

CHAPTER FOUR

THE RELEVANCE OF GROWTH IN NIGERIA'S SUPPORT SECTORS FOR ECONOMIC DEVELOPMENT

4.1 Introduction

Accelerating agricultural productivity, and enhancing the links with manufacturing and other growth sectors, to create employment and increase incomes through poverty reduction are prerequisites for structural transformation of Africa (ECA, 2005:13). The national economic development aspiration in Nigeria has remained that of altering the structure of production so as to diversify the economic base (Ajakaiye, 2002:49). Stimulating the structural performance of the growth sectors of the Nigerian economy has become very imperative towards achieving a high level of economic development. However, the country's past development programmes have failed, due mainly to problems of inadequate financial resources for development as well as other policy challenges that faced the country at various times.

The amount of financial resources needed to transform the Nigerian economy is far greater than the amount the country can generate internally. This underscores the necessity of Nigeria soliciting external resources to drive development. As recognised by the MDG last goal, which calls for a global partnership for development, attaining the agreed development outcomes will require in addition to stronger reforms on the part of the developing countries themselves, enhanced support from their developed country partners (World Bank, 2003h:7). Lessons from research and experience have produced a broad consensus on the effective strategy for development, one that is country-owned and country-led, that promotes growth, ensures that poor people participate in and benefit from it, and produces maximum progress towards the MDGs (World Bank, 2003i:4). According to the World Bank (2003i), the optimum development strategy has two interlinked and mutually reinforcing facets:

- a) A climate that enables economic activity in the form of private firms and farms that invest, create jobs and increase productivity; and
- b) Empowerment of and investment by poor people, through improvement of the enabling economic climate to spur growth and expand opportunities for the poor; empowerment of poor men and women through improved access to education and health fosters

socials inclusion and also promotes growth through the stronger participation of these groups in economic activity.

This development strategy, points to the strategic sectors that will produce maximum progress towards achieving the MDGs in Nigeria, assuming that the country can obtain adequate internal and external resources. These sectors include the agricultural, manufacturing, mining and quarrying, educational and health sectors. Table 4, shows the real GDP and the contribution of the agriculture and industrial sectors to the total GDP for the period of 1980-2003. There is a strong indication from the table that output performance of the real sectors needs to be increased. They are growth sectors, and policy strategies directed at enhancing their productive capacity. This can undoubtedly contribute significantly to sustainable growth and development in Nigeria.

Table 4. 1 The Real GDP of Nigeria between 1980-2004

Year	Total GDP	Agricultural GDP	Industry GDP	Services	Share of Agric.	Share of Industry
	US \$ million	US \$ million	US \$ million	US \$ million	To total GDP (%)	To total GDP (%)
1980	22357.0	6432.0	13605.0	3488.0	28.8	60.9
1991	26046.0	8022.0	13265.0	5222.0	30.8	50.9
1993	27396.0	8298.0	13210.0	5884.0	30.3	48.2
1994	27423.0	8498.0	12845.0	5910.0	31.0	46.8
1995	28109.0	8809.0	13009.0	6049.0	31.3	46.3
1996	29318.0	9162.0	13591.0	6317.0	31.3	46.4
1997	30109.0	9556.0	14005.0	6530.0	31.7	46.5
1998	30675.0	9942.0	13770.0	6645.0	32.4	44.9
1999	31012.0	10457.0	13419.0	6691.0	33.7	43.3
2000	32184.0	11002.0	14324.0	6671.0	34.2	44.5
2001	43382.0	12176.0	18199.0	11628.0	28.1	41.9
2002	44054.0	12692.0	16741.0	12393.0	28.8	38.0
2003	48766.0	13214.0	20484.0	13561.0	27.1	42.0
2004	72106.0	18747.6	35331.9	17305.4	26.0	49.0

Sources: 1) World Bank, African Development Indicators, 2003 pp15-18

2) World Bank, African Development Indicators, 2005 p217

3) World Bank, World Development Report, 2006 p297

Table 4.1 above shows a progressive improvement in absolute terms of the performance in agriculture and the general industrial output in the Nigerian economy. However, there is a quantum leap in terms of harnessing and stimulating production in the real sectors towards achieving the sustainable-growth targets set by the MDGs.

In the next section, further analysis is presented to buttress the role of the agricultural sector in providing food security, raw materials for domestic industries, foreign exchange from exports, structural transformation in the economy, employment opportunities both directly and indirectly. A dynamic agriculture can provide large markets for industrial products, which in turn will impact on poverty and hunger, and stimulate growth and sustainable development in Nigeria.

4.2 Relevance of the agricultural sector in Nigeria

In a developing economy like Nigeria, agriculture can play a crucial role of providing food security, raw materials for industries, employment, a market for industrial goods such as agro-chemical, tractors and fertiliser, and foreign exchange within the context of capital formation. These functions are very significant in Nigeria and, indeed, other developing countries, because of the peculiar characteristics of their economies. Federico (2005:1) says that agriculture has always been absolutely indispensable for the very survival of humankind. For centuries, agriculture has provided people with food, clothing and heating. It has employed most of the total active population. Each of the functions can now be briefly discussed.

