulatory rigidities still persist in Ghana, that have to be overcome to attract both domestic and foreign investment. Governments have designed several investment promotion plans and initiated support programmes in the past decade but the administration often lacks the capacity and sometimes the commitment to implement reforms effectively. External factors such as the conflict in Côte d'Ivoire contribute to the negative image of (West) Africa and therefore also have a negative impact on investment in Ghana.

3.2 Obstacles to Private Sector Development Persist

There is wide agreement that the macroeconomic environment is essential for the increase of both domestic and foreign investment. High and volatile inflation rates that were prevalent in Ghana do not only affect capital markets but reduce the information given by the price system and therefore could lead to inefficient resource allocation. Volatility of cocoa prices and the real exchange rate does not only affect the profitability of primary commodity exporters but also has negative impacts on income and savings. Therefore it can be concluded that the low investment ratio in Ghana is not only caused by low savings levels but also by various risk factors (Collier and Pattillo, 2000).

A recent study finds that factors that drive FDI to developing countries have a different impact on FDI in Sub-Saharan Africa. One main finding is that controlling for various other determinants FDI is uniformly lower in Sub-Saharan Africa which indicates an adverse regional effect. Furthermore infrastructure and openness to trade seem to have a lower effect on FDI in Africa but this might be driven by the different nature of FDI (Asiedu, 2002).

In an analysis of FDI and domestic investment in Ghana Tsikata et al. (2000) found several factors that influence investment decisions (see Table 7). They performed a regression analysis on the macro level, using time series country data. Furthermore, on the micro level they conducted a survey including foreign and domestic enterprises, asking them about the factors that influenced their decision to invest. In general this study is in line with similar exercises in other African countries and the results of the macro and micro level analysis point into the same direction. As the micro study differentiates between different sectors, it can give a clearer insight

for some of the external variables. For example the market size is only important for companies that serve the domestic market and not for the relatively big mining sectors that exports almost total production. Overall the study confirmed that the availability of raw materials and labour is very important for investors together with the macroeconomic and political stability. However, also investment incentives such as tax holidays are regarded as important by the private sector.

Table 7: Key Factors for Investment Decisions in Ghana

<i>Variable</i>	<i>FDI Study-macro</i>	<i>FDI study-micro</i>
Market size	No effect	Only important for domestic firms
Trade regime	Positive effect of liberalisation	
Export orientation	Positive effect	
Previous FDI	Very strong positive effect	
Public investment	Positive, not significant	Infrastructure important for non-industrial sector
Taxation	No effect	Negative effect on manufacturing only
Interest rate	No effect	Negative effect especially for non-industrial sector
Real exchange rate	Negative, not significant	Uncertainty especially important
Democracy	Positive effect	
Investment incentives		Very important esp. for non-industrial sector
Raw material availability		Very important especially for mining
Market potential		Important especially for non-industrial sector
Cheap labour		Important for manufacturing
Political stability		Important for non-industrial sector
Economic uncertainty		Very important for all sectors

Note: Non-industrial = agriculture + services
 Source: Compiled from Tsikata et al. (2000)

Some of the obstacles mentioned in the literature could already be addressed in Ghana. In the first half of 2002 the inflation rate could be brought down considerably to 13 % in September, due to reduced spending by the government. However, government expenditures were slightly above planned figures. As especially the volatility of the inflation rate creates problems for private enterprises, only a long term reduction will help to increase private initiative (GoG, 2002b). To decrease the inflation rate the Bank of Ghana had kept interest rates high. Therefore bank lending rates to the private sector decreased less than the inflation rate which results in increased real interest rates. Together with a high spread between the savings deposit rate and the lending rate this makes access to credit difficult for enterprises (GoG, 2002b).

Ghana has also liberalized its trade regime in recent years. The simple average applied MFN tariff rate was 15 % in 2000. Tariffs are applied in four categories ranging from 0 to 20. The tariff structure has been simplified and the top tariff rate has been lowered from 25 % to 20 %. However, there is a wide range of tariff exemptions due to pressure from different interest groups. This results in distortions of the trade regime and revenue losses and undermines the transparency of the tariff system. On the other hand non-tariff barriers like quotas or standards are used only for very few products (Leite et al., 2000 and WTO, 2001). However, the import procedures such as inspections at entry ports often take a very long time which increases the costs of doing business and reduces the availability of imported inputs (JITAP, 2002).

The unsustainable budget deficit has increased the necessity to not only cut public expenditures but also to increase revenues. After the first attempt to introduce a value-added tax (VAT) had failed it was reintroduced in late 1998 and the rate was subsequently raised from 10 % to 12.5 % after a year long campaign to educate the public. Together with attempts to enhance enforcement and collection rates this has contributed to enhance the transparency of the tax system and to stabilize revenues. In the first half of 2002 tax revenue was above the targeted level due to improvements in tax administration (Leite et al. 2000, WTO, 2001 and GoG, 2002b).

The restriction of public sector borrowing to 10 % of total revenue by the new government shall free resources to increase credit to the private sector. Investment will be especially stimulated if the reduced government borrowing leads to a significant decline in the lending rates (ISSER, 2002, p. 179f). Furthermore trade liberalisation should be continued, including the simplification of the tariff and the reduction of exemptions could help to improve efficiency and encourage new investment especially in export areas in which Ghana can be competitive (Leite et al., 2000, p. 77 and WTO, 2001, p. 16).

