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Scoping study on the evolution of industry in Ghana

Charles Ackah,¹ Charles Adjasi,² and Festus Turkson¹

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Abstract: This paper chronicles the evolution of industry in Ghana over the post-independence era from an inward over-protected import substitution industrialization strategy of 1960-83 to an outward liberalized strategy during 1984-2000, and since 2001, to the private sector-led accelerated industrial development strategy based on value-added processing of Ghana's natural resource endowments. Over the last couple of years, industry in Ghana, dominated since independence by the manufacturing subsector, is gradually being overtaken by mining and quarrying subsector due to the discovery and subsequent production of oil and gas. Industry is mainly dominated by micro and small firms, privately-owned and mainly located within urban areas in the form of industrial clusters. Patterns of labour productivity and wages within Ghana's industrial sector indicate the food processing subsector, foreign-owned and older firms as the most productive. Currently under a medium-term agenda, the industrial sector is expected to play a pivotal role through enhanced growth in the construction sector; infrastructure development in the oil sector, energy and water subsectors and an increase in output from the mining sector, especially in salt production.

The emerging policy issues relate to the key developmental objectives of the current industrial policy including how to empower the private sector especially SMEs to expand productive employment and technological capacity within a highly competitive manufacturing sector; how to promote agro-based industrial development to ensure value-addition to manufactures and Ghana's exports; and how to promote the spatial distribution of industries away from the current over-concentration of industries within urban areas.

Keywords: industry, industrialization, industrial policy, manufacturing, developing countries, Ghana

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1 Evolution of industry

1.1 Historical developments since 1965

The pre-economic recovery programme era

Ghana's post-independence industrial development has evolved from an import substitution industrialization (ISI) strategy to the current programme of private sector-led industrialization. Prior to Ghana's independence in 1957, the industrial sector, a corollary of the colonial economic system, was small. Made up mainly of the domestic manufacturing sector, it contributed very little to economic growth. The inherited industrial sector was underdeveloped mainly because the colonial rulers had focused on the extraction of raw materials from the Gold Coast (Ghana) while at the same time creating an economic system heavily dependent on manufactured products from Britain.

When Ghana gained independence from Britain, the Nkrumah-led Convention People's Party (CPP) government considered industrialization to be a key factor in the modernization and development of the country. The extensive programme which emphasized import substitution aimed to transform the industrial structure and reduce dependence on colonial powers and other foreign economies for goods. According to Killick (2010), the CPP government prioritized import substitution because it was believed that it would eliminate the distortions of the earlier system, provide an escape from the dependence on primary exports and break the vicious circle of poverty. It was Nkrumah's belief that every imported item which could have been manufactured locally, provided that conditions allowed it, added to Ghana's continuing economic dependence on the colonial system and delayed industrial growth (see Killick 2010: 50).

The ISI strategy of the Nkrumah-led government sought to exploit Ghana's natural domestic resources to satisfy the basic needs of the population, create jobs, and assimilate and promote technological progress. This, ultimately, would modernize the Ghanaian society as a whole. As indicated by Baah-Nuakoh (1997), the general strategy adopted in the post-independence era was the extensive promotion of industrialization with specific emphasis on manufacturing development. This was to diversify the predominantly agricultural economy, create employment for the rapidly growing population, raise per capita incomes, improve the balance of payments and project the economy on the path of sustained and rapid economic growth.

At the centre of the ISI strategy was the development of large-scale, capital-intensive manufacturing industries owned and managed by the state. Government invested heavily in infrastructure and manufacturing activities by setting up state-owned enterprises (SOEs) for domestic production of previously imported consumer goods, processing of exports of primary products (agricultural and mining), and the expansion and development of building materials and electrical, electronic and machinery industries. According to Steel (1972), the development of the electrical, electronic and machinery industry was to provide the necessary inputs needed to expand the industrial sector. As Steel notes (1972), it seemed that Nkrumah's industrialization programme was entwined with socialism and macroeconomic policy within the framework of Ghana's broader development plan.

The period from the mid-1960s actually saw a massive involvement of the state in the industrial sector. The ISI strategy of this period was characterized by an emphasis on import substitution supported by high levels of effective protection. Protection of domestic production, as already indicated, was intended to reduce economic dependence on imports in favour of locally manufactured goods. It was also partly a consequence of the balance-of-payment difficulties

Ghana was facing from its rapidly rising import costs and stagnant export earnings. It is worth noting that initially (i.e., before 1962), the ISI strategy was considered as a means of achieving economic independence and economic growth instead of a solution to the balance-of-payment problems (Steel 1972). By the late 1960s, the effective protection, exceeding 100 per cent for almost half of the manufacturing industries, created a strong incentive for a shift from consumer imports to the production of locally made manufactures using imported inputs.

In addition, the government also resorted to such administrative measures as import tariffs and licensing, but as the World Bank (1985b) observes, these direct controls were not successful in achieving the intended objectives. Instead, these policy biases generated incentives that created excess capacity and inadequate linkage with other growth-enhancing sectors. This weakened Ghana's industrial sector and contributed to its sluggish performance by the mid-1970s.

The success of the ISI strategy in Ghana during the 1960s was evident in the significant growth of the domestic manufacturing sector, the expansion of already existing industries and the shift of production towards SOEs (set up to produce a higher proportion of basic goods than the private sector). It also shifted the import structure away from consumer goods to intermediate and, more importantly, to capital goods. The ISI strategy, although ill-conceived, resulted in the rapid growth of the manufacturing sector from a 2 per cent share of real GDP in 1957 to 9 per cent in 1969. During the 1960s, manufacturing output grew at a rate of 13 per cent per annum, while its share in total industrial output increased from 10 per cent in 1960 to 14 per cent in 1970, leading to an average 8 per cent growth rate per annum in industrial sector employment. Total employment in the manufacturing sector alone increased by nearly 90 per cent between 1962 and 1970.

As shown in Table 1, the creation of a state-managed ISI strategy through large-scale, state-owned capital-intensive manufacturing industries had the intended impact. Compared to a contribution of 18.9 per cent in 1962, SOEs (including joint ventures) in 1966 and 1967 generated 32.2 per cent and 41.6 per cent of gross manufacturing output, respectively. Over the same period the contribution to gross manufacturing output of the predominantly non-Ghanaian privately owned enterprises dwindled. From a contribution of 80.9 per cent in 1962, privately owned production within the Ghanaian manufacturing sector declined to 67.5 per cent in 1966 and further down to 58.2 per cent in 1967.

Table 1 also shows a higher growth in output for the joint and wholly state owned firms than for the privately owned firms between 1963 and 1966. Steel notes (1972) that the growth rate of the output in both the wholly state and joint state-private sectors was more than 250 per cent higher than the average for privately owned between 1962 and 1966.

The significant decline in the share of privately owned enterprises to manufacturing output was the result of government direct intervention. To achieve the objective of creating a state-managed industrialization strategy, the government took over many private enterprises,

Table 1: Share and growth rate in gross manufacturing output by ownership, 1962–67

| Ownership type | % Share | | | Average annual growth rate (%) | |
|-------------------------------|---------|------|------|--------------------------------|---------|
| | 1962 | 1966 | 1967 | 1963-64 | 1965-66 |
| Wholly state-owned | 11.8 | 19.5 | 24.1 | 34.4 | 36.6 |
| Joint state-private ownership | 7.1 | 12.7 | 17.5 | 24.9 | 51.4 |
| Private ownership | 80.9 | 67.6 | 58.2 | 20.5 | 7.1 |

Source: Based on data adapted from Steel (1972: 214).

particularly those tainted by malpractice, and formed joint ventures with others. Through the use of investment policies or incentives and its official stance towards private investment, the government generated uncertainty for private investments.

It is worth noting that the increase in industrial output over the 1960s did not stimulate economic growth or improve per capita incomes, as had been envisaged. Rather, over this period, real GDP declined steadily from 4.8 per cent in 1961 to 1.1 per cent in 1966. Although evidence from the Ghana Economic Survey (1966: 100) indicates that the decline in real GDP was due to a drop in agricultural and forestry output, Steel (1972) argues that the ISI strategy may have been partly responsible, in the sense that ISI did divert resources away from the growth-enhancing sectors.

By the beginning of the 1970s, the ISI strategy was facing structural bottlenecks in the context of the shift from a centrally planned to a market based economy by the Busia government in 1969. As Killick notes (2010), the Busia administration was generally in favour of private enterprise and for giving the Ghanaians a 'greater stake in the economy of their own country'. Despite the claims of the National Liberation Council (NLC) which had overthrown Nkrumah's CPP government in 1966, that Ghana had already achieved economic stability and restored the necessary conditions for economic growth (Killick 2010: 62), the Busia administration concentrated on generating rapid growth as well as creating employment and equality. As a result of the import and interest rate liberalization (to ensure a freer operation of market forces), the high public expenditure and import boom, the economy began to face severe balance-of-payment problems that led to a 90 per cent devaluation of the cedi. The National Redemption Council led by Gen Acheampong overthrew the Busia regime in 1972, denouncing the *laissez faire* policies of the previous regime and re-introducing comprehensive controls on imports and prices, rent freezes and a revaluation of the cedi (reversing the 1971 devaluation). Various dormant state enterprises were revived and Ghana's external debts repudiated. Against the background of increasing reliance on monetary expansion and the resultant rapid inflation, the Ghanaian cedi began to exhibit signs of over-valuation.

As a result of the balance-of-payment issues and the subsequent restrictions on the availability of foreign exchange, production and capacity utilization in most of the import substituting industries, especially the SOEs, fell during the mid-1970s to 1983. For instance, average capacity utilization from 1970 to 1977 ranged between 43-52 per cent, deteriorating to 33 per cent by 1979 and 25 per cent by 1980. By the end of 1982, it was 21 per cent, reflecting the lack of foreign exchange to import needed raw materials and spare parts to keep the large-scale, state owned capital-intensive manufacturing industries running.

As the World Bank (1985b) observes, the ISI strategy, by its nature, was self-limiting in two ways. By discouraging the expansion of exports and agriculture, the strategy could not ensure that Ghana's foreign exchange earnings kept pace with the need to import raw materials and spare parts for the domestic import-substituting industries. Second, the effective protection granted under the ISI strategy made the import-dependent industries inefficient at utilizing domestic resources.

As a result of external shocks and inappropriate domestic policies during the mid-1970s to 1983, the industrial sector and the Ghanaian economy as a whole suffered a severe deterioration in economic and financial performance. The period 1975-83 was characterized by a decline in exports earnings (estimated to be about two-thirds of imports), significant reduction in capital flows and official aid as well as the loss of creditworthiness (World Bank 1985b). In addition, a number of inappropriate macroeconomic policies were pursued which had a negative impact on the industrial sector and the economy. These included large fiscal deficits being financed

primarily by borrowing from the domestic financial sector, which led to sharp increases in money supply and resultant inflationary pressures, an increasingly over-valued exchange rate, high lending rates and the crowding out of private investment.

These structural bottlenecks resulted in a decline in economic growth throughout the late 1970s, with real GDP dropping by an average of 2 per cent per annum between 1979 and 1982. With population growth reaching almost 3 per cent per annum, Ghana's real GDP per capita declined to about two-thirds of what it had been in the late 1960s. During this period, as Table 2 shows, the production structure shifted from industry to services and trade, although agriculture remained important, contributing more a half of real GDP.

Table 2: Sectoral contribution (%) to GDP at constant 1975 prices, 1970–84

| Sector | 1970 | 1975 | 1980 | 1984 |
|--------------------------|--------|--------|--------|--------|
| Agriculture | 50.7 | 47.7 | 54.5 | 55.6 |
| – of which cocoa | (16.8) | (10.9) | (10.0) | (8.6) |
| Industry | 19.3 | 21.0 | 14.8 | 11.1 |
| – of which manufacturing | (12.7) | (13.9) | (10.6) | (7.6) |
| Services | 27.4 | 31.0 | 32.3 | 35.8 |
| – of which trade | (11.8) | (12.2) | (10.2) | (10.5) |

Source: World Bank (1985b).

Whereas the contribution of the agriculture and services sectors to real GDP increased from 47.7 per cent and 31 per cent in 1975 to 55.6 per cent and 35.8 per cent in 1984, respectively, the share of the industrial sector over the same period declined almost by half (from 21 per cent to 11.1 per cent). The industrial sector recorded an unimpressive annual growth rate of 1.8 per cent over the period, mainly as a result of the decline in manufacturing subsector contribution (see Table 2). Under the ISI strategy, balance-of-payment challenges, inappropriate domestic policies and external shocks shifted production structure in the industrial sector away from capital goods (as was the case in the 1960s) towards consumer and intermediate goods.

The economic recovery programme (ERP) was introduced as part of the structural adjustment programme (SAP) in April 1983 to arrest and reverse the decline in all sectors of the Ghanaian economy as well as to rehabilitate the ruined productive and social infrastructure. The SAP/ERP sought to correct the structural macroeconomic imbalances of the previous decade by restructuring almost all sectors of the economy, including industry. Killick notes (2010) that it is conventional to split the SAP/ERP era into two periods: 1984-86 and 1987-89, the former concentrating on macroeconomic stabilization and the latter on the longer term, structural developmental issues. Specifically the latter phase involved restoring the infrastructural base of the economy, eliminating/reducing remaining price distortions and encouraging private sector development.