4.2.1 Provision of food security

Elkan (1995b:111) argues that poverty, population growth and increased urbanisation all call for an increase in the output of agriculture. The importance of adequate food provision is acknowledged, and the problem seems to worsen, considering the following facts:

Nigeria has a rapidly growing population, with the population growth rate of the country more than 3.0 percent. This teeming population has to be fed. In addition to feeding the growing population, the food nutrition content of the people's diet, which is mainly starchy food such as rice, cassava, yam, coco yam, millet and maize, may also be problematic. The food content of the diet of majority of the people is lacking in nutrition and is not balanced due to high prices of protein-rich food like fish, meat, chicken, eggs, beans and beverages. Unfortunately, the outbreak of a bird flu epidemic in Nigeria in 2005 has automatically discounted chicken as protein source. Overall, therefore, any type of modern agricultural production proposed for the country should be rich in nutrition and able to reach the population, to improve their nutritional content of their food intake on a daily basis.

Nigeria is undergoing rapid urbanisation. This is a common trend in most developing countries that adopt policies that favour urban driven development. Consequently, urban areas are seemingly developed while rural areas are left in perpetual poverty. The result of this lopsided development policy is that large numbers of the population of the rural agricultural economy are tempted to migrate to the urban areas in search of white collar jobs. This situation often creates food shortages in both the rural and urban areas, since agriculture and food production are then abandoned to the old and weak rural population.

Increased per capita income often leads to a higher demand for food by the large low-income bracket in Nigeria. A rise in high-income elasticity of demand often leads to higher demand for food. The demand for food in Nigeria is estimated to grow by 3.5 percent per year, while the growth rate of food production is only 1.0 percent. The general implication is that domestic food production does not match population growth, so the country has to rely on food imports to feed the people. This depletes the scarce foreign exchange as the food import bills increase.

Nigeria also has high food demand due to rising inflation. Most developing countries, including Nigeria, often experience high inflation rates due to shortages of food. Understandably, food shortages trigger high prices and since the imbalance is not likely to be addressed through increased supply of food, labour representatives are often left with having to ask for wages increases or increments. Increase in wages does cause reciprocal action by traders, who then raise the price of food to meet the increase in marginal cost caused by the increased wages

Increasing the domestic agricultural production will play significant role in solving the problem of food insecurity, industrial raw materials and food importation. The foreign exchange saved can be channelled to other productive projects.

Table 4. 2 Food imports to Nigeria in US\$ million (current prices) 1980-2003

Year	Amount in US\$ million	Population
1980	3,161	71.1
1991	760	88.9
1992	807	99.2
1993	771	104.8
1994	738	108.0
1995	1,060	111.2
1996	929	114.5
1997	1,219	117.3
1998	1,397	120.8
1999	1,516	123.9
2000	1,573	126.9
2001	1,671	129.8
2002	1,919	132.7
2003	2,443	136.4

Sources: 1) World Bank, African Development Indicators, 2003 p106
2) World Bank, African Development Indicators, 2005 p104

Table 4.2 justifies the need to give agriculture and food production top priority in Nigeria since food import into the country may continue to put pressure on scarce foreign exchange. Close study of the table reveals that, in 1980, total food imports cost the country \$3,161 million when the population was 71 million and that food importation has been rising with the increasing population of the country. One implication of food production not keeping pace with the rise in demand is a possible rise of wages outside agriculture. Table 4.3 shows the food production index and per capita food production in Nigeria. The figures reveal the necessity of increasing domestic food production in the country, which is currently not impressive in terms of the levels of production.

Table 4.3 Food production and food production per capita index (average 1989-1991=100)

Year	Food Production Index	Food Production per capita index
1980	58	78
1993	124	114
1994	128	114
1995	132	115
1996	139	117
1997	143	117
1998	149	119
1999	154	120
2000	156	118
2001	153	113
2002	156	114
2003	105	97

Sources: 1) World Bank, African Development Indicators, 2004 p221

2) World Bank, African Development Indicators, 2005 p217

4.2.2 Provision of raw materials for domestic industries

Agriculture is important in feeding local agro-process industries with raw materials such as animal skins for leather processing; cotton for textiles; cocoa for beverages and confectionary; maize and wheat for brewing; and so on. The import substitution industrialisation policy adopted by Nigeria in the 1980s compelled most manufacturers, both local and foreigners to establish and embark on domestic production of raw materials to feed their industries.

4.2.3 Provision of foreign exchange from exports

Most developing countries' exports are still primary agricultural products, ranging from textiles and clothing, leather, and cocoa beans to mention a few. In addition, export taxes from producers serve as a source of capital and can contribute to capital formation for economic development. Nigeria has recognised the importance of agriculture in capital formation since the late 1980s. Table 4.4 shows the composition and performance of major agricultural export commodities and the share of agricultural produces in the total exports in Nigeria.

Table 4.4 Major agricultural export commodities in Nigeria and the share to total exports (1980-2003).