Another critical issue for investors that impacts on the competitiveness of a country is the persistence of corruption. Although the new government has announced a zero tolerance policy against corruption especially foreign investors still complain about corruption. However, recently things have started to improve. From 2001 to 2002 Ghana could improve its rank of the Corruption Perceptions Index of Transparency International from 59 to 50 although 11 more countries were covered in 2002. It ranks 5th among the Sub-Saharan African countries covered. The value of the index increased from 3.4 to 3.9.⁴ Especially with respect to free expression Ghana is at the forefront of African countries. However, common forms of public sector corruption like the appearance of ‘ghost names’ on the civil payroll are still used and the attempts to establish a code of conduct for public servants make only slow progress. As in many other countries also in Ghana privatisation is an area where corruption is widespread. For that reason the new government has stopped the divestiture of some enterprises and a number of

⁴ The CPI score ranges between 10 (highly clean) and 0 (highly corrupt).

associates of the old Rawlings government face now corruption charges (Transparency International 2001 and 2003).

3.3 Reforms for Private Sector Development and Increasing Competitiveness

In 2002 an Investment Advisory Council was launched with the intention to promote dialogue between the government and senior executives of local and international companies on ways to improve the investment climate. At the first meeting in May 2002 a number of problem areas in government policy were identified, among others the regulation of land ownership and mining and labour laws, safety and security, infrastructure (especially for energy, telecommunications, and information technology), financial services, restoration of competitiveness to the mining sector, and dependency on aid and commodity exports. These areas have been assigned to the relevant ministries for action within 6 months. If the problems are at least partially solved this could strengthen investor confidence significantly.

There are also a number of initiatives that aim at increasing private sector performance in specific sectors. Support for the non-traditional sector by the Ghanaian government through the Ghana Export Promotion Council (GEPC) could help firms to exploit the Cotonou preferences as well as the new opportunities under the US African Growth and Opportunity Act (AGOA) (ISSER, 2002, p. 168f). The objective of Ghana's Industrial Development Strategy to achieve higher growth in output and sustained job creation in the industrial sector requires higher investment in manufacturing, especially for updated technology and improved labour skills for value-added production (WTO, 2001).

Interestingly in the New Partnership for Africa's Development (NePAD) private sector development also has a high priority. The need to diversify the economies on the basis of natural resources is stressed. Support for private enterprises should be directed mainly towards micro-enterprises and small and medium enterprises as these are the main contributors to value added and employment in most African countries (NePAD, Article 156). NePAD acknowledges the prime responsibility of African governments for the development of the continent and therefore increases the ownership of the development strategies as the creation of "the necessary political, social and economic conditions in Africa that would serve as incentives to curb the brain drain and attract much needed investment" that is foreseen in Article 125 (NePAD) is primarily the responsibility of the African states that have to simplify administrative procedures and improve the legal system. However, for any specific investment support measure to become effective the general obstacles to investment that prevail in many African countries have to be tackled.

Debt reduction through the Highly Indebted Poor Countries (HIPC) initiative⁵ and further privatisation together with an improved revenue collection will allow the government to re-direct resources and to reduce interest rates thereby favouring private sector investment (Republic of Ghana and European Community, 2002, p. 21). However, on the other hand the HIPC status reduces the credibility of a country for private borrowers which will make access to credit also for private investors more difficult.

External assistance to Ghana especially by the EU focuses largely on infrastructure development which is a precondition for competitiveness in many sectors. For example the financing by the European Investment Bank went mainly to the energy supply sector. Further resources were provided for the development of the banking sector, especially for small- and medium enterprises. One priority of development assistance by the EU (which is also supported by other donors) is road transport to improve access to markets and services. The aim is to improve access to the northern part of Ghana and to offer better chances to Ghana in the competition to serve the landlocked countries in West Africa and in ECOWAS in general. Therefore not only rehabilitation of roads will be financed but maintenance costs will also be covered for a limited period of time. This would enable the Tema port that handles 85% of imports to further expand its business (Republic of Ghana and European Community, 2002). Because of the crises in Côte d'Ivoire already imports of neighbouring land-locked countries like Burkina Faso and Mali are redirected to Tema but such short-term changes can overstretch the capacity and therefore contribute to further delays in handling.

Under the new Cotonou Agreement that guides the relationship between Ghana and the EU a number of improvements in the provisions for private sector support are made. Not only was the share of resources allocated for this purpose increased but especially the participation of the private sector in formulating priorities and implementing programmes will help to better focus aid resources. One of the main areas of support is therefore "Investment and private sector development". Economic and institutional reforms are recognised as a precondition and should create a favourable environment for private investment. In addition direct support is foreseen, e.g. for public-private cooperation, entrepreneurial skills, privatisation, financial and non-financial services, business institutions, transfer of technologies and know-how, access to advisory, or technical assistance services and capacity building in trade related areas. As high risk is seen as a major obstacle by foreign investors the new investment guarantees are a step into the right direction. However, the facilities to reduce risks for entrepreneurs should not only be directed towards foreign firms or firms in the EU member states. Local investors might be hit even harder by unforeseeable risks as they have less possibilities to diversify. For local investors the provisions that are aimed at facilitating access to capital, training personnel to improve productivity and management and upgrading essential infrastructure like electricity, transport and communication are designed to meet the needs of the private sector. Because export

⁵ The resources made available through HIPC will be used mainly for the poverty reduction programme for example health and education.

promotion is of crucial importance for various reasons special emphasis of the support programme should be given to them. As there is asymmetric information about investment opportunities and investors tend to stick to the countries where they are already operating, an active marketing of the advantages a country has could lead to social benefits. Therefore support for marketing the advantages of a country and the provision of information for potential investors is crucial to attract FDI (Wolf, 2002).

The privatisation of infrastructure is also an important factor for attracting investment. Through privatisation of government enterprises the share of private investment could be increased directly. Moreover, privately run companies are assumed to be more efficient and therefore sell goods and services at lower cost with higher quality. To achieve these gains it is however necessary to allow for competition and introduce an independent regulator, rather than turning a public monopoly into a private one where rents are diverted. (Mattoo et al., 2001) This is especially important for the privatisation of infrastructure such as electricity, telecommunication, water supply, transport etc. as these services are inputs into every economic activity and therefore have a great effect on the investment climate. Furthermore privatisation of infrastructure can lead to the freeing of resources which government could invest in other infrastructures.