A number of economic policy reforms were initiated under SAP to correct the structural macroeconomic imbalances at that time, but these also had some impact on the structure and development of the industrial sector. These included introduction of a market-determined exchange rate with minimal intervention, removal of price and distribution controls, liberalization of the financial sector and interest rates, abolition of the import licensing system, rationalization of import tariffs and the taxation system, promulgation of the new investment code (PNDC Law 116), establishment of the Ghana Investment Centre (GIC) and privatization of state-owned enterprises (Nyanteng 1993). In addition, the SAP sought to instigate a SOEs reform programme in order to stimulate competition within the state-dominated industrial

sector. This led to the privatization programme of the 1990s. These policy objectives had some impact on the structure and development of the industrial sector.

The post-economic recovery programme period, 1984 to 2000

The main policy initiatives under the ERP for the industrial sector included restructuring of the industrial and allied sectors, addressing the constraints faced under the ISI strategy, increasing production of manufactured goods through greater use of existing capacity, removal of production bottlenecks in the more efficient industries through selective rehabilitation and the strengthening of the existing institutions that provided assistance to the industrial sector. These policy initiatives complemented the new industrialization strategy that now emphasized the development of a more internationally competitive industrial sector based on highly efficient import substitution and increased export approach.

In addition, the new industrialization approach was expected to launch measures to support the development of appropriate technologies in the small/medium-scale manufacturing sector and to establish economically viable linkages among local industries and between key economic sectors. This was to ensure that Ghana developed local resources to supply its industries and promote the development of agro- and resource-based industries. For example, agricultural production had declined since the mid-1970s, a reflection of the lower producer prices and the high returns to trading and smuggling. This significantly reduced the supply of raw materials needed to support Ghana's resource-based 'inward looking' ISI strategy.

Soon after the introduction of the ERP, the industrial sector in general, and the manufacturing sector in particular, exhibited a strong, positive response to the reforms. After a decade of decline, this laid the foundation for Ghana's industrial recovery. During 1984-88, i.e., the first five years after the ERP launch, the industrial sector expanded at an annual average of 11.2 per cent, compared to the -12.49 per cent growth rate per annum during the three year period prior to the ERP introduction in 1984. The remarkable performance of the industrial sector was largely achieved with the recovery of the manufacturing subsector (the dominant subsector), which recorded an overwhelmingly improvement in growth (12.7 per cent on average over the period 1984-88). Various reasons have been given for this upswing, including the trade policy reforms, provision of financial and technical assistance in the rehabilitation, modernization and expansion of potentially productive and efficient industries, improved utilization of installed capacity and correction of the price distortions that were an obstacle to production, and the initiation of reforms in related sectors.

The improved performance of the industrial sector was also driven by the growth of the electricity and water subsector which expanded at an annual average of 22.64 per cent, an improvement from the -10.36 per cent average annual growth rate during 1981-83 (see Table 3).

Industrial sector growth, however, declined from the late 1980s to first half of the next decade, recording a period average of 4.10 per cent between 1989 and 1994. As shown in Figure 1, growth fell from 17.6 per cent in 1985 to 3.1 per cent in 1991 and further to 1.3 per cent in 1994. Similarly, by 1985 the manufacturing subsector had quickly reached its peak growth rate of 17.7 per cent. Momentum weakened, with declining but positive growth rates so that by 1991 there was some weak growth (1.1 per cent), increasing to 2.7 per cent by 1992 (Figure 1).

The decline in growth rates was attributed to the private sector's slow response (dominant in the industrial sector) to the economic reforms in the context of institutional and structural constraints, adverse effects of trade, exchange rate and financial sector liberalization, the lack of effective linkages between manufacturing and other major sectors, especially agriculture, and

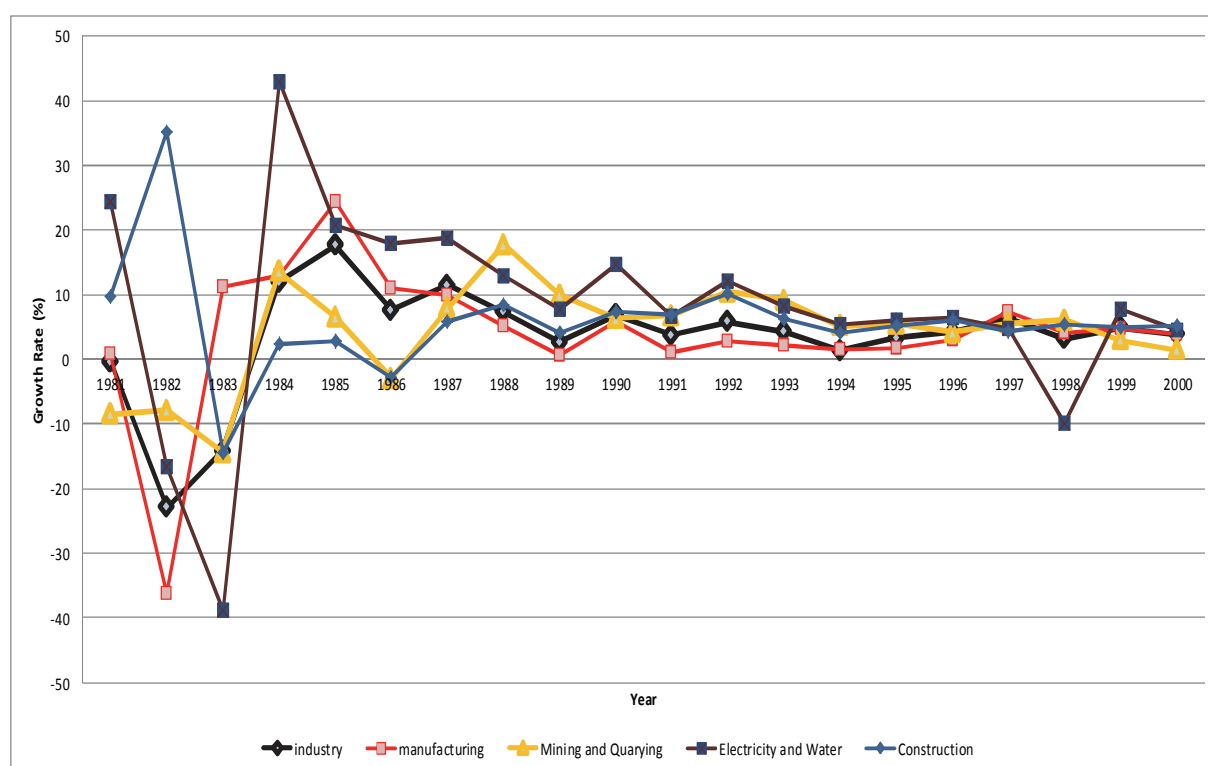
increased investment in the other sectors at the expense of the industrial sector. Structural constraints (unreliable water and power supply, infrastructural bottlenecks, problems of land acquisition, unstable industrial relations environment and perverse bureaucracies at the ports) combined to impede manufacturing and overall industrial sector growth. Stagnation within the electricity and water sectors coupled with the over-reliance on nature to ensure the generation of electric power meant decreasing power supply, adversely affecting manufacturing. In addition, continuing poor management and inefficient equipment, combined with limited productivity among the medium- and small-scale enterprises were also partial factors contributing to the decreasing growth rates of the manufacturing and industrial sector over the period 1989-94.

Table 3: Period average growth rate (%) for the industrial sector and its subsectors, 1981–2000

| Period | Industry sector | Manufacturing | Mining & quarrying | Electricity & water | Construction |
|-----------|-----------------|---------------|--------------------|---------------------|--------------|
| 1981-83 | -12.49 | -8.11 | -10.26 | -10.36 | 10.11 |
| 1984-88 | 11.18 | 12.66 | 8.54 | 22.64 | 3.34 |
| 1989-94 | 4.10 | 2.33 | 7.94 | 9.07 | 6.52 |
| 1995-2000 | 4.30 | 4.12 | 4.32 | 3.27 | 5.22 |

Source: Compiled by authors based on data from GSS (National Accounts) and ISSER.

Figure 1: Growth rate of the industry and subsectors, 1981-2000



Source: Computed by authors based on data from GSS (National Accounts) and ISSER.

The sluggish growth of the 1989-94 period prompted the government in 1994 set up a committee to examine the constraints generated by ERP for the domestic industries. The economic reforms had had a negative impact on the industrial sector in three ways. First, they exposed the over-protected domestic industries to competition from imported manufactured inputs (i.e., adverse effect of trade liberalization). Second, the reforms relating to exchange rate and financial liberalization resulted in a the rapid depreciation of the cedi and high costs for credit (due to high lending rates). These led to increased production costs and production cuts

within the industrial sector. The reforms made no allowances for the industries to adjust or to undertake the restructuring needed for exports activities and for competing with manufactured imports.

Based upon the committee's recommendations, the government introduced a number of measures to help distressed but potentially viable industries to recover. This included the setting up of the Business Assistance Fund (BAF), the Private Enterprise and Export Development Fund (PEED), the Trade and Investment Programme (TIP), the Fund for Small and Medium Enterprises Development, the Export Processing Zone (EPZ) and the Ghana Trade and Investment Gateway project (GHATIG). See Appendix for details.

Although the industrial sector and its subsectors responded positively to these measures, there was only a marginal improvement in the growth rates, reversing the declining trend evident since the late 1980s. As shown in Table 3, industrial output increased marginally from a period average of 4.1 per cent (1989-94) to 4.3 per cent (1995-2000), attributable mainly to the 4.12 per cent growth rate of manufacturing for the same period, up from 2.33 per cent over 1989-94. Looking at Figure 1 shows that the manufacturing subsector growth rate increased from 1.8 per cent in 1995 to 3.0 in 1996 and 7.3 per cent in 1997. In 1998, it fell to 4.0 per cent due to the energy crisis but increased the following year to 4.8 per cent before declining to 3.8 per cent in 2000. With the sluggish performance in all subsectors in 2000, it was not surprising that the overall industrial growth rate fell by 1.1 per cent below the year 1999 level.

In sum, liberalization exposed manufacturing firms not only to intense competition from productive-efficient economies like China, but the opening of the financial markets (an offshoot of the SAP) also resulted in high interest rates. Coupled with rising depreciation of the domestic currency, production costs soared, rendering many domestic firms, particularly those relying on imports, economically inefficient. The textile industry in Ghana is a classic example of how the reforms and inconsistent government policies contributed to the subsector's declining performance. By mid 1970s, Ghana's garment industry had boasted of about 16 large and medium-sized textile companies, and about 138 medium and large-scale garment manufacturing firms. However by 2002, only four major companies namely, the Ghana Textile Manufacturing Company (GTMC), Akosombo Textile Limited (ATL), Ghana Textile Product (GTP), and Printex had survived the turbulence of the subsector (Quartey 2006).

One of the most remarkable features of the industrial sector after the economic reforms was the change in the relative subsector shares to GDP. Although the manufacturing sector remained dominant, after the ERP its contribution dwindled over time. Prior to the economic reforms, the manufacturing subsector accounted, on average, for more than two-thirds of the sector's contribution to GDP. As a share of real industrial output, the annual average for the manufacturing subsector over the period 1984-90 was 64.5 per cent, less than the average of the pre-ERP decade (about 70 per cent). Shares of the other subsectors are given in Table 4.

Table 4: Relative contributions of industry and related subsectors to GDP, 1984-2000 (period average, %)

| Year | Total industrial sector (% of total GDP) | Relative contribution of industrial subsectors (%) | | | |
|-----------|---|--|--------------------|---------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity & water | Construction |
| 1984-90 | 13.6 | 64.5 | 8.7 | 7.7 | 18.9 |
| 1991-95 | 16.5 | 55.0 | 12.5 | 10.2 | 22.4 |
| 1996-2000 | 25.2 | 36.2 | 22.7 | 10.5 | 30.8 |

Source: Compiled by authors based on data from GSS (National Accounts) and ISSER.

Over the 1990s, the share of manufacturing in the industrial sector's contribution to GDP declined significantly, albeit still remaining the dominant subsector. Its share peaked at 67.3 per cent soon after the launch of the ERP but then declined (Table 4). Over the same period, however, shares of the construction and mining and quarrying subsectors increased, as Table 4 shows. It would seem that the construction and mining-quarrying subsectors reacted remarkably better to the reforms than manufacturing. For instance, mining benefited immensely from exchange rate liberalization and the inflows of loans in response to the favourable investment climate. Various investment legislations passed during that period provided a clear framework for mining investment, triggering an inflow of foreign direct investment (FDI) that enabled the subsector to acquire much-needed equipment and spare parts, boosting production. The increased contribution of the construction subsector can be attributed to the massive capital injection to rehabilitate and supplement the existing social infrastructure following the launch of economic reforms.

During the first half of the 2000s, there was a shift in the focus of Ghana's industrialization strategy. The broad policy objective of the government was aimed at creating wealth by transforming the nature of the economy to achieve growth, accelerated poverty reduction and the protection of the vulnerable/excluded within a decentralized, democratic environment. The objective was to stabilize the economy and lay the foundation for sustainable, accelerated and job creating agro-based industrial growth. The World Bank/IMF sponsored Interim PRSP (2000-02) and the Growth and Poverty Reduction Strategies, GPRS I (2003-05) and GPRS II (2006-09) focused on private sector-led industrial production through the application of science and technology.

The policy strategies within the industrial sector were aimed at promoting agro-processing, facilitating the development of commercially viable export and domestic market-oriented enterprises in the rural areas, improving agricultural marketing and enhancing access to export markets, improving the competitiveness of domestic industrial products, promoting industrial subcontracting and partnership exchange and promoting the development of the crafts industry for export. The industrial sector rallied positively to these initiatives. Industrial growth was buoyant in 2002, increasing from 2.9 per cent in 2001 to 4.7 per cent in 2002, and further to 5.1 per cent in both 2003 and 2004 (see Table 5).