Year	Forest products exports thousand cubic metres	Cocoa (thousand cubic metric tons)	Groundnut thousand metric tons	Oil palm products thousand metric tons	Cotton thousand metric tons	Total merchandise exports US \$ million	Share of Agriculture in total exports US \$ million	Share of agriculture in total exports %
1980	11	151	1	96	0	25,956	446	1.7
1987	17	0	0	0	0	7,545	258	3.4
1988	16	220	0	102	0	6,897	440	6.4
1989	11	149	0	64	1	7,870	255	3.2
1990	37	154	0	9	3	13,585	230	1.7
1991	49	161	0	8	1	12,254	214	1.7
1992	34	111	0	3	0	11,791	189	1.6
1993	431	161	0	2	3	9,924	275	2.8
1994	288	148	7	6	3	9,415	327	3.5
1995	269	139	1	11	2	11,734	403	3.4
1996	248	182	4	17	22	16,117	542	3.4
1997	0	147	22	10	32	15,539	522	3.4
1998	0	135	13	11	9	10,114	0	0
1999	0	208	5	14	7	11,927	0	0
2000	0	145	0	163	0	21,395	0	0
2001	0	175	2	14	20	17,949	0	0
2002	0	0	3	11	11	14,912	0	0
2003	0	241	3	13	26	0	0	0

Source: 1) World Bank, African Development Indicators, 2004 p

2) World Bank, African Development Indicators, 2005 pp.92-96

The contribution of agricultural export commodities to the total exports and as a foreign exchange earner has not shown significant improvement over the years, in spite of the sector's role as the main foreign exchange earner in the country prior to the time that crude oil exports became prominent. This trend has to be reversed, especially now that the country needs capital to fund the important development project needed to increase growth and build a modern infrastructure, to provide clean water and dependable electricity and to alleviate poverty in the country.

4.2.4 Structural transformation in Nigeria

The development path of the Asian countries discussed in chapter 2 started with agriculture-inducing industrial exports. This in turn absorbed surplus labour from agriculture for higher income distribution, thereby diversifying and transforming the economic base of these countries. This implies that agriculture in Nigeria can play a crucial role in accelerating the process of structural transformation by shifting the surplus labour from the rural agricultural economy to the industrial sector. This process will eventually lay the foundation for sustainable accelerated socio-economic development.

4.2.5 Provision of employment opportunities

In a developing economy like Nigeria, agriculture employs about 90 percent of the population. This figure can be reduced with increased large-scale commercial farming and export manufacturing industries that will attract surplus labour from the agricultural sector. However, agriculture still creates employment opportunities for the growing population in developing countries, and this is why the World Bank (2003j:8) says agricultural subsidies and escalating tariffs in developed countries costs developing countries an estimated 27 million jobs annually. This often frustrates efforts by poor countries to diversify their economies and move up the technology ladder.

4.2.6 Provision of large markets for industrial products

Agriculture also plays an important role in providing a market for agricultural capital products, tools, and machinery, such as tractors and harvesters, agro-chemicals and fertilisers. It is generally recognised that growth in agricultural production has become critically dependent on yield increases primarily based on the development of new high-yielding varieties (Srinivasan, 2003:187). As noted by Johnson (2002:1-2), agricultural biotechnology can contribute significantly to overcoming the problems of food shortages in developing countries by increasing yields and the nutritional quality of raw products, and ensuring an adequate amount of vitamin A for children. The role of the agricultural sector in improving food security, creating employment, reducing poverty and hunger, and stimulating much-needed growth and development is with little or no doubt vital for a developing country like Nigeria.

However, innovative technologies are inevitably required to transform present traditional agricultural production into modern biotechnology that caters for mass production of food, thereby helping to solve the problems of food insecurity, poverty and hunger in Nigeria. However, the agricultural, like the other growth sectors, can only grow through investments. This makes foreign investment into the Nigerian agricultural sector crucial. Agriculture remains the backbone of the economy in most developing countries and in the Nigerian economy, typically, it is the largest source of employment. Great majority in the poor nations source their livelihood in agriculture (Lindahl, 2005:52). A strong and growing agricultural sector is increasingly recognised as essential to economic development, both in its own right and to stimulate and support growth in industry. In the following section, the relevance of the manufacturing sector in economic development and growth is discussed.

4.3 The relevance of the manufacturing sector in economic growth and development in Nigeria

Modern industry is seen as the hallmark of a developed economy (Lall, 2002:125). Indeed, industrialisation is widely accepted by both developed and developing countries as the centrepiece of the development process. Apart from the material benefits that industrialisation can bring, there is a general belief that it expresses a nation's success on earth and its ability to cope with the modern world. More broadly put, industrialisation is relevant to both developed and developing countries. Delbridge and Lowe (1998:5) identify the main contributions of the sector to economic growth and development as increasing the productivity rate in the production of goods and services; generating employment and skills; generating of wealth; distributing wealth; being a source of innovation and development of technological capacities; generating foreign exchange and trade services; and being an agent of cultural change and the impact on urban- rural transformation. Brown (1995:190) says that in all economies, manufacturing industries have been critical agents of structural transformation that make the transmission from a private, low-productivity, low-income state, to one that is dynamic, sustained and diversified. Industrial production is important for the development of the Nigerian economy for the following reasons:

4.3.1 Historical association with development

Less developed economies are committed to industrialisation, because they desire the national prestige which an industrial economy can give them over fellow primary producers, the desire for economic independence is expressed in the attainment of self-sufficiency in the economy. Remenyi (2004:116) stresses that South East Asia and North Asia, Malaysia, Singapore and Taiwan have out performed the rest of the developing world in taking advantage of the growth based on export expansion because of resolute commitment in industrialisation.

4.3.2 Inability to harness the potential in agriculture

Most developing countries can no longer push further the possibilities of agricultural development, because the price of agricultural products trends to fluctuate widely. These products have not kept pace with the price of manufactured goods, In other words, the terms of trade for agricultural commodities have deteriorated. Nigeria started to exploit the manufacturing industry when the primary sector's foreign exchange contribution to the economy started to dwindle (Ogwuma (1996:67).