Access to information and communication technologies (ICT) is especially important for investment decisions not only because its network character is complementary to the network structure of transnational corporations but because access to information is crucial for the reduction of transaction costs and the reduction of uncertainty. As risk and uncertainty are among the biggest obstacles for investment in Sub-Saharan Africa the availability of better information can be expected to increase investment.

Ghana has started reforms in the telecommunications sector in 1996. In addition to the main provider Ghana Telecom two other fixed network operators are licensed. To meet universal service targets and to improve access outside Accra the licences are due to obligations to roll out a certain number of fixed lines and pay phones. Until now these obligations have not been met by the operators. In addition to fixed line providers three mobile cellular operators are licensed with a rapidly growing number of subscribers. Furthermore the number of Internet providers is growing and Internet Cafes are mushrooming in Accra. However, in Ghana the privatisation of telecommunication has only partially fulfilled the expectations. In recent years both mobile and fixed telephones increased rapidly but the quality of lines is still poor and interconnection rates between fixed and mobile lines are high (ISSER, 2002, p. 150f).

4 Ghana's Competitiveness in Different Sectors

The government of Ghana has ambitious plans to speed up development - amongst other measures through private sector development. However, to provide effective support knowledge about the competitiveness of different sectors is needed as different sectors face different obstacles and need different types of support.

4.1 Real Exchange Rate Development

A conventional measure of a country's international competitiveness is the real effective exchange rate (REER). It is associated with changes in the country's balance of trade in goods and non-factor services. The production costs of a tradable good differ across countries mainly because the prices for non-tradable inputs differ. A relative increase in the cost of non-tradable inputs which is reflected in an appreciation of the real exchange rate therefore leads to higher production costs (Frohberg and Hartmann, 1997).

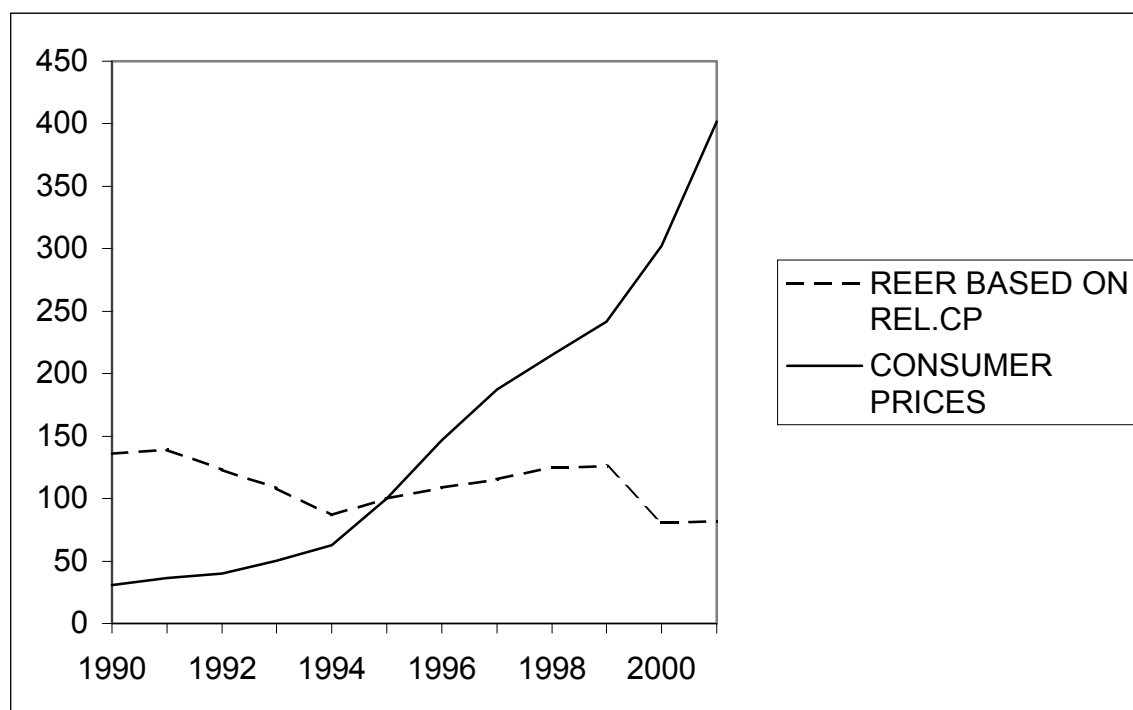
There are different price indices used for deflating the nominal exchange rate. Most common are the consumer price index (CPI) and the GDP deflator as they are readily available for most countries.⁶ The CPI based REER covers a wide range of products that are fairly comparable across countries. As consumer prices also have a close correlation with wages it indirectly also measures a country's cost competitiveness. However, in most price indices also distortions such as taxes are reflected and the prices of intermediate goods that are not consumed are excluded from the analysis (Leite et al., 2000).

In the first half of the 1990s the CPI-based REER decreased which indicates a steady gain in competitiveness. This reflected the reforms of trade and the exchange rate system during that period. However, from 1995 to 1998 Ghana's CPI-based REER increased but still did not reach the highest level of 1991. This decline in competitiveness reflects the slower rate of nominal depreciation of the cedi compared with the inflation differential between Ghana and its partner countries. In 2000 the situation changed again as the cedi's nominal value depreciated dramatically. This outweighed even the increase in inflation and led to a CPI-based REER that was even below the 1994 levels. This low REER persisted in 2001 indicating a sustained increase in competitiveness (see figure 1) (Leite et al., 2000).

⁶ The REER is calculated with respect to Ghana's major trading partners.

Using the GDP deflator instead of the CPI incorporates the ratio of the relative prices of non-tradable to tradable goods at home and abroad. For Ghana however this indicator gives a very similar picture of its competitiveness (Leite et al., 2000).