The momentum of the sector continued in 2005, reaching a period peak of 7.6 per cent. Over this period, all subsectors, with the exception of construction, experienced fluctuations, although growth rates remained relatively stable. Interestingly, all the subsectors performed better in 2005 than in the previous four-year period (i.e., from 2001). In 2005, peaking at a nearly 10 per cent, the construction sector recorded relatively higher growth trends than other subsectors. This was possibly due to the massive infrastructural developments (civil works and real estate) that were

Table 5: Growth rates of the industrial sector and its subsectors, 2001-05 (%)

| Year | Industrial sector | Industrial subsectors | | | |
|------|-------------------|-----------------------|--------------------|---------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity & water | Construction |
| 2001 | 2.9 | 3.7 | -1.6 | 4.0 | 4.8 |
| 2002 | 4.7 | 4.8 | 4.5 | 4.1 | 5.1 |
| 2003 | 5.1 | 4.6 | 4.7 | 4.2 | 6.1 |
| 2004 | 5.1 | 4.7 | 4.5 | 3.7 | 6.6 |
| 2005 | 7.6 | 5.0 | 6.3 | 12.3 | 9.9 |

Source: Compiled by authors based on data from GSS (National Accounts) and ISSER.

embarked upon. These were considered to constitute an integral part of the foundation needed for the sustainable, accelerated and job creating agro-based industrial growth envisaged under the poverty reduction strategy. Notable measures contributing to construction's higher output during this period included, among others, the government's real estate developments in low-cost housing at various service barracks and selected communities, road infrastructure projects (Accra-Kumasi corridor road, Weija-Cape Coast road, Ofankor-Nsawan, etc.), the rehabilitation and construction of four stadia, and the construction of the West African Gas Pipeline and Osagyefo Power Barge Plant.

Interestingly, the relatively stronger growth of the subsectors did not translate into higher contributions to aggregate economic growth. As Table 6 shows, the contribution of the sector to GDP fell in 2005 below the 24.7 per cent rate recorded in the preceding four-year period. The relatively smaller contribution of industry to GDP in 2005 implies that the sector had not fully recovered from the decline that began after 2000.

Despite improved performance, at the end of 2005 the industrial sector continued to face challenges and these were expected to continue to endanger its growth prospects. Costly credit reflecting high lending rates, unreliable power availability, and rising fuel prices compelled many firms, especially those operating in import-dependent manufacturing, to cut production. In addition, liberalization of external trade continued to expose many vulnerable domestic manufacturing firms to unfair competition from imported goods, making the sector less attractive to potential investments.

Table 6: Relative contribution of the industrial sector and its subsectors to GDP, 2001–05 (%)

| Year | Total Industrial sector (% of total GDP) | Industrial subsectors | | | |
|---------|---|-----------------------|--------------------|---------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity & water | Construction |
| 2001 | 24.90 | 36.69 | 21.11 | 10.34 | 31.86 |
| 2002 | 24.93 | 36.71 | 21.06 | 10.28 | 31.95 |
| 2003 | 24.90 | 36.57 | 20.96 | 10.19 | 32.28 |
| 2004 | 24.73 | 36.37 | 20.86 | 10.06 | 32.72 |
| 2005 | 24.70 | 36.30 | 20.40 | 10.20 | 33.20 |
| 2001-05 | 20.69 | 36.53 | 20.88 | 10.21 | 32.40 |

Source: Compiled by authors based on data from GSS (National Accounts) and ISSER.

1.2 Policies for industrial development (historical evolution)

Post-independence, pre-ERP period, 1965-83

The main emphasis of the post-independence industrial policy was import substitution industrialization to be managed through effective protection in the form of a highly restrictive trade policy regime. The ISI strategy was centred around the development of a large-scale public sector investment that was to become the leading edge in Ghana's industrial development.

The ISI strategy relied on administrative controls rather than market mechanisms to determine incentives and resource allocations. Policies to achieve this objective included: (i) quantitative import restrictions (i.e., foreign exchange rationing; import licensing); (ii) heavy tariffs on imported consumer goods, and (iii) domestic price controls in the form of administrative fixing of minimum wages, rents and interest rates. See Appendix for details.

The post-ERP period, 1984-2000

The ERP introduced a paradigm shift in the industrial policy of Ghana from the traditional import substitution and over-protected industrial strategy to an outward liberalized private sector-led industrial strategy. The ERP industrial policies sought to develop a more internationally competitive industrial sector with an emphasis on local resource-based industries with the capacity for export and efficient import substitution. A significant feature of the industrial strategy under the ERP was the shift from the government as the main vehicle for industrial development to the private sector as its prime mover. It also sought to generate employment with a focus on job creation in small- and medium-scale enterprises. This was expected to contribute to the absorption of the redeployed from the public sector and new labour market entrants.

Baah-Nuakoh (2003) outlines the objectives of Ghana's industrial policy under the ERP as articulated in the January 1992 Industrial Policy Statement (pages 4 and 5):

In the long term... to create a balanced industrial structure. In the medium term... to create a solid base for increasing the production of manufactured goods with increased local content for national consumption and for export by increasing the exploitation and in-situ processing of the nation's raw material... In the short term... to improve general industrial performance and overcome the problems associated with heavy dependence on imported goods and under-utilization of production capacity.

To achieve these objectives, the government placed emphasis on promoting the local indigenous private sector and involving both local and foreign firms in the industrial development of Ghana, restructuring the industrial sector and rehabilitating major industries, enhancing the competitiveness of industries, supporting the establishment of new industrial capacities, promoting the adoption of environmentally sound industrial operations and undertaking massive investment in the development and acquisition of appropriate technologies (Baah-Nuakoh 2003).

Some of the policies drawn to achieve this included: introduction of a market-determined exchange rate with minimal intervention; removal of price and distribution controls; liberalization of the financial sector and interest rates; dismantling the import licensing system and the rationalization of import tariffs; and privatization of the state-owned enterprises under the Divestiture Implementation Programme.

The industrial sector bounced back under ERP-generated measures, with growth recorded in output and in capacity utilization. After six years of continuous decline in real industrial GDP, the sector experienced positive growth rates (see Table 3). The positive response, however, was not sustained mainly because of the negative impact the reforms had on the sector. Many industries that had established behind the highly protective barriers of the pre-ERP era found it difficult to cope with the liberalized and more competitive market environment. Also, tight monetary policies pursued under the ERP increased the cost of credit, and this, coupled with the substantial depreciation of the *cedi*, eroded the liquid resources that could have helped firms undertake investments. In the mid-1990s, additional policies were designed to assist the distressed but potentially viable enterprises that were finding it difficult to survive under the economic reforms. These included: (i) the launch of the trade and investment programme (TIP); tariff policy reforms; the establishment of the Business Assistance Fund (BAF), Private Enterprises and Export Development (PEED) policy and the Investment Policy Fund for Small and Medium Scale Enterprises Development (FUSMED) to provide the needed funds to boost industrial production; The promulgation of a new investment code (GIPC Act of 1994 to PNDC

Law 116) and the establishment of the Ghana Investment Centre; institutional reforms, and regulatory reforms.

1.3 Key industrialization episodes and turning points

Since independence, Ghana has undergone three major industrialization episodes, namely the inward over-protected ISI strategy of 1960-83; the outward liberalized strategy during 1984-2000, and since 2001, the private sector-led accelerated industrial development strategy.

Inward over-protected ISI strategy (1960-83): Import substitution industrialization through high levels of effective protection with:

- Reliance on large-scale public sector investment as the leading edge of industrial development. Application of quantitative import restrictions and import tariffs to protect and support the ISI strategy during the 1960s-early 1970s;
- Extensive use of administrative controls to determine incentives and allocate resources for industrialization (introduced in 1962, but extensive use from the beginning of the 1970s to 1983).

Outward liberalized industrialization strategy (1984-2000): Industrial restructuring under the SAP/ERP was to create an internationally competitive industrial sector based on a highly efficient import substitution and increased export approach supported by:

- Removal of price and distribution controls, abolishing of import licensing and resorting to market-determined prices as part of ERP from late 1984;
- Privatization of the SOEs, launched in 1988;
- Industrial policies to assist distressed but potentially viable SOEs in the early 1990s. See matrix in Appendix.

Private sector-led accelerated industrial development strategy (since 2001): Industrial architecture based on value-added processing of Ghana's natural resource endowments through the private sector-led accelerated industrial development strategy.

2 The structure of the industrial sector

2.1 Sectoral composition

After the rebasing of the national account estimates¹ in November 2010, Ghana's industrial sector currently consists of five subsectors, namely manufacturing, construction, mining and quarrying, electricity and water and sewerage. The rebasing of the Ghanaian economy reflects the change in the total value of goods and services produced, growth rates, sectoral distributions and other related indicators driven by GDP from 2006.

Ghana's manufacturing activities include the production of food, beverages, tobacco, textiles, petroleum refinery and cement, among others. Construction deals with the construction, repairs, maintenance, alteration and demolition of buildings, highways, streets, bridges, roads, sewers, railways and communication systems. The mining and quarrying subsector covers the extraction

¹ The rebasing of the national account estimates covered the years 1993 to 2006. Since then, national account estimates have been computed on the rebased economy.

of natural minerals, in the form of either solids, liquids or gases. This subsector in Ghana produces mainly gold, diamonds, manganese, bauxite, salt, stones and sand. The activities of the public sector-dominated electricity and water and sewerage subsectors include production and distribution of electricity and water and sewerage. Prior to rebasing, the electricity and water and sewerage subsectors had been lumped together.

The industrial sector, given the contribution it makes to GDP, continues to support the growth of the Ghanaian economy. Industrial sector products are also crucial foreign exchange earners. The sector also fulfils almost all of the nation's power and water requirements at the household and industrial level. In terms of its contribution to GDP, industry has overtaken agriculture since 2011 as the second largest sector. Tentative estimates for 2012 (GSS 2012) show that industry contributed 27.6 per cent to GDP, making it the second largest after the service sector (49.3 per cent) and exceeding agriculture (23.1 per cent).

The services sector remains the largest, contributing 49.3 per cent to GDP. In terms of growth, it recorded the highest rate (8.8 per cent), followed by industry (7.0 per cent), while agriculture's share was the lowest (2.6 per cent). Even though the estimates show an improvement for agriculture compared to 2011 (0.8 per cent), its contribution to the economy continues to drop, from 25.6 per cent of GDP to 23.1 per cent. Crops, however, remain the largest activity in the economy with a share of 19.3 per cent of GDP.

Table 7 shows that the industrial sector's contribution to GDP is small: at most, 20 per cent between 2006 and 2010. The sector's dwindling contribution to GDP clearly shows its diminishing importance in comparison to the services and agricultural sectors. While the service sector's share to of GDP between 2006 and 2010 was, on average, nearly 50 per cent, industry, on average, accounted for 20 per cent, less than the agricultural sector's average (30.5 per cent) for the same period. Industry's increasing contribution to GDP can be attributed to the commencement of crude oil mining in 2010, which quadrupled the shares of mining and quarrying to GDP (from about 2 per cent to over 8 per cent).

Table 7: Industry and subsectors share of GDP, 2006–12

| Year | Total industrial sector (% of GDP) | Share of industrial subsectors of GDP (%) | | | | |
|-------|------------------------------------|---|-----------------------------------|-------------|------------------|--------------|
| | | Manufacturing | Mining & quarrying ^(a) | Electricity | Water & sewerage | Construction |
| 2006 | 20.8 | 10.2 | 2.8 (0.0) | 0.8 | 1.3 | 5.7 |
| 2007 | 20.7 | 9.1 | 2.8 (0.0) | 0.6 | 1.0 | 7.2 |
| 2008 | 20.4 | 7.9 | 2.4 (0.0) | 0.5 | 0.8 | 8.7 |
| 2009 | 19.0 | 6.9 | 2.1 (0.0) | 0.5 | 0.7 | 8.8 |
| 2010 | 19.1 | 6.8 | 2.3 (0.4) | 0.6 | 0.8 | 8.5 |
| 2011 | 25.9 | 6.7 | 8.5 (6.8) | 0.6 | 0.8 | 9.2 |
| 2012* | 27.6 | 6.7 | 8.8 (6.9) | 0.5 | 0.7 | 10.9 |

Notes: ^(a) Figures in parentheses refer to the contribution of crude oil.

Source: ISSER (2010) and GSS (2012).

Table 8 shows that growth rates of the industrial sector have fluctuated in recent times. After decreasing from 9.5 per cent in 2006 to 6.1 per cent in 2007, the sector rebounded to a 15.1 per cent rate the following year. The performance improvement of the industrial sector in 2008 was underscored by the strong showing of the construction and the electricity subsectors which expanded 39 per cent and 19.4 per cent, respectively. The strong showing of the construction subsector in 2007 and 2008 largely reflects the massive infrastructure projects (stadia, real estate,

roads etc.) that were constructed to celebrate Ghana@50 in 2007, host the CAN 2008 tournament and the African Union Heads of State conference in 2008.