4.3.3 Developing countries as agricultural societies

This is the traditional view, but the development of manufacturing can help the agricultural sector in many ways. The processing of agricultural commodities, which is part of manufacturing; increases the agricultural sector's income manufacturing also encourages efficient forms of production and marketing in the agricultural sector and provides agricultural inputs such as machinery and fertiliser, improves the availability of food items by making them available as processed food. Food processing can also help eliminate the problem of a market glut by providing an outlet for excess production. Furthermore, manufacturing helps agriculture by absorbing labour from the rural sector, thus enabling the modernisation and rationalisation of agriculture. A high degree of mechanised agriculture is essential for increased productivity in the agricultural sector. Szirmai (2005:265) says that the industrial sector offers a much better opportunity for capital accumulation, large-scale production and technological progress.

4.3.4 Manufacturing sector as complement to other sectors in job creation

The population of most developing countries is increasing and employment generation is not keeping pace with population growth. Therefore, manufacturing can serve as an additional major

source of employment. In fact, manufacturing can complement the absorptive employment capacities of agriculture, mining, and construction. Ogwuma (1996:67) says that the manufacturing sector plays a catalytic role in the modern economy it is an avenue for increasing productivity, employment generation and enhancing foreign exchange earning capacity. Furthermore, the manufacturing sector creates investment capital income at a faster rate than any other sectors of the economy.

4.3.5 Manufacturing as a relevant development strategy because of its efficient use of land resources

Agriculture is an extensive user of land, which is a finite resource, especially because of ecological problems such as erosion and desertification. This is perhaps why countries like Hong Kong and Singapore had no better alternative than to industrialise, so that available land could be optimally used.

4.3.6 Industrialisation promoting national integration

Industry involves large numbers of transactions, including farmers selling raw materials to wholesalers, manufacturers selling to wholesaler after processing, manufacturers purchasing electricity, legal services, communication and so on, both in and outside the country. This helps each sector to develop stronger linkage with other sectors. The greater the degree of linkage, the greater the interdependence and possibility of building a spatially integrated society. Wield (1994:1) argues that industrialisation is at the centre of development. According to Wield (1994), industrial development brings about most profound changes to the social and economic make-up of societies. Ogwuma (1996) believes that the manufacturing sector promotes wider and more effective linkages among different sectors in the economy.

4.3.7 The manufacturing sector providing additional income

Manufacturing has the potential to earn foreign exchange from exports after entrepreneurs have acquired the necessary technology and expertise and met domestic demand. According to Szirmai (2005:5) the industrial sector offers much better opportunity for capital accumulation, large-scale production and technological progress. Manufacturing plays a critical role as foreign exchange earner rather than saver, since attempting to conserve foreign exchange by restricting imports. For example, the adoption by many developing countries of import substitution

strategy, often fails woefully. In Nigeria, import substitution has failed, because the foreign exchange was being spent on plants and machinery imports, licensing fees and import of raw materials.

4.3.8 Industrialisation inducing technological development

Technology is the principal driver of industrial production and, in particular, of increasing productivity. According to Adiele, (2002:3-4) technology satisfies the need of making man more productivity in his environment. Most developing countries that have industrialised have experienced high levels of technological advancement and to that extent are less dependent on industrialised countries. Ndiyo (2003:848) states that the ultimate impact of technology is the enhancement of the well-being and influence of man through the creation of wealth. Seitz (2002:211) believes that technology makes economic growth and social change happen. The limited use of high technology in the developing countries is one of the reasons why they are less developed and less prosperous than the industrialised nations

4.3.9 Highly industrialised nations and the status of superpower

Most powerful countries in the world are also industrialised, which implies that industrialisation is closely related to a country being a world player in international events. It is also linked to a country being able to wield strong military might. Most industrialised countries are rich and this is critical to the strength of their military development. Jenkins (1994:13) states that rapid industrial growth in developed countries is responsible for the wide gap between them and the developing countries. It becomes imperative for developing countries to pursue industrialisation policy so that they can at least narrow the development and growth gap. These countries have increasingly advanced in electronics manufacturing and development.

In the following section, the relevance of mining and quarrying in economic growth and development is explored.

4.4 Relevance of mining and quarrying (solid minerals) in economic growth and development of Nigeria

It is important to emphasise that the mining and construction industries constitute an important part of the growth sector of a country. These sectors have the potential of contributing significantly to the development of the country. Nigerian has been ranked one of the most highly endowed in renewable and non-renewable resources (Oladunni, 2004:31). The mineral resources include copper, iron ore and steel, that can generate employment, income and provide raw materials for other industries in the country. Workers on road, dam and bridge construction in Nigeria have large potential in the production of iron, steel and natural gas. This can trigger the inflow of foreign investment into the manufacturing sector. The mining, construction and industrial activities in Nigeria hold great appeal and elicit very strong commitment for rapid growth and development of the country. Nevertheless, an analysis of the importance of mining and quarrying for Africa in economic growth and development is necessary so that Nigeria can draw lessons of policy relevance and interest from the activities of other African countries in policy deregulation.