Figure 1: Ghana's Real Effective Exchange Rate (REER) and Inflation Rate (Consumer Price Index)



Source: IMF: International Financial Statistics 2002, own calculations.

4.2 Revealed Comparative Advantage

For policy makers it is not only important to be informed about the general competitiveness of the economy but also about the competitiveness of specific sectors and products especially in export markets. Therefore it is more appropriate to use indicators that compare one sector relative to others (Frohberg and Hartmann, 1997).

The index of *revealed comparative advantage* (RCA) is used to investigate the competitive position of a country in a certain product and market. It is based on the idea that a country's comparative advantages reveal themselves in the process of international trade, as the country is likely to export relatively more of those goods, where it has comparative advantages than of goods where it has comparative disadvantages. The RCA index is computed as the share of a product category in total exports of a country relative to the share of this product in world exports. A RCA greater than one for a given product relative to world imports indicates that the share of this product in the total exports of the country under consideration is more than this

product's share in world trade. Note that the observed RCAs are conditional on existing trade barriers.

Table 8: Ghana's Top RCA Export Products, 2000

SITC	percentage of total exports	RCA
072 Cocoa	15.85	264.21
971 Gold, non-monetary nes	31.59	90.25
223 Seeds for other fixed oils	0.42	42.06
277 Natural abrasives nes	0.58	28.86
037 Fish etc prepd, prsrvd nes	2.95	18.43
058 Fruit prsrvd, preprd	2.38	11.91
634 Veneers, plywood, etc	2.64	11.50
248 Wood, shaped, rail sleepers	4.24	10.61
684 Aluminium	8.30	10.51
245 Fuel wood nes, charcoal	0.04	10.11
635 Wood manufactures nes	2.13	7.90
035 Fish salted, dried, smoked	0.30	7.39
652 Cotton fabrics, woven	2.18	6.60
351 Electric current	1.02	6.36
247 Other wood rough, squared	0.57	4.37
232 Natural rubber, gums	0.25	4.21
676 Railway rails etc, iron, steel	0.08	3.90
057 Fruit, nuts, fresh, dried	1.68	3.82
287 Base metals ores, conc nes	1.09	3.29
263 Cotton	0.40	3.07
098 Edible products, preps nes	0.68	2.71
122 Tobacco, manufactured	0.65	2.61
424 Other fixed vegetable oils	0.24	2.15
034 Fish, fresh, chilled, frozen	0.58	1.65
075 Spices	0.06	1.58
071 Coffee and substitutes	0.30	1.48
288 Non-ferrous metal scrap nes	0.18	1.28
265 Vegetb fibre, exc cotton, jute	0.01	1.24
893 Articles of plastic nes	1.26	1.23
697 Base metal household equip	0.21	1.19
334 Petroleum products, refined	3.12	1.16
278 Other crude minerals	0.12	1.06
054 Vegtb etc fresh, simply prsrvd	0.39	1.03

Source: UNCTAD, 2002a.

For Ghana the products with the highest RCA index in world trade are also the products with the highest trade share namely gold and cocoa. However, for these products world prices are highly volatile and therefore export volumes also fluctuate a lot. There are also other products like fish, fruit, spices, articles of plastic and metal household equipment that have a

RCA bigger than one and where exports increased in recent years (see Table 8). These are products where demand is also expected to grow either in the world market or in the region.

4.3 Factor Productivity

Value added per employee that is also regarded as a measure of labour productivity varies considerably across industries.

Table 9: Value Added per Employee and Wages per Employee by Sector

Branch (ISIC)	Value Added		Wages and Salaries	
	1985	1995*	1985	1995*
TOTAL MANUFACTURING(300)	7728	4172	995	658
Food products(311)	6806	3707	997	690
Beverages(313)	16911	8770	1349	793
Tobacco(314)	64523	55873	1011	861
Textiles(321)	1791	1595	832	639
Wearing apparel, except footwear(322)	1267	-	670	-
Leather products(323)	2474	-	620	-
Footwear, except rubber or plastic(324)	1720	-	690	-
Wood products, except furniture(331)	4873	2275	727	461
Furniture, except metal(332)	3019	936	582	390
Paper and products(341)	4313	4105	1052	658
Printing and publishing(342)	1769	1001	794	548
Industrial chemicals(351)	4928	5437	1444	941
Other chemicals(352)	11659	6520	1001	995
Petroleum refineries(353)	71337	-	4152	-
Misc. petroleum and coal products(354)	-	-	-	-
Rubber products(355)	2406	676	680	395
Plastic products(356)	4719	2847	902	410
Pottery, china, earthenware(361)	846	-	296	-
Glass and products(362)	2084	-	984	-
Other non-metallic mineral prod.(369)	13172	-	1936	-
Iron and steel(371)	1895	1670	893	483
Non-ferrous metals(372)	19825	10809	4481	3095
Fabricated metal products(381)	3436	3151	706	511
Machinery, except electrical(382)	1385	1251	493	390
Machinery electric(383)	5991	4282	861	495
Transport equipment(384)	2068	-	642	-
Professional & scientific equipm.(385)	4495	-	678	-
Other manufactured products(390)	3922	-	878	-

Source: UNIDO, 2002.

In 1995 labour productivity was highest in the tobacco industry, followed by non-ferrous metals, beverages, other chemicals and industrial chemicals. The latter was the only sector where value added per employee did not decline from 1985 to 1995. The decline in the labour productivity was highest in the rubber products sector and the wood products and furniture sector. Although during the same period also wages expressed in US \$ declined their decline was lower in most sectors. However, for the textiles, paper, plastic products, iron and steel, metal products and machinery sectors wages declined faster than labour productivity making these sectors more competitive (see Table 9).