Table 8: Growth rates of industry and its subsectors, 2006-12 (%)^(a)

| Year | Total industrial sector | Industrial subsectors | | | | |
|---------------------|-------------------------|-----------------------|--------------------|---------------------|------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity | Water & sewerage | Construction |
| 2006 | 9.5 | 4.2 | 13.3 | 24.2 ^(b) | n/a | 8.2 |
| 2007 | 6.1 | -1.2 | 6.9 | -17.2 | 1.2 | 23.1 |
| 2008 | 15.1 | 3.7 | 2.4 | 19.4 | 0.8 | 39.0 |
| 2009 | 4.5 | -1.3 | 6.8 | 7.5 | 7.7 | 9.3 |
| 2010 | 6.9 | 7.6 | 18.8 | 12.3 | 5.3 | 2.5 |
| 2011 | 41.1 | 13.0 | 206.5 | -0.8 | 2.9 | 20.0 |
| 2012 ^(c) | 7.0 | 4.3 | 5.0 | 12.0 | 0.0 | 11.8 |
| 2007-10 | 7.8 | 2.2 | 5.9 | 5.5 | 3.8 | 18.5 |

Notes: ^(a) Growth rates for the year 2006 at 1993 constant prices. All others at 2006 constant prices; ^(b) Figure relates to both electricity and water and sewerage subsectors; ^(c) Provisional.

Source: ISSER (2009 and 2010) and GSS (2012).

By 2009 the industrial sector's overall growth had dipped to 4.5 per cent. This can be attributable to the negative growth of the manufacturing subsector and the slowing down of the construction and electricity subsectors' momentum in 2009. Unreliable power supplies and rising fuel prices in 2009 contributed significantly to the manufacturing subsector's disappointing development. In 2010, the industrial sector recovered, achieving a growth rate of 6.9 per cent. As Table 8 indicates, this was largely due to the improved performance of the electricity, manufacturing and the mining and quarrying subsectors. The buoyant growth of these subsectors seemed to have neutralized the dismal performance of the construction and water subsectors in 2010 as compared to the previous year.

In 2011, the increased production of crude oil sparked an enviable 41.1 per cent growth rate for the industrial sector. The production of petroleum from the Jubilee Fields in 2011 explains the 206.5 per cent increase in the growth rate of the mining and quarrying subsector versus the 2010 figure of 18.8 per cent. The manufacturing and construction subsectors also achieved appreciable growth rates (13.0 per cent and 20.0 per cent, respectively) over their 2010 rates. On the other hand, the water and sewerage and electricity subsectors failed to reach their targeted growth rates as they managed only a disappointing 2.9 per cent and -0.8 per cent, respectively (see Table 8).

Industry growth plummeted from its record high of 41.1 per cent in 2011 to 7.0 per cent by 2012. The declining crude oil and gas production during 2011 and the first half of 2012 induced largely by the base effect of commercial crude oil production oil in 2011, and production difficulties in the Jubilee Field coupled with slow growth in manufacturing and the production and distribution of water contributed to the drastic reduction in the growth of the sector.

A review of the subsectors' relative shares in total industry output indicates that construction has overtaken manufacturing since 2008. Between 2001 and 2005, the period averages of construction and manufacturing were 32.4 per cent and 36.5 per cent, respectively, but by the beginning of 2006 construction's share has increased consistently, from 27.4 per cent in 2006 to 44.7 per cent in 2010. Over the same period, manufacturing, on the other hand, has dropped from 49 per cent in 2006 to 35.5 per cent in 2010 (see Table 9). The massive infrastructural developments since the mid-2000s instigated as part of Ghana's development agenda and the

high production costs that confronted the manufacturing subsector can explain the increasing importance of the construction subsector at the expense of manufacturing.

The importance of the manufacturing subsector in terms of its relative contribution to industry GDP was further worsened when it was overtaken in 2011 by mining and quarrying as the second largest subsector. The mining and quarrying subsector rose from a relative 12.2 per cent share in 2010, to 32.8 and 32.0 per cent in 2011 and 2012, respectively, as compared to manufacturing at 25.9 and 24.2 per cent for the same period.

Table 9: Relative contribution of subsectors to industrial GDP, 2006–10 (%)

| Year | Industrial subsectors (%) | | | | |
|---------------------|---------------------------|--------------------|-------------|------------------|--------------|
| | Manufacturing | Mining & quarrying | Electricity | Water & sewerage | Construction |
| 2006 | 49.0 | 13.5 | 3.8 | 6.3 | 27.4 |
| 2007 | 44.0 | 13.5 | 2.9 | 4.8 | 34.8 |
| 2008 | 38.9 | 11.8 | 2.6 | 3.9 | 42.7 |
| 2009 | 36.6 | 10.9 | 2.5 | 3.6 | 46.4 |
| 2010 | 35.5 | 12.2 | 3.2 | 4.4 | 44.7 |
| 2011 | 25.9 | 32.8 | 2.3 | 3.3 | 35.7 |
| 2012 ^(a) | 24.2 | 32.0 | 1.8 | 2.7 | 39.4 |

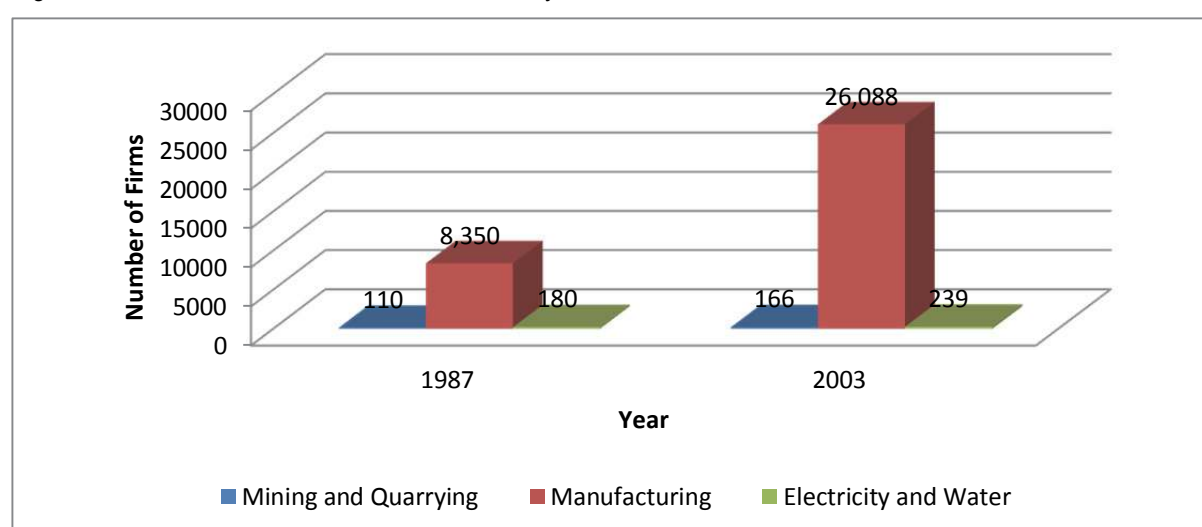
Note: ^(a) Provisional.

Source: ISSER (2010) and GSS (2012).

2.2 Size distribution

The number of establishments within the industrial sector has substantially increased² from 8,640 in 1987 to 26,493 firms in 2003, an increase of over 200 per cent. Over 90 per cent of the total

Figure 2: Number of firms in the industrial sector by subsectors, 1987 and 2003



Source: GSS (Industrial Census 1987 and 2003).

² This is the latest census of industrial establishments in Ghana conducted by the Ghana Statistical Service at the time of writing this report.

number of firms in both years were in manufacturing with the rest in mining and quarrying and electricity and water (Figure 2). This, however, excludes the construction subsector which was excluded from the industrial census reports. The dominance of the manufacturing subsector in the distribution of firms explains its almost two-thirds contribution to industry output until the mid-2000s. It also explains why the industrial policies pursued since independence have concentrated mainly on this subsector.

For this analysis, a size classification was adopted according to which an establishment that employs less than five people was considered to be a micro establishment, between 5 and 19: small; between 20 and 49: medium, and 50 and above to be a large establishment. According to this classification, the Ghanaian industrial sector appears to be comprised primarily of micro and small firms, accounting for almost 94 per cent of the total industrial sector firms. Medium firms, on the other hand, make up only 4.0 per cent; the rest are large firms (Table 10).

Table 10: Distribution of establishments by size in industry and its subsectors, 2003

| Size of firm | Industrial subsectors | | | | | | Total industrial sector | |
|------------------|-----------------------|------|--------------------|------|---------------------|------|-------------------------|-------|
| | Manufacturing | | Mining & quarrying | | Electricity & water | | | |
| | No. | % | No. | % | No. | % | No. | % |
| Micro (1-4) | 14,352 | 55.0 | 26 | 15.7 | 60 | 25.1 | 14,438 | 54.5 |
| Small (5-19) | 10,256 | 39.3 | 64 | 38.6 | 73 | 30.5 | 10,393 | 39.2 |
| Medium (20-49) | 942 | 3.6 | 27 | 16.2 | 70 | 29.3 | 1,039 | 4.0 |
| Large (50+) | 538 | 2.1 | 49 | 29.4 | 36 | 15.1 | 623 | 2.3 |
| Subsector shares | 26,088 | 98.5 | 166 | 0.6 | 239 | 0.9 | 26,493 | 100.0 |

Note: Distribution is given in terms of the number of establishments.

Source: GSS (2006).

Within the manufacturing subsector (which accounts for 98.5 per cent of the industrial establishments), 55 per cent are micro firms, with small, medium and large firms representing 39.3, 3.6 and 2.1 per cent, respectively. The size distribution within the mining and quarrying and electricity and water subsectors shows that these subsectors have a relatively greater proportion of larger firms. For instance, 44.4 per cent of firms in the mining and quarrying subsector are medium and large size, in the manufacturing subsector only 5.7 per cent are in that size category.

2.3 Employment

Even though the industrial sector provides jobs and income for the country's labour force, its contribution to employment since 2000 has been less than a fifth of total employment (15.5 per cent and 14.4 per cent in 2000 and 2006, respectively). Out of a total number of 413,603 new jobs that were expected to have been created by FDI between 2001 and 2010, the manufacturing and construction subsectors were considered to have generated about 28 per cent.

With respect to the distribution of employment across subsectors, Table 11 shows that between 2000 and 2006, there has been a significant increase in the share of total industry employment generated by the manufacturing sector. In 2006, the manufacturing subsector represented 80 per cent of total industrial sector employment, compared to 69 per cent in 2000. This mainly mirrors the decline in employment in the mining and quarrying, electricity and water and the construction subsectors.

Table 11: Employment in the industrial sector and its subsectors, 2000 and 2006

| Industry/subsectors | 2000 | 2006 |
|---|-----------|-----------|
| Total number employed – all industry | 1,151,394 | 1,296,407 |
| Share of industry in total employment (%) | 15.5 | 14.2 |
| Subsector shares in total industry employment (%) | | |
| Manufacturing | 69.0 | 80.1 |
| Mining and quarrying | 9.0 | 5.2 |
| Electricity and water | 2.6 | 1.5 |
| Construction | 19.4 | 13.2 |
| Total | 100.0 | 100.0 |

Source: Ghana Living Standards Survey (GLSS) IV and V

2.4 Ownership

Examining firm ownership within Ghana's industrial sector, the evidence in Tables 11 and 12 indicates that the sector is overwhelmingly owned by private investors, most of whom are Ghanaians. Approximately 87.6 per cent of the total industrial sector workers in 2003 were employed by privately-owned establishments, with the remainder in establishments owned by the state (5.7 per cent) or jointly owned (6.6 per cent). Table 12 shows that a greater proportion of the workforce within the manufacturing subsector was employed by private firms (i.e., 94.7 per cent) than in quarrying and mining. The electricity and water subsector is largely state-owned: less than 3 per cent of the subsector's workers were employed in privately or jointly owned companies.

Table 12: Distribution of establishments in the industrial sector and its subsectors by type of ownership, 2003

| | Manufacturing | | Mining & quarrying | | Electricity & water | | All Industry | |
|------------------|---------------|------|--------------------|------|---------------------|------|--------------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| State owned | 2,912 | 1.2 | 906 | 4.6 | 11,938 | 97.2 | 15,756 | 5.7 |
| Private owned | 230,512 | 94.7 | 10,793 | 54.8 | 240 | 2.0 | 241,545 | 87.7 |
| Jointly owned | 10,092 | 4.1 | 8,004 | 40.6 | 98 | 0.8 | 18,194 | 6.6 |
| Subsector shares | 243,516 | 88.4 | 19,703 | 7.2 | 12,276 | 4.5 | 275,495 | 100.0 |

Note: Distribution is given in terms of persons engaged rather than the number of establishments.

Source: GSS (2006).

A look at Table 13 shows that as of 2003, the industrial sector was dominated by Ghanaians, a pattern totally different to what existed at independence in 1957, when ownership of industrial establishments/firms was mainly vested with foreigners. The government's efforts since 1957 to bring the industrial sector into the hands of Ghanaians seems to have been successful: by 2003, 81.4 per cent of the sector's workforce were employed in Ghanaian-owned establishments; the remainder of the industrial workforce were employed in enterprises that were either owned by non-Ghanaians or people of mixed nationality (Table 13). In the manufacturing subsector, 83.1 per cent were employed in establishments fully owned by Ghanaians. The case of the mining and quarrying subsector is different, with approximately 54.3 per cent of the workforce in establishments owned either by non-Ghanaians or people of mixed nationality. This could be due to the large capital investment need to enter the mining industry. Ghanaians cannot readily access the necessary loans, which may have led to the mining industry being dominated by foreigners.