Africa is endowed with rich and diverse mineral resources. In general the continent produces about 60 metal and mineral products in large quantities. Overall, the continent contains approximately 30 percent of the Earth's mineral resources, including 60 percent of cobalt, 70 percent of platinum and 35 percent of gold (Hilson, 2003:233). Hilson, (2003) has shown that an economy can gain significantly from large-scale mining operations and even more from small and medium-scale artisan operations. Reviewing the role of large-scale FDI mining policies as a context for small-scale mining in developing countries, Etemad and Salmasi (2003:59) argue that FDI theory from a mining perspective is no longer rich enough to provide enough guidelines for decision-making and policy formulation in the mining sector. The general theory of FDI is partly responsible for the misguided inadequacies of mining regulations in most countries where large-scale FDI mining multilateral firms hold monopoly power over medium and small-scale mining activities. To date, many international initiatives for the regulation of small-scale mining have been designed, yet very few have been successfully implemented by governments (Andrews, Minying, Lei and Cao, 2003:182-185). According to the UN (1996:43) many large companies seeking to establish operations in

developing countries have concerned themselves with the small-scale mining issue, establishing specialised divisions that deal with community relations.

Artisan and small-scale mining activities are now widespread simply because there are few alternative employment opportunities in many parts of the developing world, and an increasing number of rural inhabitants are turning to artisan and small-scale mining in order to feed their families. This further reinforces assertions that the industry is poverty-driven (Hilson, 2003:3).

Table 4.5 shows the small-scale mine employment capability in selected Africa countries. The employment capability of the peasant poor located around the mines in 25 African countries. It is evident that large numbers of people could be empowered to participate in these mining activities in the various countries shown above. This is useful since mining could be the only direct means these people have of access to the wealth and income generated by the mining and quarrying sector.

Table 4.5 Small-scale mine employment in selected Africa countries 2003

Country	Employment capability
South Africa	10,000
Tanzania	450,000 – 600,000
Zambia	20,000 – 30,000
Zimbabwe	50,000 – 350,000
Ghana	50,000 – 300,000
Guinea	40,000
Ivory Coast	10,000- 15,000
Senegal	30,000
Ethiopia	100,000
Uganda	500 – 10,000
Sierra Leone	30,000 – 40,000
Rwanda	5000 – 15,000
Kenya	30,000 - 40, 000
Madagascar	5000 – 20,000
Morocco	5000 – 10,000
Mozambique	700 – 100, 000
Namibia	10,000 – 20, 000
Burkina Faso	60,000 – 70,000
Burundi	10,000
Central African Republic	45,000
Chad	10,000 – 15,000
DR Congo	150,000
Mali	100,000
Morocco	5000 – 10,000
Nigeria	10,000 – 20,000

Source: Hilson, G.M. 2003 p236

However, common sense suggests that mining activities at any level require some capital and skills in terms of techniques of production. Table 4.6 shows the different criteria used defining small-scale mining in some selected African countries where small-scale mining is fully in operation.

Table 4.6 Different criteria used in the definition of small-scale mining in selected Africa countries 1999

Country	Criteria used	Comments
South Africa	Capital investment	Black people empowered to own shares and operate at technical and board levels
Tanzania	Annual production capacity	Small-scale mining fully in operation
Zambia	Size of concession area	Small-scale mining fully in operation
Zimbabwe	Size of concession area, capital investment	Small-scale mining fully in operation
Ghana	Capital investment, number of participants	Small-scale mining fully in operation
Guinea	Type of mineral exploited	Small-scale mining fully in operation
Ivory Coast	Level of mechanisation	Small-scale mining fully in operation
Senegal	Depth of working, crude production levels	Small-scale mining fully in operation
Ethiopia	Annual production, level of mechanisation	Small-scale mining fully in operation

Source: United Nations, 2002 quoted in Hilson, G.M. 2003 p236

Literature has shown that different countries use a variety of criteria to evaluate the level and empowerment of small-scale operation on an annual basis. Some of these include: annual production capacity; the size of the concession area; capital investment; number of participants and depth of working; crude production levels; type of mineral exploited and level of mechanisation. These criteria are quite important since participants are expected to significantly boost output levels for various minerals. Also, mining production requires some level of capital investment to be able to make large impact in the sector.

According to the UN (2002d), African governments have relied on a wide range of criteria in their recent efforts to define artisan and small-scale mining, documented in national mineral

policies, codes and legislation, but the industry is far from achieving its full potential. The continent's operations employ at least three million men, women and children and these make notable contribution to the continental mineral output. The ILO (1999) estimates the value of gold and gemstones produced by artisan mining annually at US\$1.4 billion in sub-Saharan Africa. In Ghana, the government invested a modest US\$1.4 million to construct regional buying stations that pay world prices to small-scale miners for their gold, a move that has resulted in the collection of well over US\$140 million in revenues that would otherwise have been lost (Labonne, 1996). In other African countries, such as Guinea and the Central African Republic, mineral production is almost entirely confined to small-scale mining. For the Central African Republic, 90 percent of diamond and 100 percent of gold production is carried out by small-scale miners; in Guinea, the share of small-scale mining in national mineral production increased from 66 percent in 1990 to almost 100 percent in 1993 (UNECA, 1993; Bocoum & Samba, 1995; United Nations, 1996; Hilson, 2002).