From other studies it can be concluded that value added per employee is lower in Ghana than in other African countries such as Kenya and Zimbabwe. The paper and printing industry is the most capital intensive followed by the metal industry. The food, tobacco and beverages industries are the least capital intensive. The elasticity of substitution between labour and capital ranged from 0.226 in the garment industry to 0.572 in the paper and printing industry. Therefore a policy that reduces the price of capital will reduce labour demand especially in the paper industry (Gyan-Baffour and Betsey, 2001).

When comparing the results of the revealed comparative advantage analysis with labour productivity developments one has to bear in mind the different time periods studied and the different aspects the indices cover. In addition labour productivity is only available for the manufacturing sectors. However, for a few products prospects seem to be positive under both perspectives, namely plastic and metal products where labour productivity has increased relative to wages and the revealed comparative advantage index is greater than one.

Although the above indicators give some hints in what sectors Ghana is and will be competitive in the future further analysis of the issue is needed that takes into account more refined measures of productivity and uses more dynamic approaches. In any case the results should rather be used to provide general support like improved infrastructure, education and training in areas relevant to potentially competitive sectors instead of direct support. The current approach of the Government of Ghana for example to “support the establishment of at least 10 small and medium scale fruit processing plants and 3 tomato processing plant in 2002 as well as 10 small scale brown sugar production plants” (GoG, 2002a, article 204) is too specific and might create new distortions.

5 Policy Conclusions

After the successful democratic change of government in 2000/2001, the investor friendly approach of the new president Kufuor and his first attempts to get macroeconomic indicators, especially inflation, under control, again the future for private sector development looks more promising than in the past. This is reflected in the positive trend of the real effective exchange rate that increased Ghana's competitiveness since 2000. The non-traditional exports sector, that includes fish, fruit, wood products and cotton fabrics with a relatively high RCA index, has the potential to increase substantially in the next decade which would require substantial investment. As support for non-traditional exports also includes small-scale farmers and artisans, this will be an important factor to reduce poverty (ISSER, 2002, p. 178f). Especially metal and plastic products that are mainly consumed locally or exported to neighbouring countries are relatively competitive.

It has become increasingly evident that simply pursuing macroeconomic stability and enacting liberal FDI regulatory and legal regimes is not enough, although they remain basic pre-conditions. Therefore, the focus now increasingly shifts to the meso-level of specific sectoral policies, from privatisation, competition, and infrastructure provision. Privatisation has emerged as a catalyst in attracting investors and therefore the attempt to allow private sector participation in utilities and other areas that in the past have been dominated by the government is a step in the right direction. Parallel liberalisation and deregulation of the service industries, especially in telecommunications have offered new FDI opportunities. The induced improvement in infrastructure provision is especially important for exporting enterprises.

Together with social (education and health) infrastructure facilities, these are crucial factors shaping the investment appeal of a country. In industries that are globally integrated, the state of the transport and telecommunication infrastructure is a key element. The cost, quality and reliability of logistics are important factors in the overall cost calculations that companies undertake when evaluating competing locations. Most of the measures that play a role when attracting FDI are relevant for all companies, be they domestic-or foreign-owned (Odenthal, 2001). To achieve higher growth rates than in the past it is necessary to develop all sectors of the economy: agriculture, industry and services. It is especially important to link them up through supply chains. Industry could be based more on raw materials that are available from agriculture and mining such as processing of cocoa products for example (ISSER, 2002, p. 182).

However, one major problem in Africa in general and also in Ghana is the negative image and the lack of visibility and credibility of macroeconomic reforms. In this respect the envisioned peer review mechanism of NePAD could help a great deal to regain investor confidence.

References

- Appiah-Kubi, K. (2001): State-owned Enterprises and Privatisation in Ghana. *Journal of Modern African Studies*, 39, pp. 197-229.
- Asiedu, E. (2002): On the Determinants of Foreign Direct Investment to Developing countries: Is Africa Different? *World Development*, 30, pp. 107-119.
- Aryeetey, E. (1994): Private Investment under Uncertainty in Ghana. *World Development*, 22, pp. 1211-1221.
- Aryeetey, E. and J. Harrigan (2000): Macroeconomic & Sectoral Developments since 1970. In: Aryeetey, E., J. Harrigan and M. Nissanke (eds.): *Economic Reforms in Ghana – The Miracle & the Mirage*. Oxford, pp. 5 - 31.
- Aryeetey, E., M. Nissanke and W. F. Steel (2000): Intervention & Liberalization: Changing Policies & Performance in the Financial Sector. In: Aryeetey, E., J. Harrigan and M. Nissanke (eds.): *Economic Reforms in Ghana – The Miracle & the Mirage*. Oxford, pp. 209 - 226.
- CEPA (2001): *Ghana Macroeconomic Review 2000*. Center for Policy Analysis, Accra.
- Collier, P. and C. Pattillo (2000): Investment and Risk in Africa. In: Collier, P. and C. Pattillo (eds.): *Investment and Risk in Africa*. St. Martins Press, New York, pp. 3-30.
- CSAE/ Department of Economics, University of Ghana (1995): *The Ghanaian Manufacturing Sector 1991-1993*. RPED Paper No. 55.
- Divesture Implementing Committee (2002): *Privatization of State owned Enterprises*. Accra.
- European Commission (2001): *External Trade with Ghana 2000*. Brussels.
- Frohberg, K. and M. Hartmann (1997): *Comparing Measures of Competitiveness*. IAMO Discussion Paper No. 2, Halle.
- GIPC (2002): *Statistics on Registered Projects, Second Quarter 2002, Investment Report*. Ghana Investment Promotion Centre, Accra.
http://www.gipc.org.gh/IPA_Information.asp?hdnGroupID=7&hdnLevelID=4.
- Government of Ghana (GoG) (2002a): *The Budget Statement and Economic Policy of the Government of Ghana*. Accra.
- Government of Ghana (GoG) (2002b): *Review of Economic Performance*. Accra.
- Grant, R. (2001): Liberalization policies and foreign companies in Accra, Ghana. In: *Environment and Planning*, 33, pp. 997-1014.