Table 13: Ownership status of private firms by nationality and gender

| | Manufacturing | | Mining & quarrying | | Electricity & water | | Total industry sector | |
|------------------------|---------------|------|--------------------|------|---------------------|------|-----------------------|------|
| | No. | % | No. | % | No. | % | No. | % |
| Ghanaian, male | 104,866 | 45.5 | 2,327 | 21.6 | 31 | 12.9 | 107,224 | 44.4 |
| Ghanaian, female | 59,048 | 25.6 | 218 | 2.0 | 0 | 0 | 59,266 | 24.5 |
| Ghanaian, both genders | 27,618 | 12.0 | 2,387 | 22.1 | 198 | 82.5 | 30,200 | 12.5 |
| Non-Ghanaians | 21,997 | 9.5 | 2,207 | 20.4 | 0 | 0 | 24,204 | 10.0 |
| Mixed nationality | 16,983 | 7.4 | 3,654 | 33.9 | 11 | 4.6 | 20,648 | 8.6 |
| Total | 230,512 | 100 | 10,793 | 100 | 240 | 100 | 241,545 | 100 |

Note: Distribution is given in terms of persons engaged rather than the number of establishments.

Source: GSS (2006).

2.5 Spatial distribution

An examination of the regional distribution of firms in Ghana shows that in 2003 the Greater Accra region, followed by Ashanti, encompassed the majority of industrial establishments, with these two regions accounting for 50 per cent of the total. Together the Eastern, Central and Western Regions accounted for about 30 per cent of the total number of establishments (see Table 14). This implies an approximately 80 per cent concentration in the major cities/urban areas in five of the country's ten regions.

The heavy concentration of industrial establishments in only five regions is the result of industrial clustering especially with respect to the Ashanti and Greater Accra regions. By their very nature, clusters are populated by enterprises engaged in similar commercial activities. Clustering in Ghana mainly concerns the manufacturing sector, and manifests as the visible physical concentration of establishments/enterprises in relatively narrowly defined geographical areas within the major cities of Accra-Tema, Kumasi, and Takoradi. See Table 15 for details on some selected industrial clusters in Ghana.

Table 14: Spatial distribution of establishments in the industrial sector and its subsectors, 2003

| Region | Subsectors | | | All, % |
|---------------|---------------|--------------------|---------------------|--------|
| | Manufacturing | Mining & quarrying | Electricity & water | |
| Greater Accra | 25.7 | 23.5 | 7.1 | 25.5 |
| Western | 7.4 | 13.3 | 13.4 | 7.5 |
| Central | 9.6 | 23.5 | 10.5 | 9.7 |
| Volta | 5.0 | 12.7 | 15.5 | 5.2 |
| Eastern | 5.0 | 9.6 | 14.6 | 11.4 |
| Ashanti | 24.7 | 14.5 | 9.6 | 24.5 |
| Brong-Ahafo | 6.7 | 2.4 | 13.8 | 6.8 |
| Northern | 4.7 | -- | 5.4 | 4.7 |
| Upper East | 3.2 | 0.6 | 3.8 | 3.2 |
| Upper West | 1.6 | -- | 6.3 | 1.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: GSS (2006).

Table 15: Certain selected clusters in Ghana

| Location | Group | Range of firm sizes | Industrial sector |
|---------------------------|--|---------------------|---|
| Kumasi-Ashanti | Furniture cluster | micro-small | Furniture |
| | Suame-Magazine | micro-small | Metalwork and machinery |
| Tema-Greater Accra | Tema Industrial Area/free zones enclave | small-medium-large | All sectors |
| | Spintex Industrial Area/free zones enclave | small-medium-large | All sectors |
| Accra-Greater Accra | North Industrial Area | small-medium | Manufacturing |
| | South Industrial Area | small-medium | Manufacturing and garages |
| Sekondi /Takoradi-Western | Light Industrial Area | small-medium-large | Manufacturing (mainly food processing and wood exporters) |
| | Light Industrial Area | micro-small | Garages, metalwork, machinery |
| | Heavy Industrial EPZ | small-medium-large | Mineral processing for exports |
| Shama-Western | Shama EPZ | small-medium-large | Petroleum, petrochemical |

Source: Compiled by the authors.

Industrial clusters in Ghana have either developed spontaneously or were established in response to government/public interventions or policies. The Suame-Magazine and the furniture cluster in Kumasi, the second largest city in Ghana, exemplify the spontaneous agglomeration of micro and small enterprises converging in small areas. Suame-Magazine, located in the Suame district of Kumasi, is possibly the largest light manufacturing cluster in Africa with approximately over 10,000 micro and small enterprises and workshops, engaged mainly in automobile repair services (i.e. garages), automobile parts production and retail, and metalworking. Originating from the 1930s, it currently employs over 100,000 workers and spans an area of approximately 900,000 square meters. In addition to the clusters, industrial zones have been set up by the Ghana Free Zones Board (GFZB) as export processing zones (EPZs). They include the EPZs at Tema, Sekondi and Shama as well as the Ashanti Technology Park.

The EPZ at Tema,³ with a total area of 1,200 acres (480 hectares), offers a favourable and conducive environment for manufacturing, service and commercial export activities. Business processing is facilitated by the calculated convergence of all front-line export/investment promotion institutions into a 'one-stop-shop'. A range of property options, including factory shells, office space and land parcels serviced with good quality roads, drains, water and electricity connections and dependable sewerage system, is readily available to prospective investors and new business start-ups. The Tema EPZ is well serviced with off-site facilities such as a reliable electrical power grid, large water reservoir to ensure constant, adequate water supplies, central sewerage system, telecommunication services and securitized enclosures. The Tema enclave is also linked by a first-class road network to the airport and seaport. It is being developed largely into a multipurpose industrial park to provide non-free zone investors access to the industrial site and its superior services for boosting productive capacity.

³ Tema is a major industrial and residential city in Ghana. The country's largest seaport is located in Tema and it is one of the fastest growing cities with well-developed infrastructure. Many industries are located in the Tema industrial area where there is also a concentration of skilled labour.

The Ashanti Technology Park (ATP) in Ejisu within the Ashanti Region⁴ is located in the centre of the country. Occupying an area of 1099 acres, the Ashanti Technology Park is envisaged to evolve into a multi-purpose EPZ with opportunities for investment in water production and distribution, electrical production from thermal and bio-mass plants, telecommunications infrastructure, accessories manufacturing, data processing and call centre operations, development of telecommunications infrastructure and data processing centres.

The Sekondi Export Processing Zone is a 2,200 acres industrial enclave in Ghana's Western Region. The proximity of the Sekondi EPZ to the country's second largest seaport with a direct road link is ideal for heavy industrial activities. The Sekondi EPZ is to be developed into an integrated industrial mineral processing zone.

The Shama EPZ, situated in the Shama Ahanta East Metropolitan area in Ghana's Western Region, is an industrial park targeted for the petroleum-petrochemical sector. The Shama enclave has a good, strategic location that covers 3,200 acres of seafront land. The GFZB provides investment support to a downstream refinery, distribution, transit and supply chain business services including dominant operators in chemical production as well as manufacturers of by-products (plastics and jellies) intended for export. The GFZB also offers support in skills development and capacity-building services for employers and employees. The GFZB provides land for tank farms, storage yards for logistics and haulage contractors, manufacturing of chemical inputs and accessories for the petroleum industry at very competitive prices.

Currently, about 300 enterprises, representing various industrial subsectors, operate within Ghana's free zones enclaves. Enterprises within the manufacturing subsector are involved in food processing, wood and veneer processing, production of consumable goods, processing of shea nuts/oil seeds, lubricants and biofuels, garment processing, food processing machines and spare parts, plastic waste recycling, data processing, telecommunication, software development, jewellery and furniture making, etc.

With the production and exploration of oil being developed in the Western Region, the Shama EPZ is expected to attract petroleum/petrochemical sector enterprises. The GFZB has already indicated its willingness to continue its participation in the country's oil sector through the licensing and monitoring of growing businesses in all downstream and support services segments, and the Shama EPZ will serve as the ideal industrial zone for those operations.

2.6 Sunrise and sunset industries

Sunrise sectors

Sunrise industries can be found mainly in manufacturing and construction, which partly explains why the majority of investment inflows have been directed towards these two subsectors. Information from the Ghana Investment Promotion Centre indicates that the manufacturing and construction subsectors attracted between 1994 and 2010 FDI valued at US\$10,179 million (or about 72 per cent of total investments). The manufacturing and construction subsectors are considered to have created about 28 per cent of the 413,603 jobs that were expected to be generated during 2001-10. This mirrors the discovery and exploration of oil and gas in Ghana as well as the current industrialization strategy of encouraging agro-processed exports within the country's industrial sector.

⁴The Ashanti Region has abundant resources, including most of Ghana's rich cocoa beans, gold, timber and wood, leather ware, and tourist sites.

Within the manufacturing subsector there has been an increase in firms engaged in energy-related activities such as producing petrochemicals, fertilizers and LPG cylinders. Within the construction subsector, industries producing energy (oil and gas and power) related infrastructure and real estate developments are expected to benefit largely from the anticipated increase in real GDP growth stimulated by Ghana's oil exploration.

Sunset sectors

As a result of the ISI pursued after independence, Ghana established numerous light industries to locally produce imported goods, including, among others, manufactured textiles and garments, soap, wood works, aluminium, metal. Quartey (2006) observes that the textile subsector dominated the manufacturing sector for more than two decades after the launch of the ISI. Textiles contributed significantly to livelihoods, as it employed about 25,000 people, or 27 per cent of total manufacturing labour force.

By 1982 the dominance of the textile and garments subsector began to dwindle. The shortage of foreign exchange for importing raw materials resulted in low-capacity operations. This situation was further exacerbated by the negative impact of trade liberalization that formed a part of the SAP pursued in the 1980s and 1990s. Trade reforms led to increased importation of textiles and other used apparel, which facilitated the demise of many textile industries in Ghana. As Quartey (2006) observes, by the mid-1970s, there were about 16 large and medium sized textile enterprises in Ghana as well as some 138 medium and large-scale garment manufacturing companies. However, inconsistent government policies over the years reduced the number of firms drastically, eroding the subsector. By 2002, only four major companies had survived the turbulence, namely, the Ghana Textile Manufacturing Company (GTMC), Akosombo Textile Limited (ATL), Ghana Textile Product (GTP) and Printex, with GTP maintaining the lead in the industry.

The textile and garment subsector's diminishing operations was also evident in its output and employment figures. As shown in Table 16, in 1977 Ghana's textile industry with 25,000 workers accounted for 27 per cent of the total manufacturing employment. But by 1995, employment within the subsector had decreased to 7,000, further dropping to 5,000 by the year 2000. In March 2005, Ghana's four major textile companies had 2,961 employees, less than a fifth of the 1977 level.

The major reasons given for the decline include: low demand for local textile products and influx of second-hand clothing; lack of competitiveness against imported goods due to the high cost of local textiles and smuggling. Local textile/garment producers were hindered by increased production costs caused by obsolete plants and machinery, high cost of local cotton, high costs and unreliable supply of utilities, high interest rates/cost of finance and overstaffing.

In view of the decline in output, in employment and the number of firms, the outlook for the textile and garments sector is bleak. As indicated by Quartey (2006), this sunset section calls for pragmatic policies which should lead to both local and global restructuring of the industry.

Table 16: Activity within Ghana's textile industry, 1977–2005

| Activity | 1977 | 1995 | 2000 | 2005* |
|------------------------|--------|-------|-------|-------|
| Output (million yards) | 129 | 46 | 65 | 39 |
| Employment | 25,000 | 7,000 | 5,000 | 2,961 |

Note: * Year 2005 figures represent data on the four largest firms: GTMC, GTP, ATL and PRINTEX.

Source: Based on Quartey (2006).

There should be an intensification of efforts by the government aimed at restructuring and improving the textile and garment industry. Quartey (2006) recommends that concrete steps be taken locally to address the problem of cheap or under-declared imports, wrongly classified textile imports, and pirate-copied brands, markings, tickets and labels including those of the Ghana Standards Board.

Various programmes have already been initiated and include the Presidential Special Initiative (PSI), export action programme for textile and garments, the Spintex textile and garment cluster network, the establishment of the textile and garment training centre and revision of import tariffs on textiles and garment. It is expected that these initiatives will enable the industry to take full advantage of the African Growth and Opportunity Act (AGOA), increase employment opportunities for the growing population, expand and diversify the economy, and promote both domestic and foreign investment as well as stimulate exports.

3 Patterns of industrial productivity

Table 17 shows labour productivity distribution across the firms surveyed under the World Bank Enterprise Survey-Investment Climate Assessment Wave 2 in 2006. These surveys are conducted by the World Bank and its partners across all geographic regions and cover small, medium, and large companies. The surveys are administered to a representative sample of firms in the non-agricultural formal private economy. In Ghana the formal sector constitutes only 20 per cent of labour force (Osei-Boateng and Ampratwum 2011).

Table 17: Labour productivity (US\$, 2006 values)

| Sector | All firms | 0-5 yrs | 6-10 yrs | 11-20 yrs | 20+yrs | Foreign owned | Exporting |
|--------------|-----------|----------|----------|-----------|-----------|---------------|-----------|
| Textiles | 263.28 | | 263.28 | | | | 263.28 |
| Garments | 1,918.53 | 1,145.81 | 1,734.22 | 2,650.49 | 1,129.52 | 634.69 | 1392.88 |
| Food | 7,986.93 | 5,276.64 | 8,594.95 | 6,141.69 | 10,394.53 | 18799.35 | 4344.42 |
| Other man. | 4,309.60 | 1,303.98 | 3,175.83 | 5,971.39 | 4,193.55 | 9220.37 | 7554.11 |
| Construction | 1,128.34 | | | 1,128.34 | | | |
| All sectors | 4,300.30 | 2,841.64 | 3,652.25 | 4,439.61 | 5,459.60 | 12,028.18 | 4,016.59 |

Note: Labour productivity is computed as total annual sales divided by the total number of employees (full time + part-time).

Source: World Bank (2006).