Artisan and small scale mining activities are strongly proliferating all over the African continent. In South Africa, artisan and small scale-mining is typically practiced in the poorest and most remote rural areas by a largely itinerant, poorly educated populace of men and women without employment alternatives (MMSD, 2002). Artisan and small-scale mining workers now feed their families with proceeds from their mining activities, emphasising the fact the industry is poverty-reduction driven. In many other countries, specific attention and efforts have been made to provide protection to small-scale miners by licensing, registering and documenting their operations. Some of the major reasons for this include the wish to:

- a) Monitor and checkmate illegal mining and smuggling and trading activities;
- b) Encourage private citizens as prospectors to increase mineral production, and to liberalise the marketing of minerals;
- c) Curb the supply of gold to the black market;
- d) Address the exploitation, by the small-scale mining sector, of specific mineral products;
- e) Control the mining rights of cultural minorities within their ancestral lands;
- f) Serve as sources of revenue for the government from the operators;
- g) Address environmental problems as they arise, such as erosion and other hazardous environmental concerns;

- h) Develop and exploit existing small mineral deposits;
- i) Generate additional foreign exchange to the government; and
- j) Generate employment opportunities and improve living conditions in the rural areas (Hilson, 2003).

Apart from the above reasons for licensing small-scale on artisan mining operations, there is a large need for government to control and protect the environment. This includes to put in place effective health and safety measures to safeguard the lives of miners to explore the need of adopting common marketing and buying centres for all licensed miners. Overall, the government has to introduce sanity in the sector by endeavouring to create incentives and discipline or penalise by using fines, imprisonment, or the holding, suspending and even cancelling of mining licenses or permits given to any miner that contravenes the legislation. The decentralisation of mining regulations is also important and can be achieved by the active involvement of local governments in small-scale mining activities as currently exercised in countries like Ghana, Indonesia, the Philippines, Sierra Leone and Zimbabwe.

Poverty reduction is widely acknowledged as a consequence of the encouragement of small-scale-mining industries in Africa. Many countries have decentralised the licensing and registration of small-mining operations to enable them to increase the exploitation of small mineral deposits, regulate the health and safety of miners, encourage additional revenue to the local authorities, provide employment opportunities, improve the living standard of the people and help them to be less dependent on national government and poverty reduction campaigns.

In Nigeria, the national government should consider the large opportunities offered by small scale-mining activities for poverty reduction, when determining to deregulate its policy and strategies on mining and quarrying (solid minerals) as many countries in Africa have done. Reed (2001:51) explains that Tanzania opened up its mining sector in the 1980s when it realised that it could offer prospects of attracting the much needed foreign investment and expand the sector. At 10 years ago the demand for Nigeria's minerals is relatively high, as shown in Table 4.6. Liberalisation of the mining sector could ensure increased production, and this implies more employment opportunities for skilled and unskilled men and women. Also, the employment

statistics shown in Table 4.5 should be higher given the size of the country in terms of geographical dispersal of these minerals in Nigeria.

Table 4.7 Demand and supply statistics of some processed minerals in Nigeria 1996

Raw material	National demand (quantity)	Supply (quantity)	Shortfall	% short
Beneficiated laolin	150,000	20,000	130,000	(87)
Beneficiated talc	50,000	300	49,700	(99)
Beneficiated phosphate	200,000	0	200,000	(100)
Beneficiated lime	500,000	20,000	480,000	(96)
Beneficiated gypsum	300,000	0	300,000	(100)
Beneficiated feldspar	100,000	10,000	90,000	(90)
Beneficiated bentonite	60,000	0	60,000	(100)
Beneficiated barytes	100,000	20,000	80,000	(80)
Soda Ash	60,000	300	49,700	(99)

Source: Aliyu 1996:158.

The mineral resources shown in Table 4.8 play an important role as inputs or raw materials for the agricultural and manufacturing sectors. Table 4.8 contains the principal uses of the above mineral resources.

Table 4.8 Principal importance and uses of some of the minerals in Nigeria 1996

Minerals	Principal uses
Kaolin	Paper, rubber, pottery, ceramics and pharmaceuticals
Talc	Ceramics, paint and cosmetics
Phosphate	Fertilisers
Lime	Water treatment and steel making
Gypsum	Cement
Feldspar	Glass, Pottery and ceramics
Bentonite	Water and oil-well drilling
Barytes	Oil-well drilling and white paint pigment
Soda Ash	Detergent and glass

Source: Aliyu 1996:156.

Ongoing discussion and analysis of the relevance of the mining sector has shown that it can generate employment opportunities for rural artisan and small-scale miners and so improve their living standards, increase collection revenue for national, state and local governments, and raising additional foreign exchange for the national government of Nigeria. The contribution of the mining and quarrying sector to economic development of the can be felt if policy control and legislation in the sector is deregulated to incorporate local authorities in the licensing and

registration of mining operators in the country. Access to mineral exploration by small-scale miners will provide a means of livelihood, jobs and business opportunities to millions of Nigerians who are still roaming the streets looking for employment. The study has, however, shown that the mining sector can also provide important inputs for the agricultural and manufacturing sectors. Mining has been a growth and development sector in many other African countries like Botswana, DR Congo, Ghana, Ivory Coast, Namibia, South Africa and a host of other countries in the continent depend on it for domestic and foreign income. According to Hilson (2003:18), the activity of mining is mainly poverty-reduction driven. Hence, it is people who initiate and direct this poverty alleviation measure for any country as a whole, with little cost and limited intervention on the part of the government. In the next section, the role and importance of the socio-economic sectors like education and health in economic development and growth are discussed.