- Gyan-Bafour, G. and C. Betsey (2001): *Increasing Labour Demand and Labour Productivity in Ghana*. African Economic Policy Discussion Paper No. 50, Washington D.C.
- Hernandez-Cata, E. (2000): *Raising Growth and Investment in Sub-Saharan Africa: What can be done?* IMF Policy Discussion Paper PDP/00/4, International Monetary Fund, Washington D.C.
- Hoefer, A. F (2001): *The Competitiveness of Ghana's Industry*. Dissertation Nr. 2494, Bamberg.
- IMF (2002): *International Financial Statistics 2002*. International Monetary Fund, Washington D.C.
- ISSER (2002): *The State of the Ghanaian Economy in 2001*. The Institute of Statistical, Social and Economic Research, Accra.
- Joint Integrated Technical Assistance Programme to selected Least Developed and Other African Countries (JITAP) (2002): *Multilateral Trading System Impact on the National Economy and External Trade Policy Adaption – Ghana*. UNCTAD/DITC/TNCD/10, Geneva.
- Killick, T. (2000): Fragile Still? The Structure of Ghana's Economy 1960-94. In: Aryeetey, E., J. Harrigan and M. Nissanke (eds.): *Economic Reforms in Ghana – The Miracle & the Mirage*. Oxford, pp. 51-67.
- Lall, S. and G. Wignaraja (1996): *Skills and Capabilities: Ghana's Industrial Competitiveness*. Development Studies Working Papers No. 92, Centro Studi Luca d'Agliano – Queen Elisabeth House, Oxford.
- Leite, S. P., A. Pellechio, L. Zanforlin, G. Begashaw, S. Fabrizia and J. Harnack (2000): *Ghana: Economic Development in a Democratic Environment*. IMF Occasional Paper No. 199, International Monetary Fund, Washington D.C.
- Mattoo, A., R. Rathindran and A. Subramanian (2001): *Measuring Services Trade Liberalization and its Impact on Economic Growth: An Illustration*. World Bank Policy Research Working Paper No. 2655, World Bank, Washington D.C.
- Nowak, M., R. Basanti, B. Horvath, K. Kochhar and R. Prem (1996): Ghana. In: Hadjimichael, M. T.; M. Nowak, R. Sharer, et al.: *Adjustment for Growth. The African Experience*. IMF, Washington D.C., pp. 22-47.
- Odenthal, L. (2001): *FDI in Sub-Saharan Africa*. Technical Paper No. 173, OECD Development Centre, Paris.
- OECD/AfDB (2002): *African Economic Outlook*. Organisation for Economic Cooperation and Development/African Development Bank, Paris.
- Pattillo, C. (1998): *Investment, Uncertainty, and Irreversibility in Ghana*. IMF Staff Papers No. 45, Washington.
- Republic of Ghana and European Community (2002): *Country Strategy Paper and Indicative Programme for the period 2002 – 2007*. Brussels.
- Transparency International (2001): *Global Corruption Report 2001*. Berlin.

- Transparency International (2003): *Global Corruption Report 2003*. Berlin.
- Tsikata, G. K., Y. Asante and E. M. Gyasi (2000): *Determinants of Foreign Direct Investment in Ghana*. London.
- Tsikata, Y. M. (2001): *Owing Economic Reforms – A Comparative Study of Ghana and Tanzania*. UNU/WIDER Discussion Paper No. 2001/53, Helsinki.
- UNCTAD (1998): *World Investment Report 1998: Trends and Determinants*. United Nations Conference on Trade and Development, New York and Geneva.
- UNCTAD (2002a): *Handbook of Statistics 2002*. United Nations Conference on Trade and Development, New York and Geneva.
- UNCTAD (2002b): *World Investment Report 2002: TNCs and Export Competitiveness*. United Nations Conference on Trade and Development, New York and Geneva.
- UNIDO (2002): *UNIDO Country Industrial Statistics: Ghana*. United Nations Industrial Development Organization, Vienna.
- Wolf, S. (2002): *EU Aid for ACP Investment*. HWWA Discussion Paper No 191, Institute of International Economics, Hamburg.
- World Bank (2002): *World Development Indicators*. Washington D.C.
- WTO (2001): *Trade Policy Review Ghana 2001*. World Trade Organization, Geneva.

The following papers have been published so far:

- | | | |
|--------|--|--|
| No. 1 | Ulrike Grote,
Arnab Basu,
Diana Weinhold | Child Labor and the International Policy Debate
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 1998, pp. 47. |
| No. 2 | Patrick Webb,
Maria Iskandarani | Water Insecurity and the Poor: Issues and Research Needs
Zentrum für Entwicklungsforschung (ZEF), Bonn,
Oktober 1998, pp. 66. |
| No. 3 | Matin Qaim,
Joachim von Braun | Crop Biotechnology in Developing Countries: A
Conceptual Framework for Ex Ante Economic Analyses
Zentrum für Entwicklungsforschung (ZEF), Bonn,
November 1998, pp. 24. |
| No. 4 | Sabine Seibel,
Romeo Bertolini,
Dietrich Müller-Falcke | Informations- und Kommunikationstechnologien in
Entwicklungsländern
Zentrum für Entwicklungsforschung (ZEF), Bonn,
January 1999, pp. 50. |
| No. 5 | Jean-Jacques Dethier | Governance and Economic Performance: A Survey
Zentrum für Entwicklungsforschung (ZEF), Bonn,
April 1999, pp. 62. |
| No. 6 | Mingzhi Sheng | Lebensmittelhandel und Kosumtrends in China
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 1999, pp. 57. |
| No. 7 | Arjun Bedi | The Role of Information and Communication Technologies
in Economic Development – A Partial Survey
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 1999, pp. 42. |
| No. 8 | Abdul Bayes,
Joachim von Braun,
Rasheda Akhter | Village Pay Phones and Poverty Reduction: Insights from
a Grameen Bank Initiative in Bangladesh
Zentrum für Entwicklungsforschung (ZEF), Bonn,
June 1999, pp. 47. |
| No. 9 | Johannes Jütting | Strengthening Social Security Systems in Rural Areas of
Developing Countries
Zentrum für Entwicklungsforschung (ZEF), Bonn,
June 1999, pp. 44. |
| No. 10 | Mamdouh Nasr | Assessing Desertification and Water Harvesting in the
Middle East and North Africa: Policy Implications
Zentrum für Entwicklungsforschung (ZEF), Bonn,
July 1999, pp. 59. |
| No. 11 | Oded Stark,
Yong Wang | Externalities, Human Capital Formation and Corrective
Migration Policy
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 1999, pp. 17. |