Table 18: Skills

| Sector | Ratio of temporary to full time staff | No. of years of experience of top manager |
|---------------------|---------------------------------------|---|
| Textiles | 0.00 | 8.00 |
| Garments | 0.13 | 16.61 |
| Food | 0.10 | 17.87 |
| Other manufacturing | 0.15 | 16.99 |
| Construction | 0.00 | 14.00 |
| All sectors | 0.13 | 17.03 |
| N | 293 | 293 |

Source: World Bank (2006).

The productivity distribution clearly shows that food is the most productive subsector, and textiles the least productive. Older companies are also found to be more productive than younger firms, as were foreign-owned firms compared to domestic firms. Labour productivity of exporting firms, however, is lower than the average productivity of all firms. The most productive sector, food, is also the most skilled in terms of the number of years of experience of the top manager. Interestingly, textiles which was the least productive subsector, is also the least skilled (see Table 18).

To find out if labour productivity can be attributed to higher wages, this report, based on data from the World Bank Enterprise Survey, analysed wages per employee, computed as total annual salary costs of the firm divided by the total number of full and part-time employees (Table 19).

Table 19: Wages per employee, annual, in US\$ at 2006 values

| Sector | All firms | 0-5yrs | 6-10yrs | 11-20yrs | 20+yrs | Foreign owned | Exporting |
|---------------------|-----------|--------|---------|----------|--------|---------------|-----------|
| Textiles | 150.45 | | 150.45 | | | | 150.45 |
| Garments | 351.54 | 239.49 | 283.06 | 440.40 | 337.78 | 105.78 | 315.49 |
| Food | 602.78 | 411.72 | 595.01 | 594.80 | 725.63 | 1792.20 | 579.32 |
| Other manufacturing | 488.79 | 205.29 | 424.60 | 545.61 | 569.74 | 1792.204 | 7554.11 |
| Construction | 423.13 | | 423.13 | | | | |
| All sectors | 463.11 | 298.98 | 392.27 | 504.76 | 558.42 | 1,173.05 | 512.27 |

Source: World Bank (2006).

Wages formed a similar pattern to what is observed for labour productivity (Table 19). The most productive subsector, food, is also the highest paid, while correspondingly the least productive subsector, textiles, has the lowest wages. The older, more productive firms, pay higher wages than younger firms, and the highly productive foreign owned-firms offer better wages than domestic companies. This analysis clearly shows a high positive correlation between labour productivity and skills, and between labour productivity and wages per employee within the Ghanaian industrial sector.

4 The industrial policy framework

Currently Ghana's new industrialization strategy is aimed at creating an industrial architecture based on value-added processing of the country's natural resource endowments through a private sector-led accelerated industrial development strategy (GoG 2011). The renewed industrialization vision is intended to realize the dream of seeing the transformation of the economy within the lifetime of the present generation and to enable all Ghanaians enjoy its benefits through increased quality jobs and higher incomes.

Set within the context of Ghana's long-term strategic vision of achieving middle-income status by 2020 through the transformation of the economy into an industry-driven economy, Ghana's current industrial policy is designed to promote added competitiveness and enhanced industrial production, with increased employment and prosperity. It has also been designed to provide a broader range of fair-priced, better quality products for the domestic and international markets.

The key development objectives of the industrial policy, specifically, are:

- to expand productive employment in the manufacturing sector

- to create a modern productive economy with high levels of value-addition
- to expand technological capacity in the manufacturing sector
- to promote agro-based industrial development
- to promote spatial distribution of industries to reduce poverty and income inequalities
- to provide consumers with fairly priced, better quality products and services, and
- to make firms within the industrial sector, especially in manufacturing, competitive on both domestic and international markets (GoG 2011b).

Derived from the key development planning frameworks of the government of Ghana,⁵ the industrial policy framework represents the set of specific policy instruments and measures to be applied to improve access to competitive factors of production within the economy; and enhance productivity, efficiency and growth of Ghana’s industrial sector, especially the manufacturing subsector. Although the full spectrum of industrial policy initiatives cutting across 21 policy thematic areas has been categorized into four main components, namely production and distribution; technology and innovation; incentives and regulatory regime and cross-cutting issues, this report discusses policy initiatives under the following themes:

- macroeconomic policies
- trade policies
- institutional and regulatory framework
- industry sector specific policies.

4.1 Macroeconomic policies

Ghana’s economic growth over the last decade has been among the most rapid in Africa and faster than in some high-investment emerging market economies. The economy of Ghana has experienced moderate but consistent growth over the past 25 years, with the growth rate between 1990 and 2010 averaging 5 per cent. With oil and gas coming on stream, Ghana is well positioned to become one of Africa’s leading ‘commodities powerhouses’. Oil revenue is expected to contribute eventually an equivalent of about 20 per cent of total national revenue. The contribution of gold and other minerals, cocoa and oil provides a diversified commodity backbone that will underpin the country’s rapid industrialization and sustained economic growth (GoG 2010).

The government continues to pursue macroeconomic stability and growth-oriented programmes that are consistent with Ghana’s medium- and long-term objectives of becoming a modernized industry-driven middle-income country. Currently it is estimated that the average medium-term real GDP growth rate in Ghana would be at least 8 per cent per annum, mainly on account of the consolidation of macroeconomic stability, and policies to stimulate growth of agriculture, industry and service sectors as well as employment generation. The projected non-oil average annual GDP growth rate of at least 8 per cent would ensure that at a constant population growth rate of 2.2 per cent over the medium term, Ghana will be able achieve and sustain per capita income levels consistent with its long-term vision. When the impact of oil and gas development is taken into consideration, the average real GDP is projected to grow at 11.3 per cent per

⁵ These include the World Bank/IMF sponsored Interim PRSP (2000-02), the GPRS I and II (2003-09); the National Trade Policy; the National Medium-term Development Framework, MTDF (2010-13); and the Private Sector Development Strategy, PSDS (2005-09, Phase I) and (2010-15, Phase II).

annum over the medium term and this is expected to double the projected real per capital income growth.

The macroeconomic policies that have and continued to be pursued to ensure macroeconomic stability include:

- rationalization of government sector expenditures and enhanced revenue mobilization to ensure fiscal consolidation so as to lower fiscal deficits and tone down the inflationary impact of unsustainable fiscal deficits;
- reforms in public financial management to ensure fiscal sustainability;
- maintenance of a flexible exchange rate regime to enhance competitiveness of domestic firms;
- continuous operationalization of the inflation-targeting framework which aims at creating an enabling environment (keeping inflation low and facilitating access to low-cost credit) to help the private sector flourish.

4.2 Trade policies

With respect to the industrial policy framework, the policy thrust of the external trade sector within the framework of trade liberalization is to use trade policy to promote the international competitiveness of domestic enterprises, improve export competitiveness of such enterprises; diversify markets and increase exports; and accelerate economic integration with other regional and/or subregional countries/states. The major trade policy initiatives include:

- maintaining competitive real exchange rates;
- improving the import/export regime;
- establishment of the Ghana Competition Commission to deal with unfair international trade practices;
- establishment of a National Agency for the Protection of Consumers;
- promoting new goods and services;
- taking full advantage of preferential access to markets such as Africa Growth and Opportunity Act (AGOA), European Union-African Caribbean and Pacific (EU-ACP) and sub-Saharan African subregional trading blocs;
- engaging fully in multilateral trade negotiations; and
- strengthening links between industrial and trade policies.

4.3 The institutional and regulatory framework

The institutional and regulatory environment within which the private sector operates is crucial to efforts aimed at accelerating the growth and transformation of the economy. In order to build a vibrant, competitive private sector strongly positioned for international and domestic competition, the institutional and regulatory policy effort seeks to tackle the core constraints inhibiting private sector growth. The many barriers that confront investors and investments are being removed to make Ghana a more attractive investment destination, necessary for enhanced industrial production.

The various business registration requirements, levies for business registration, and several investment legislations, are being rationalized while the ministries, departments and agencies that

administer business regulations are being amended to be more responsive to the needs of the private sector. To enhance productivity and efficiency, and to reduce the cost of doing business, the government has taken measures to remove value chain constraints to improve service delivery. Urgent and aggressive investment in both physical and social infrastructure is a national priority for improving efficiency and reliability in the production chain.

A proactive local content policy is required so that industrial development translates into job creation at the level needed to change the economic fortunes of Ghanaians. This can be achieved only if natural resources are applied locally along the industrial value chain, which implies that most of the value-added processing must be done in Ghana. Without a specific policy strategy to compel the direct participation and involvement of Ghanaians there will be little job creation.

The institutional and regulatory policies to boost industrial production include:

- ensuring easy access to business registration and acquisition of permits;
- strengthening the capacity of relevant institutions to deliver efficient services countrywide;
- promoting harmonious labour and industrial relations in the manufacturing sector to increase productivity by:
 - strengthening the National Labour Commission with resources, capacity and a network of regional offices to effectively implement the Labour Act;
- expanding and intensifying the knowledge of all stakeholders on the Labour Act;
- updating labour market information availability for all stakeholders;
- developing, in consultation with stakeholders, a national productivity programme linking training, staff development and remuneration with productivity; and
- formulating and implementing appropriate laws to ensure that Ghanaians at all levels directly benefit from the industrialization process.

A key role in promoting industrialization in Ghana is the development and effective use of national standards (both voluntary and mandatory), based on relevant international standards. This assures consumers of the safety and suitability of products. While voluntary standards developed by consensus among relevant stakeholders essentially provide the basis for assessing the quality of products, processes and systems, technical regulations (mandatory standards) are applied to protect the health and safety of consumers and the environment.

In view of the importance of standards, regulatory and institutional policies geared towards the development and use of standards in industry include government efforts to:

- facilitate the strengthening of the linkage between the Ghana Standards Board and industry associations in the development of voluntary standards;
- encourage the application of national standards in manufacturing;
- support initiatives to improve institutional capacity of associations to develop standards of interest to their members;
- facilitate coordination amongst the regulatory bodies in the development of technical regulations; and
- improve the institutional capacity of regulatory bodies to enforce application of technical regulations in industry.

4.4 Sector-specific policies

For the attainment of economic transformation as envisaged under the government's medium-term agenda, the industrial sector, which is expected to play a pivotal role, is projected to grow at an average annual growth rate of 20.3 per cent over the medium term. The main drivers expected to help achieve this target include: enhanced growth by the construction sector; infrastructure development in the oil sector, energy and water subsector growth in 2011 and beyond resulting mainly from the Bui Dam operations; production of gas to power thermal generation; and an increase in output from the mining sector, especially in salt production to meet industrial demand. Under the national industrial policy, the industrial sector-specific policies include measures to:

- strengthen the linkages between industry, and research and development institutions;
- decentralization of industrial development to exploit the resource endowments of districts;
- establishment of new and emerging industries such as petrochemicals, fertilizer and LPG cylinder production on the back of the new oil and gas industry;
- establishment of manufacturing enterprises to process agricultural produce, especially beans, fruits and shea nuts;
- exploitation of the limestone deposits in northern Ghana for the production of cement for industry, as well as utilization of the country's significant clay deposits for the production of bricks and other building materials to support the programme for the construction of affordable housing units;
- rejuvenation of the textile industry in an integrated manner, from seed production to spinning to ginning, and printing;
- establishment of integrated shea butter processing factories in the three northern regions, targeting the processing of 50,000 tons of shea butter per annum for both local and international markets;
- rehabilitation of abandoned but viable manufacturing enterprises, including jute factory, tomato cannery, gold refinery and ceramics production;
- establishment of a second oil refinery in the Western Region to boost the production of petroleum products for exports and for national energy security;
- review and implementation of plans for an integrated iron and steel industry;
- establish industry support centres to assist firms become internationally competitive; and
- to seed and facilitate the creation of industrial anchors, and deploy the full benefits of existing free zone, export zone and related investment laws to accelerate industrial development.

5 Emerging policy issues

The 'top three' questions emerging from the current industrial policy debate relate to the key developmental objectives of the current industrial policy. These include:

- i) How to empower the private sector especially small and medium enterprises to expand productive employment and technological capacity within a highly competitive manufacturing sector;

- ii) Beyond expansion in productive and technological capacity, how to promote agro-based industrial development to ensure value-addition to manufactures and Ghana's traditional and non-traditional exports; and
- iii) To achieve poverty reduction and reduce income inequalities in Ghana, to promote the spatial distribution of industries away from the current situation of over-concentration of industries within urban areas?