4.5 Relevance of the growth support sectors, education and health, in achieving economic development in Nigeria

The growth support sectors, education and health, provide strong support and contribute immensely through the provision of human capital, and enhancement of productivity, employment and income. Advancing the performance the health sector can ensure good health and a healthy work force for sustainable development. In this section, the outlook for the Nigeria's educational and health sectors is discussed. The education sector is presented first, followed by the health sector.

4.5.1 Education as condition and support sector for MDGs in Nigeria

Formal education plays a critical role in the development of human capital and economic generation. Education has been linked to economic progress for both the individual and for the society (Koven & Lyons, 2003:50). Worldwide, countries have come to recognise the link between education and economic development as well as the growth of knowledge-intensive fields. Education is viewed as particularly relevant for emerging industries, which are placing new demands on the nation's workforce for technical expertise, knowledge about regional markets, financial capital, and a stable workforce.

In future, production will depend on knowledge of information processing and flexibility, skills that change frequently. The establishment and development of knowledge infrastructure should be seen as essential for rural and urban development in the twenty-first century. Just as Nigeria needs a high quality and efficient physical infrastructure such as transportation, electricity, hospitals, clean water and other utility systems, it should have the capacity for future growth and development. The country needs a knowledge infrastructure to grow creative and innovative individuals, groups and organisations that can contribute to sustainable economic development.

The role of higher educational institutions have changed, throughout the world the trend has been for universities to shift from elite to mass systems that offer almost universal access (Mazzarol & Soutar, 2001:33). As a matter of fact, what made the Asian miracle is that these countries invested largely in education, which made them much more successful at adopting the technologies that advanced the countries requirements, than sources of their peers. Growth needs higher rates of investment in physical and human capital, and the newly industrialised countries achieved these high rates (Nelson & Pack, 2003:105).

According to Nelson and Pack (2003), between the 1960s and 1990s, Hong Kong, Korea, Taiwan and Singapore transformed themselves from being technologically backward and poor into relatively modern and affluent economics. Education represents both consumption and investment. Education it is valued for its immediate benefits, and it helps to create income in the future by providing educated workers with the skills and knowledge that enable them to increase their productive capacities and receive higher earnings. This means that the distribution of education influences future income distribution. Thus, the equity implications of educational investment are important.

Education is an important aspect of human capital development; it is an investment to support economic growth and enhance the well-being and standard of living of the people. Rightly considered, it is an investment to acquire knowledge. Basic education impacts on people's literacy and their ability to think adaptably and with time-based discipline. It also brings a higher degree of personal efficiency and ability to innovate. Countries like Japan, South Korea and Germany are known to have made large investments in education. Their continued technological dominance represents the fruits of their investments.

The case of Nigeria which has more than 60 institutions of higher learning is almost totally bad. The problems that bedevil the sector are numerous, ranging from a lack of focus and inadequate funding to poor infrastructure. The persistent industrial strikes have led to unnecessary loss of time. There is no doubt that investment in education is an unavoidable imperative for any country that desires economic growth and development. Firstly, it drives meaningful socio-economic change. Secondly, proper education throws up the requisite skills needed to tackle social problems. It was the realisation of the place of education in human capital development that made the UN make basic universal primary education one of the MDGs. This is to ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a course in primary schooling.

There is no doubt that this goal is born out of the necessity to expand the primary, secondary and tertiary institutions to the level that they will begin to provide skilled manpower for economic and technological development. In 2000, the percentage of students over 15 years old in tertiary institutions in Nigeria was 40 for male and 44 for female, while the students between the age of 15 and 24 years old was 10 for male and 6 for female (World Bank, 2002). Large numbers of children have little access to education with high dropout and repeat rates. High school education also faces serious problems with regard to quality, and requisite public finance. There are few libraries, most of them lacking access to international journals and generally deprived of educational materials, while research facilities remain limited. Furthermore, life expectancy was estimated at 54 years for the period 1999 to 2005, respectively. The adult literacy rate for Nigeria was low at 57 percent from 1990 to 2005 indicating that at least 43 percent of Nigerians are illiterate.

The Nigerian educational system is faced with many challenges, including the problems of providing educational opportunities to disadvantaged minorities such as the nomads (Nomadic education), street children and disabled persons. There is also the problem of low teachers-student ratios, inadequate supply of instructional material and poor general quality of education in Nigeria. This can be attributed to low budgetary allocation and implementation in the educational sector. Table 4.9 below shows the federal allocation to education between 1990-2005. The figures in Table 4.9 show a progressive increase in the absolute amount being

allocated to the educational sector, but the percentage of the federal budget that this represents has not improved. Within the period under consideration 1990-2005, federal annual budget to education had fallen below 15 percent.