- No. 12 John Msuya Nutrition Improvement Projects in Tanzania: Appropriate Choice of Institutions Matters
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 1999, pp. 36.
- No. 13 Liu Junhai Legal Reforms in China
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 1999, pp. 90.
- No. 14 Lukas Menkhoff Bad Banking in Thailand? An Empirical Analysis of Macro Indicators
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 1999, pp. 38.
- No. 15 Kaushalesh Lal Information Technology and Exports: A Case Study of Indian Garments Manufacturing Enterprises
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 1999, pp. 24.
- No. 16 Detlef Virchow Spending on Conservation of Plant Genetic Resources for Food and Agriculture: How much and how efficient?
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 1999, pp. 37.
- No. 17 Arnulf Heuermann Die Bedeutung von Telekommunikationsdiensten für wirtschaftliches Wachstum
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 1999, pp. 33.
- No. 18 Ulrike Grote,
Arnab Basu,
Nancy Chau The International Debate and Economic Consequences of Eco-Labeling
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 1999, pp. 37.
- No. 19 Manfred Zeller Towards Enhancing the Role of Microfinance for Safety Nets of the Poor
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 1999, pp. 30.
- No. 20 Ajay Mahal,
Vivek Srivastava,
Deepak Sanan Decentralization and Public Sector Delivery of Health and Education Services: The Indian Experience
Zentrum für Entwicklungsforschung (ZEF), Bonn,
January 2000, pp. 77.
- No. 21 M. Andreini,
N. van de Giesen,
A. van Edig,
M. Fosu,
W. Andah Volta Basin Water Balance
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2000, pp. 29.
- No. 22 Susanna Wolf,
Dominik Spoden Allocation of EU Aid towards ACP-Countries
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2000, pp. 59.

- No. 23 Uta Schultze Insights from Physics into Development Processes: Are Fat Tails Interesting for Development Research?
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2000, pp. 21.
- No. 24 Joachim von Braun,
Ulrike Grote,
Johannes Jütting Zukunft der Entwicklungszusammenarbeit
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2000, pp. 25.
- No. 25 Oded Stark,
You Qiang Wang A Theory of Migration as a Response to Relative
Deprivation
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2000, pp. 16.
- No. 26 Doris Wiesmann,
Joachim von Braun,
Torsten Feldbrügge An International Nutrition Index – Successes and Failures
in Addressing Hunger and Malnutrition
Zentrum für Entwicklungsforschung (ZEF), Bonn,
April 2000, pp. 56.
- No. 27 Maximo Torero The Access and Welfare Impacts of Telecommunications
Technology in Peru
Zentrum für Entwicklungsforschung (ZEF), Bonn,
June 2000, pp. 30.
- No. 28 Thomas Hartmann-
Wendels
Lukas Menkhoff Could Tighter Prudential Regulation Have Saved Thailand's
Banks?
Zentrum für Entwicklungsforschung (ZEF), Bonn,
July 2000, pp. 40.
- No. 29 Mahendra Dev Economic Liberalisation and Employment in South Asia
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 2000, pp. 82.
- No. 30 Noha El-Mikawy,
Amr Hashem,
Maye Kassem,
Ali El-Sawi,
Abdel Hafez El-Sawy,
Mohamed Showman Institutional Reform of Economic Legislation in Egypt
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 2000, pp. 72.
- No. 31 Kakoli Roy,
Susanne Ziemek On the Economics of Volunteering
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 2000, pp. 47.
- No. 32 Assefa Admassie The Incidence of Child Labour in Africa with Empirical
Evidence from Rural Ethiopia
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2000, pp. 61.
- No. 33 Jagdish C. Katyal,
Paul L.G. Vlek Desertification - Concept, Causes and Amelioration
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2000, pp. 65.

- No. 34 Oded Stark On a Variation in the Economic Performance of Migrants by their Home Country's Wage
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2000, pp. 10.
- No. 35 Ramón Lopéz Growth, Poverty and Asset Allocation: The Role of the State
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2001, pp. 35.
- No. 36 Kazuki Taketoshi Environmental Pollution and Policies in China's Township and Village Industrial Enterprises
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2001, pp. 37.
- No. 37 Noel Gaston,
Douglas Nelson Multinational Location Decisions and the Impact on Labour Markets
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 2001, pp. 26.
- No. 38 Claudia Ringler Optimal Water Allocation in the Mekong River Basin
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 2001, pp. 50.
- No. 39 Ulrike Grote,
Stefanie Kirchhoff Environmental and Food Safety Standards in the Context of Trade Liberalization: Issues and Options
Zentrum für Entwicklungsforschung (ZEF), Bonn,
June 2001, pp. 43.
- No. 40 Renate Schubert,
Simon Dietz Environmental Kuznets Curve, Biodiversity and Sustainability
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2001, pp. 30.
- No. 41 Stefanie Kirchhoff,
Ana Maria Ibañez Displacement due to Violence in Colombia: Determinants and Consequences at the Household Level
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2001, pp. 45.
- No. 42 Francis Matambalya,
Susanna Wolf The Role of ICT for the Performance of SMEs in East Africa – Empirical Evidence from Kenya and Tanzania
Zentrum für Entwicklungsforschung (ZEF), Bonn,
December 2001, pp. 30.
- No. 43 Oded Stark,
Ita Falk Dynasties and Destiny: On the Roles of Altruism and Impatience in the Evolution of Consumption and Bequests
Zentrum für Entwicklungsforschung (ZEF), Bonn,
December 2001, pp. 20.
- No. 44 Assefa Admassie Allocation of Children's Time Endowment between Schooling and Work in Rural Ethiopia
Zentrum für Entwicklungsforschung (ZEF), Bonn,
February 2002, pp. 75.