These three issues are important because ultimately the success of Ghana's industry policy will be measured by the extent to which it empowers the private sector (especially small and medium enterprises) within a highly competitive manufacturing sector to expand and create opportunities for employment and reduce poverty and spatial inequalities in Ghana

Appendix Table A1: Industrial policy matrix: post-independent, pre-ERP era, 1965–83

| Policy: Quantitative Import Restrictions (QIR) | | | | | | | | | | | | | |
|---|--|--|--|--------------------------|----|---------------------------|-----|----------------|-----|----------|------|--|---|
| Target: Manufacturing subsector, especially the import substitution large-scale public sector firms or enterprises | | | | | | | | | | | | | |
| Policy objectives | Policy intervention | Impact/effect of policy | Evaluation of outcome | | | | | | | | | | |
| <p>Mainly to support ISI strategy in the face of balance of payment difficulties in the early 1960s</p> <p>Was intended to:</p> <ul style="list-style-type: none"> • Eliminate competing imports • Ensure the availability of investment and intermediate goods • Ensure stable production plans for import-dependent domestic firms • Ensure availability of inputs at fixed prices for domestic ISI firms • Shift control of the economy from foreign private to state control in line with ISI strategy | <p>a. Foreign exchange rationing</p> <p>b. Import licensing</p> | <p>World Bank(1985b)</p> <ul style="list-style-type: none"> • Insufficient foreign exchange to import inputs for ISI industries • Over-valued exchange rate and policy biases towards agricultural production leading to price increases in domestic raw materials • Price controls eroded the potential benefits expected from the QIR <p>Steel (1972)</p> <ul style="list-style-type: none"> • Import licensing contributed to inefficiencies in manufacturing subsector as a result of increased production costs ** • Import licensing also encouraged investors to adopt capital intensive production techniques because of the favour enjoyed by large capital investments in the allocation of import licenses | <p><u>World Bank (1985b)</u></p> <p>QIR had limited success</p> <ul style="list-style-type: none"> • Success limited to reduction in the level/shares of imported consumer goods and shift to imports of intermediate and capital goods • Existence of parallel forex market in the early 1970s limited the impact of official allocations of forex and import licenses <p><u>Steel (1972)</u></p> <p>Limited success due to cronyism and corruption:</p> <ul style="list-style-type: none"> • Allocations of import licensing guided by political considerations or cronyism and corruption rather than economic viability | | | | | | | | | | |
| <p>**Unpredictability of import license allocation forced manufacturing firms to over-stock, while the requirement to finance imports using the 180-day credit meant increased interest charges (led to a 15% increase in input costs)</p> | | | | | | | | | | | | | |
| Policy: Import tariffs | | | | | | | | | | | | | |
| Target: New ISI industries mainly in manufacturing subsector (furniture, nails and roofing sheets) | | | | | | | | | | | | | |
| Policy objectives | Policy intervention | Impact/effect of policy | Evaluation of outcome | | | | | | | | | | |
| <ul style="list-style-type: none"> • To restrict imported consumer goods in the face of balance-of-payment difficulties beginning 1961 • To provide incentives to maintain level of investment required to support ISI strategy | <p>a. Increases in the level and coverage of import tariff rates</p> <p>b. Cascaded pyramidal tariffs structure in 1965:</p> <table border="0"> <tr> <td>capital goods</td> <td style="text-align: right;">2%</td> </tr> <tr> <td>inputs for capital goods</td> <td style="text-align: right;">9%</td> </tr> <tr> <td>inputs for consumer goods</td> <td style="text-align: right;">16%</td> </tr> <tr> <td>consumer goods</td> <td style="text-align: right;">55%</td> </tr> <tr> <td>luxuries</td> <td style="text-align: right;">128%</td> </tr> </table> | capital goods | 2% | inputs for capital goods | 9% | inputs for consumer goods | 16% | consumer goods | 55% | luxuries | 128% | <ul style="list-style-type: none"> • Rapid growth of ISI due to shift in imports from consumer goods to intermediate or capital goods • Wide disparities in the degree of protection across industries due to cascaded pyramidal tariffs structure | <p>Moderate level of success achieved, as evident in the shift in imports away from consumer goods to intermediate and capital goods</p> <p>Limited success due to rapid inflation, increasing use of quantitative import restrictions, price controls and increasing divergence between parallel and official exchange rates</p> |
| capital goods | 2% | | | | | | | | | | | | |
| inputs for capital goods | 9% | | | | | | | | | | | | |
| inputs for consumer goods | 16% | | | | | | | | | | | | |
| consumer goods | 55% | | | | | | | | | | | | |
| luxuries | 128% | | | | | | | | | | | | |

Table continues

Policy: Import tariffs (continued)

Target: New ISI Industries mainly in the manufacturing subsector (furniture, nails and roofing sheets)

| Policy objectives | Policy intervention | Impact/effect of policy | Evaluation of outcome |
|-------------------|---|--|--|
| | <p>Response to policy failure:</p> <p>Variation in tariff protection narrowed from a band of 5-150 per cent to 20-50 per cent in 1973 Was intended to discourage production of consumer goods to get ISI strategy back on track</p> | <ul style="list-style-type: none"> Created an effective rate of protection for firms utilizing domestic resources to process imported inputs thereby encouraging large-scale investment in domestic production of consumer goods Narrowing of variation in tariff protection in 1973 increase government revenue | <p><u>World Bank (1985b)</u></p> <p>Moderate level of success achieved, as evident in the shift of imports away from consumer goods to intermediate and capital goods</p> <p>Limited success due to rapid inflation, increasing use of quantitative import restrictions, price controls and increasing divergence between parallel and official exchange rates</p> |

Policy: Domestic price controls

Target: Industrial sector, especially manufacturing subsector, and the agricultural sector

| | | | |
|---|--|---|--|
| <p>Introduced in 1962 mainly to:</p> <ul style="list-style-type: none"> Moderate inflation by keeping consumer prices low Limit the level of super-normal profits enjoyed by the few firms with the capacity to produce during the period of scarcity and widespread use of quantitative restrictions Make credit readily and cheaply available to industrial and agricultural sectors | <p>Over nearly 6000 price controls on over 700 items between early 1970s to 1984 in the form of:</p> <ol style="list-style-type: none"> Maximum prices on essential intermediate and consumer goods Minimum wages Ban on market trade of selected essential commodities Interest rate ceilings to priority sectors <p>Response to policy failure</p> <p>Resort to mandatory credit allocations in due to inability to direct credit to priority sectors through interest rate ceilings</p> | <ul style="list-style-type: none"> Calculation of maximum price by Prices & Incomes Board based on cost-plus basis did not encourage domestic producers to minimize costs. Rather it encouraged rent seeking activities for obtaining licenses and contracts Encouraged black marketing and caused a massive shortage of essential price-controlled goods due to corruption Cap placed on lending rates to priority sectors (industrial and agricultural sectors) led to negative real lending rates as a result of the high rates of inflation experienced during the late 1970s to early 1980s. This discouraged banks from giving loans to these sectors Mandatory credit allocations resulted in banks refusing in many cases to accept deposits, resulting in financial disintermediation and thus depriving the industrial sector of needed financial support | <p><u>World Bank (1985b)</u></p> <p>Price controls ineffective because of the nature of Ghana's retailing and distribution networks made it impossible to control the market price for most products</p> <p>Was mainly effective in reducing the profits that should have been enjoyed by firms because of higher prices that would have been guaranteed by the market mechanism because of scarcity</p> <p>Interest rate ceilings and mandatory credit controls led to financial disintermediation and caused inadequate access to credit/finance by firms in industrial sector</p> |
|---|--|---|--|

Appendix Table A2: Industry policy matrix for the post-independence, post-ERP period, 1983/4 to 2000

| 1 | | |
|---|--|--|
| Policy: Exchange rate policy reforms (liberalization of exchange rates) | | |
| Target: Export sectors, local resource-based industries with capacity for export and efficient import substitution | | |
| Policy objectives | Policy intervention | Impact/effect of policy |
| <p>Mainly intended to improve Ghana's external competitiveness through the introduction of a market determined exchange rate regime with minimal intervention</p> | <ul style="list-style-type: none"> – Foreign exchange adjustments through devaluations between 1983-86 – Introduction of flexible exchange rate regime (with minimal intervention) , i.e., dirty float in 1986 – Introduction of foreign exchange auctions – Setting up of foreign exchange bureaus | <p>Maintenance of exchange rate in real terms allowed depreciation in real effective exchange rate</p> <p>Improvement in Ghana's external competitiveness</p> <p>Minimized the role of parallel foreign exchange market (i.e., 'black market')</p> <p>Generally successful in supporting trade liberalization efforts</p> |
| 2 | | |
| Policy: Removal of price and distribution controls, abolishing of import licensing and rationalization of tariffs | | |
| Target: Domestic producers/industries | | |
| <p>Mainly intended to:</p> <p>Rectify price distortions created by price controls</p> <p>Allow prices to reflect cost of production</p> <p>Abolish import licensing to allow for trade liberalization</p> | <ul style="list-style-type: none"> – Scope of price controls reduced at end of 1983. Controls on 700 items reduced to 23 items – Further reduction from 23 to 17 as at end of 1984, and further to 8 items by July 1985 – Reference price system put in place by Prices and Incomes Board (PIB) to guide price changes by producers based on production costs – Customs tariffs simplified into uniform structure and scope narrowed to a band of 25-30% – Rationalized tariffs on about 90% of imports | <p>Price adjustments by producers/importers to reflect exchange rate movements</p> <p>Full pass-through of higher cedi costs of imports due to exchange rate depreciation</p> <p>Eliminated consumer and price subsidies on imports except petroleum and fertilizer</p> <p>Adjustment in tariff rates on utilities to reflect increased costs of these services as a result of the new exchange rate regime</p> <p>Wages and salaries also adjusted with the aim of increasing real wages in the face of acceleration in inflation</p> |
| 3 | | |
| Policy: Privatization of state-owned enterprises (SOEs) | | |
| Target: Poorly performing SOEs within the industrial sector | | |
| <p>Launched in 1988, to respond to the need to reduce the financial burden that poorly performing SOEs were putting on public finances</p> | <p>Was carried out in the form of:</p> <ul style="list-style-type: none"> – Outright sale of assets to private investors through competitive bids – Sale of shares – Long-term leasing of assets – Joint venture agreements | <p>By the end of 1998 about 212 of 300 SOEs had been wholly or partly divested</p> <p>Of the 212 divested SOEs, 112 were outright sale of assets, 31 sale of shares, 31 joint ventures, 6 long-term leases and 42 completely liquidated</p> <p>Of those that were divested through sale of shares, government off-loaded its shares in 8 of them on the Ghana Stock Exchange (Baah-Nuakoh 2003)</p> <p>The proceeds from the divestiture of these SOEs as at end of 1998 amounted to about 90.962 million Ghana <i>cedis</i></p> |

Table continues

| 4 Specific policies to assist viable but distressed enterprises | | |
|--|--|---|
| 4A Trade and investment programme (TIP) Target: Exporting firms/industries within export-led sectors incl. manufacturing and mining/quarrying subsectors | | |
| Policy objectives | Policy intervention | Impact/effect of policy |
| <p>Initiated in 1993 (until 1997), it was aimed at increasing the country's total export earnings, creating jobs, attracting more businesses and investment into export production and improving the individual exporter's earnings</p> <p>Main objective was to streamline the legal and administrative framework of the non-traditional export (NTE) sector and strengthen the capacity of public and private institutions involved in the NTE trade</p> | <p>For TIP to be fully functional:</p> <ul style="list-style-type: none"> - A new Import and Export Act (1995) to streamline the export sector and liberalize export trade particularly with respect to export documentation and procedures - Reforms to confusing export rules, regulations and administrative bottlenecks and the rendering of support services by agencies like Ghana Export Promotion Council (GEPC) and the Ministry of Trade and Industry (MOTI) | <p>TIP led to:</p> <ul style="list-style-type: none"> Removal of foreign exchange control regulations, thereby allowing exporters to have full access to their foreign currency earnings Facilitation of export of non-traditional exports Introduction of a new export form to replace the 'Single Administrative Document', a very lengthy and cumbersome form. Elimination of price controls and guidelines for exporters Enactment of a new Export and Import Act (Act 503) which granted the freedom to export any product for commercial purposes Provision of infrastructure (air freight terminal at Kotoka Airport and rehabilitation of shed 9 at Tema Port) and technical services to export trade |
| 4B Tariff policy reforms Target: Adjustment-fatigued but potentially viable domestic industries/firms | | |
| <p>Introduced in 1994 to improve the structure of protection by providing technical support to adjustment-fatigued, but potentially viable, industries facing unfair competition as a result of trade liberalization</p> <p>Was to rationalize tariffs and avoid the abuse of the removal of all custom and import duties on building costs introduced in 1991</p> | <ul style="list-style-type: none"> - Equalization of domestic sales tax with import tariffs. - Imposition of import duty of 10% on building materials in 1994. - The policy to reduce import tariff on goods to be used for export production was implemented gradually in 1998 - Some categories of imports which compete with domestically produced goods were subject to specific duties as alternative to import duties. | <p>Although basically a trade policy, it had a bearing on the industrial sector in terms of the importation of the needed raw materials and machinery as well as enhancing effective competition between local and foreign goods</p> |
| 4C Industrial sector financing Target: Financially distressed but potentially viable firms within the sector | | |
| (i) Business Assistance Fund (BAF) | | |
| <p>Was to overcome the financial difficulties industrial sector firms faced after the launch of the ERP</p> <p>Also to ensure funding for industrial sector development</p> | <p>Included the establishment/setting up of BAF which was launched in 1993 with a government of Ghana credit of ₵10 billion (actual disbursements began in 1995)</p> | <p>Highly effective and successful and well patronized by private sector. By 1998 the fund had been over-subscribed to the tune of ₵5 billion. Had to be replaced by the Export Development and Investment Fund (EDIF) for financial reasons</p> |

Table continues

| (ii) Private Enterprises and Export Development (PEED) for private sector firms within manufacturing | | |
|--|---|---|
| Policy objectives | Policy intervention | Impact/effect of policy |
| To promote and encourage the private sector to produce and export non-traditional products | <p>Begun in January 1994, PEED was a credit facility of US\$41 million from the IDA/World Bank to the government of Ghana</p> <p>PEED had two components:</p> <ul style="list-style-type: none"> – an export re-finance component that was to enable banks offer short-term (360 days maximum) credit facility up to a maximum of US\$500,000 – an export credit guarantee component under which non-traditional exporters could be extended up to 75% of pre-shipment credit guaranteed by the Export Finance Office | At the end of 1996 about US\$12 million of the US\$34 million allocated to export credit had been disbursed to 68 companies (Baah-Nuakoh 2003) |
| (iii) The Investment Policy Fund for Small- and Medium-Scale Enterprise Development (FUSMED) targeted to private SMEs in the productive sectors of the economy | | |
| Credit facility to rehabilitate and expand existing enterprises, establish new ones and lease industrial and business equipment | Begun in 1990 it was a credit facility of US\$30 million provided by the IDA/World | Between 1990 and the end of 1999, the manufacturing sector had obtained about 70% of the funds with the service and transport sectors obtaining about 20% and 11 %, respectively. In terms of size, medium firms obtained about 65%, small firms about 27 % and micro firms close to 8% |
| (iv) Ghana Stock Exchange (GSE) | | |
| As part of the financial sector reforms, the GSE was set up to facilitate access to long-term finance for firms in the production sectors of the economy | | Made significant contributions to the industrial sector by enabling companies to float shares to increase their working capital. As at December 1999, 22 companies had been listed on the stock exchange, of which 15 were operating in the industrial sector (13 in the manufacturing and 2 in the construction/real estate subsectors); currently there are 36 companies listed on the exchange with 14 manufacturing and 6 in mining and oil |
| 4D | | |
| Promulgation of New Investment Code (GIPC Act 1994/PNDC L116) and establishment of the Ghana Investment Centre | | |
| Target: Industrial sector, foreign firms looking for investment opportunities in Ghana | | |
| Part of the efforts by the government of Ghana to create a favourable environment to boost investment and investment resource flows to the industrial sector due to shortage of investment resources after the ERP | <ul style="list-style-type: none"> – Establishment of the National Investment Promotion programme to mobilize investment resources – Promulgation of the GIPC Act of 1994 to replace Investment Code 116 – Establishment in 1996 of the Ghana Trade and Investment Gateway Programme (GHATIG) to make Ghana the gateway to industrialization in the West African subregion | Within two years of its establishment the Free Zones Board had approved 46 projects of which 3 were enclave developers (Baah-Nuakoh 2003) |

Table continues

Promulgation of New Investment Code (GIPC Act 1994/PNDC L116) (con't)

| Policy objectives | Policy intervention | Impact/effect of policy |
|-------------------|--|-------------------------|
| | <ul style="list-style-type: none"> - In line with this was the promulgation of the Free Zones Act in 1995, according to which GHATIG established export processing zones and industrial parks to boost the industrial sector, particularly with respect to the production of export products. - GHATIG also involved the pursuance of the liberalized skies policy to liberalize Ghana's space and landing facilities. - Free Zones Act of 1995 set up the Ghana Free Zones Board, a free zone enterprise could produce any type of goods and services for export except those deemed environmentally hazardous. - Free-zone industries were exempt from paying direct or indirect duties, levies on imported inputs and value added taxes on the sale of manufactured products within the free zone. - Industries in the free zones were also exempt from income tax on profits for the first 10 years of operation within the enclave, after which most of the industries were liable to a profit tax rate not exceeding 8% for the duration of their operations within the enclave | |

4E
Institutional and regulatory reforms
Target: Private sector firms with the industrial sector

| | |
|--|--|
| <p>Policies to strengthen institutions that provide support to the industrial sector such as National Board for Small Scale Industries and the Ghana Standards Board</p> | <p>Government reviewed legal environment and labour regulations to make them consistent with the direction of industrial policy. This included:</p> |
| <p>Also intended to strengthen the private sector's response to the economic reforms especially in terms of the promotion of domestic and foreign private investment</p> | <ul style="list-style-type: none"> - the enactment of the Minimum Wage Law (L.I.1495 of 1990) - the abolition of the 1971 Manufacturing Industries Act (Act 365) - the repeal of price control laws - the amendment of the 1985 Investment Code - the enactment of a legislative instrument on immigration quota - the introduction of the technology transfer regulations |

Source: Authors.

Appendix Table A3: Growth rates of industry and its subsectors, 1981-2000 (%)

| Year | Industry | Industry subsectors | | | |
|----------------|----------|---------------------|--------------------|---------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity & water | Construction |
| 1981 | -0.39 | 0.78 | -8.48 | 24.41 | 9.72 |
| 1982 | -22.89 | -36.31 | -7.9 | -16.6 | 35.1 |
| 1983 | -14.2 | 11.2 | -14.4 | -38.9 | -14.5 |
| 1984 | 11.9 | 12.9 | 13.5 | 42.9 | 2.3 |
| 1985 | 17.6 | 24.3 | 6.5 | 20.7 | 2.8 |
| 1986 | 7.6 | 11.0 | -3.0 | 18.0 | -2.7 |
| 1987 | 11.5 | 10.0 | 7.89 | 18.7 | 5.9 |
| 1988 | 7.3 | 5.1 | 17.8 | 12.9 | 8.4 |
| 1989 | 2.6 | 0.6 | 9.96 | 7.7 | 4.2 |
| 1990 | 6.9 | 5.9 | 6.35 | 14.6 | 7.3 |
| 1991 | 3.7 | 1.1 | 6.7 | 6.6 | 7.0 |
| 1992 | 5.8 | 2.7 | 10.4 | 12.0 | 10.1 |
| 1993 | 4.3 | 2.2 | 9.1 | 8.2 | 6.3 |
| 1994 | 1.3 | 1.5 | 5.1 | 5.3 | 4.2 |
| 1995 | 4.1 | 1.8 | 5.5 | 6.0 | 5.2 |
| 1996 | 4.2 | 3.0 | 4.2 | 6.5 | 6.1 |
| 1997 | 6.4 | 7.3 | 5.6 | 4.8 | 4.4 |
| 1998 | 2.5 | 3.0 | 4.0 | -10.0 | 5.5 |
| 1999 | 4.9 | 4.8 | 3.0 | 7.8 | 5.0 |
| 2000 | 3.8 | 3.8 | 1.5 | 4.5 | 5.1 |
| Period average | | | | | |
| 1981-83 | -12.49 | -8.11 | -10.26 | -10.36 | 10.11 |
| 1984-88 | 11.18 | 12.66 | 8.54 | 22.64 | 3.34 |
| 1989-94 | 4.10 | 2.33 | 7.94 | 9.07 | 6.52 |
| 1995-2000 | 4.30 | 4.12 | 4.32 | 3.27 | 5.22 |

Source: GSS (National Accounts) and ISSER (various issues).

Appendix Table A4: Relative contributions of the industrial sector and its subsectors to GDP, 1984-2000

| Year | Industry | Relative contribution of industrial subsectors to total industrial GDP (%) | | | |
|----------------|----------|--|--------------------|---------------------|--------------|
| | | Manufacturing | Mining & quarrying | Electricity & water | Construction |
| 1984 | 11.6 | 62.1 | 9.5 | 6.0 | 22.4 |
| 1985 | 13.0 | 65.4 | 9.2 | 6.9 | 19.2 |
| 1986 | 13.3 | 67.7 | 8.3 | 7.5 | 17.3 |
| 1987 | 14.1 | 64.6 | 7.6 | 7.8 | 18.4 |
| 1988 | 14.4 | 64.6 | 8.3 | 8.3 | 18.1 |
| 1989 | 14.0 | 63.6 | 9.3 | 8.6 | 18.6 |
| 1990 | 14.5 | 63.4 | 9.0 | 9.0 | 18.6 |
| 1991 | 14.2 | 61.8 | 9.2 | 9.2 | 19.0 |
| 1992 | 14.6 | 59.6 | 9.6 | 10.3 | 20.5 |
| 1993 | 14.5 | 58.6 | 10.3 | 10.3 | 20.7 |
| 1994 | 14.1 | 58.9 | 10.6 | 10.6 | 21.3 |
| 1995 | 24.9 | 36.1 | 22.9 | 10.8 | 30.5 |
| 1996 | 24.9 | 35.7 | 22.9 | 10.8 | 30.9 |
| 1997 | 25.4 | 36.2 | 22.9 | 11.4 | 30.3 |
| 1998 | 25.1 | 36.3 | 22.4 | 10.0 | 30.7 |
| 1999 | 25.2 | 36.5 | 23.1 | 10.3 | 31.0 |
| 2000 | 25.2 | 36.4 | 22.1 | 10.2 | 31.3 |
| Period average | | | | | |
| 1984-1990 | 13.6 | 64.5 | 8.7 | 7.7 | 18.9 |
| 1991-1995 | 16.5 | 55.0 | 12.5 | 10.2 | 22.4 |
| 1996-2000 | 25.2 | 36.2 | 22.7 | 10.5 | 30.8 |

Source: GSS (National Accounts) and ISSER (various issues).

Appendix B: data source

Data sources

- Enterprise Survey-Investment Climate Assessment Waves from the World Bank
- Industrial Census 1987 and 2003 from Ghana Statistical Service (GSS)
- National Accounts Data from Ghana Statistical Service (GSS)
- Regional Project on Enterprise Development & Ghana Manufacturing Enterprise Survey, Rounds I–VII (12 years: 1992-2003): Centre for the Study of African Economies (CSAE), Oxford University, UK
- State of Ghanaian Economy (various issues) from ISSER, University of Ghana

Acronyms

| | |
|------|-----------------------------------|
| AGOA | Africa Growth and Opportunity Act |
| ATL | Akosombo Textile Limited |
| ATP | Ashanti Technology Park |
| AU | African Union |

| | |
|--------|---|
| BAF | Business Assistance Fund |
| CPP | Convention People's Party |
| CAN | African Nations Cup |
| EDIF | Export Development and Investment Fund |
| EPZ | export processing zone |
| ERP | economic recovery programme |
| EU-ACP | European Union-African Caribbean and Pacific |
| FDI | foreign direct investment |
| FUSMED | Fund for Small and Medium Enterprises Development |
| GDP | gross domestic product |
| GEPC | Ghana Export Promotion Council |
| GFZB | Ghana Free Zones Board |
| GHATIG | Ghana Trade and Investment Gateway Project |
| GIC | Ghana Investment Centre |
| GIPC | Ghana Investment Promotion Centre |
| GoG | Government of Ghana |
| GPRS | growth and poverty reduction strategies |
| GSE | Ghana Stock Exchange |
| GSS | Ghana Statistical Service |
| GTMC | Ghana Textile Manufacturing Company |
| GTP | Ghana Textile Product |
| IMF | International Monetary Fund |
| ISI | import substitution industrialization |
| ISSER | Institute of Statistical Social and Economic Research |
| ISSP | industrial sector support programme |
| LPG | liquefied petroleum gas |
| MDAs | ministries, departments and agencies |
| MOTI | Ministry of Trade and Industry |
| MSE | micro and small enterprises |
| MTDF | medium-term development framework |
| NBSSI | National Board for Small Scale Industries |
| NLC | National Liberalization Council |
| PEED | Private Enterprise and Export Development Fund |
| PIB | Prices and Incomes Board |
| PNDC | Provisional National Defence Council |
| PRSP | poverty reduction strategy programme |
| PSDS | private sector development strategy |
| PSI | Presidential Special Initiative |
| SAP | structural adjustment programme |
| SGER | State of the Ghanaian Economy |
| SOEs | state owned enterprises |
| SSA | sub-Saharan Africa |
| TIP | trade and investment programme |

References

- Baah-Nuakoh, A. (1997). *Studies on the Ghanaian Economy*, vol. I. Accra: Ghana University Press.
- Baah-Nuakoh, A. (2003). *Studies on the Ghanaian Economy: The Industrial Sector*, vol. III. Accra: Woeli Publishing Services.
- GSS (Ghana Statistical Service) (2006). '2003 National Industrial Census'. Accra.
- GSS (2012). 'Provisional GDP 2012'. Accra.
- GSS (various issues). 'Quarterly Digest of Statistics'. Accra.
- GSS (various issues). Data on National Accounts. Accra.
- GSS (various issues). Ghana Living Standards Survey IV and V. Accra.
- GoG (Government of Ghana) (1992). 'Industrial Policy Statement'. Accra: Ministry of Trade.
- GoG (2010). 'The Coordinated Programme of Economic and Social Development Policies, 2010–2016'. Statement on the *Agenda for Shared Growth and Accelerated Development for a Better Ghana* presented to Parliament by the President, December.
- GoG (2011a). 'Ghana's Industrial Policy'. Accra: Ministry of Trade and Industry.
- GoG (2011b). 'Industrial Sector Support Programme'. Accra: Ministry of Trade and Industry.
- ISSER (Institute of Statistical, Social and Economic Research) (various issues). 'The State of the Ghanaian Economy'. Legon-Accra: ISSER at University of Ghana.
- Killick, T. (2010). *Development Economics in Action: A Study of Economic Policies in Ghana*, 2nd edition. New York, NY: Rutledge.
- Nyanteng, V. K. (1993). *Policies and Options for Ghanaian Economic Development*. Legon: ISSER.
- Osei-Boateng, C., and E. Ampratwum (2011). 'The Informal Sector in Ghana'. Ghana: Friedrich Ebert Stiftung.
- Quartey, P. (2006). 'The Textile and Clothing Industry in Ghana'. In H. Jauch and R. Traub-Merz (eds), *The Future of the Textile and Clothing Industry in Sub-Saharan Africa*. Buchdruckerei: Bub Bonner Universitats, pp. 135–46
- Steel, W. F. (1972). 'Import Substitution and Excess Capacity in Ghana'. *Oxford Economic Papers*, 24(2): 212–40.
- World Bank (1985a). *World Development Report*. Washington, DC: World Bank.
- World Bank (1985b). 'Ghana: Industrial Policy, Performance and Recovery'. WB Report 5716-GH. Washington, DC: World Bank, West Africa Region and Industry Department.
- World Bank (2006). *Enterprises Survey-Investment Climate Assessment, Wave 2*. Washington, DC: World Bank.