- No. 45 Andreas Wimmer,
Conrad Schetter Staatsbildung zuerst. Empfehlungen zum Wiederaufbau und zur Befriedung Afghanistans. (German Version)
State-Formation First. Recommendations for Reconstruction and Peace-Making in Afghanistan. (English Version)
Zentrum für Entwicklungsforschung (ZEF), Bonn,
April 2002, pp. 27.
- No. 46 Torsten Feldbrügge,
Joachim von Braun Is the World Becoming A More Risky Place?
- Trends in Disasters and Vulnerability to Them –
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 2002, pp. 42
- No. 47 Joachim von Braun,
Peter Wobst,
Ulrike Grote “Development Box” and Special and Differential Treatment for
Food Security of Developing Countries:
Potentials, Limitations and Implementation Issues
Zentrum für Entwicklungsforschung (ZEF), Bonn,
May 2002, pp. 28
- No. 48 Shyamal Chowdhury Attaining Universal Access: Public-Private Partnership and
Business-NGO Partnership
Zentrum für Entwicklungsforschung (ZEF), Bonn,
June 2002, pp. 37
- No. 49 L. Adele Jinadu Ethnic Conflict & Federalism in Nigeria
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 2002, pp. 45
- No. 50 Oded Stark,
Yong Wang Overlapping
Zentrum für Entwicklungsforschung (ZEF), Bonn,
August 2002, pp. 17
- No. 51 Roukayatou Zimmermann,
Matin Qaim Projecting the Benefits of Golden Rice in the Philippines
Zentrum für Entwicklungsforschung (ZEF), Bonn,
September 2002, pp. 33
- No. 52 Gautam Hazarika,
Arjun S. Bedi Schooling Costs and Child Labour in Rural Pakistan
Zentrum für Entwicklungsforschung (ZEF), Bonn
October 2002, pp. 34
- No. 53 Margit Bussmann,
Indra de Soysa,
John R. O Neal The Effect of Foreign Investment on Economic Development
and Income Inequality
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2002, pp. 35
- No. 54 Maximo Torero,
Shyamal K. Chowdhury,
Virgilio Galdo Willingness to Pay for the Rural Telephone Service in
Bangladesh and Peru
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2002, pp. 39
- No. 55 Hans-Dieter Evers,
Thomas Menkhoff Selling Expert Knowledge: The Role of Consultants in
Singapore’s New Economy
Zentrum für Entwicklungsforschung (ZEF), Bonn,
October 2002, pp. 29

- No. 56 Qiuxia Zhu
Stefanie Elbern Economic Institutional Evolution and Further Needs for Adjustments: Township Village Enterprises in China
Zentrum für Entwicklungsforschung (ZEF), Bonn,
November 2002, pp. 41
- No. 57 Ana Devic Prospects of Multicultural Regionalism As a Democratic Barrier Against Ethnonationalism: The Case of Vojvodina, Serbia´s "Multiethnic Haven"
Zentrum für Entwicklungsforschung (ZEF), Bonn,
December 2002, pp. 29
- No. 58 Heidi Wittmer
Thomas Berger Clean Development Mechanism: Neue Potenziale für regenerative Energien? Möglichkeiten und Grenzen einer verstärkten Nutzung von Bioenergieträgern in Entwicklungsländern
Zentrum für Entwicklungsforschung (ZEF), Bonn,
December 2002, pp. 81
- No. 59 Oded Stark Cooperation and Wealth
Zentrum für Entwicklungsforschung (ZEF), Bonn,
January 2003, pp. 13
- No. 60 Rick Auty Towards a Resource-Driven Model of Governance: Application to Lower-Income Transition Economies
Zentrum für Entwicklungsforschung (ZEF), Bonn,
February 2003, pp. 24
- No. 61 Andreas Wimmer
Indra de Soysa
Christian Wagner Political Science Tools for Assessing Feasibility and Sustainability of Reforms
Zentrum für Entwicklungsforschung (ZEF), Bonn,
February 2003, pp. 34
- No. 62 Peter Wehrheim
Doris Wiesmann Food Security in Transition Countries: Conceptual Issues and Cross-Country Analyses
Zentrum für Entwicklungsforschung (ZEF), Bonn,
February 2003, pp. 45
- No. 63 Rajeev Ahuja
Johannes Jütting Design of Incentives in Community Based Health Insurance Schemes
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2003, pp. 27
- No. 64 Sudip Mitra
Reiner Wassmann
Paul L.G. Vlek Global Inventory of Wetlands and their Role in the Carbon Cycle
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2003, pp. 44
- No. 65 Simon Reich Power, Institutions and Moral Entrepreneurs
Zentrum für Entwicklungsforschung (ZEF), Bonn,
March 2003, pp. 46
- No. 66 Lukas Menkhoff
Chodechai Suwanaporn The Rationale of Bank Lending in Pre-Crisis Thailand
Zentrum für Entwicklungsforschung (ZEF), Bonn,
April 2003, pp. 37