Table 4.9 Federal government budget allocation to education between 1990-2005

Year	Amount allocated in Naira (₦) million	% of total budget
1990	2,121.2	5.3
1991	1,557.5	4.1
1992	2,404.4	6.3
1993	7,999.4	7.3
1994	10,283.8	14.9
1995	12,728.0	13.0
1996	15,350.0	10.8
1997	16,840.0	11.5
1998	23,666.1	9.6
1999	27,713.5	11.1
2000	56,568.2	8.7
2001	19,860.0	7.0
2002	9,215.0	7.9
2003	14,680.0	-
2004	9,053.0	-
2005	9,053.0	-

Source: 1) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December, 2004 p165
2) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December, 2005 p194

Table 4.10 Primary education in Nigeria, 1990-2005

Year	No. of schools	Total enrolment	No. pupils per teacher	% of female
1990	354,333	13,607,249	36	43.2
1991	35,466	13,776,854	37	43.8
1992	36,610	14,805,937	39	44.1
1993	37,812	15,911,888	41	44.4
1994	38,000	16,831,560	50	44.4
1995	39,677	17,994,082	60	44.0
1996	416,660	19,794,082	48	41.7
1997	43,951	21,161,852	52	43.5
1998	45,621	22,473,886	54	45.2
1999	47,902	23,709,949	52	48.5
2000	48,860.00	24,895,444	54	42.0
2001	49,343.00	27,384,991	56	51.0
2002	47,694.00	29,575,790	55	51.0
2003	52,815.00	26,292,370	53	53.0
2004	65,627.00	28,144,967	52	53.0
2005	59,340.00	26,160,000	40	53.0

Source: 1) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December 2004 p165
2) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December, 2005 p194

Table 4.10 further shows the profile of primary education in Nigeria between 1990-2005. It indicates that there has been an increase in the number of primary schools from 35,433 in 1990 to 39,677 in 1995 and 47,902 in 1999. The number of primary schools further increased from 48,860 in 2000 to 65,627.0 in 2004, and decreased to 59,340 in 2005. At the same time, the total enrolment increased from 13,607,249 in 1990 to 17,994,082 in 1995 and 23,709,949 in 1999. The enrolment increased further in 2000 from 24,895,444 to 28,144,967 in 2004. It also decreased to 26,160,000 in 2005. However, it is worth noting that while the number of enrolment was increasing, the teacher-pupil ratio did not increase as well. This means that the pupils may not receive adequate attention from the teachers, who are burdened with many pupils contending for attention. There is also the possibility of the pupils' not performing well due to inadequate attention from the few available teachers.

Nevertheless, it is also important to note that the percentage of female pupils enrolling within the period under consideration have been increasing progressively from 43.2% in 1990 to 44% in 1995 and 48.5% in 1999. Interestingly, the number of female pupils' enrolment increased in 2001 from 51% to 53% in 2004 and 2005. Though this indicates a positive outlook of bridging the gap between male and female pupils in primary education by 2015. It is instructive to observe that, apart from the physical increase in the number of primary schools enrolment, the number of teachers need to be increased, implying both improvements in the quality of teaching and training, and of instructional materials made available to the schools. The general picture portrayed in Table 4.11 above of secondary education in Nigeria between 1990-2005, was not very impressive, compared with that of primary education. Between 1990 and 1995 there was no significant increase in the number of institutions. From 1996 to 2005, there was a proliferation in the number of secondary schools in Nigeria. Though the teacher-student ratio did not increase proportionally, as it was for primary education, but the number of enrolments showed a progressive increase.

However, unlike in primary education, the percentage of female students in secondary education had shown an unstable improvement over the same period. This dismal situation can be attributed to factors like high rate of dropout in schools, possibly because of the high cost of education at secondary school level. With increasing poverty among many Nigerian households parents are forced to withdraw their female children from school. Female children at educational

age are also often forced into early marriage by their parents especially in the rural agricultural areas. Some female students withdraw from school to join their parents in petty trading (child labour). According to Atsenuwa (2003:61) the low enrolment of girls in schools is a reflection of the sexual division of labour in most homes in Nigeria. Atsenuwa (2003:61-62) further stresses that overall, girls labour is perceived as more essential than boys' in domestic chores, farming and petty trading.

Table 4.11 Secondary education in Nigeria, 1990-2005

Year	No. of schools	Total enrolment	No. students per teacher	% of female
1990	6,046	2,949,225	21	43.0
1991	5,905	3,124,171	22	41.0
1992	6,009	3,600,620	25	45.0
1993	6,162	4,150,917	N/A	48.6
1994	6,300	4,500,000	N/A	48.6
1995	6,452	5,084,546	40	43.0
1996	9,111	5,389,619	37	39.2
1997	7,311	5,578,255	39	41.9
1998	7,801	5,795,807	40	46.2
1999	8,113	6,056,618	38	45.0
2000	8,275	6,359,449	46	46.0
2001	8,275	6,995,394	47	47.0
2002	8,351	7,485,072	48	48.0
2003	11,918	7,091,376	43	43.0
2004	13,333	6,745,186	43	43.0
2005	12,610	6,534,000	27	44.0

Source: 1) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December 2004 p165

2) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December, 2005 p194

Note: N/A = not available

In agrarian societies, like Nigeria, where the female role is defined largely in terms of home, parents are likely to have significant incentives to keep their daughters at home and out of school. This means that in agricultural societies girls are much less likely to be enrolled in school at any point in time thereby achieving lower levels of education than boys (Atsenuwa, 2003). This also implies that parental characteristics are important determinants of education for both men and women. Boys are usually given higher parental encouragement for education than girls. In addition the education process includes factors particularly relevant to women's adult family roles, such as dating frequently, age at first marriage, and age at first birth, which will have significant effects on educational outcomes for females more so than for the males.

The gender differences in education may arise because of gender differentiation in adult roles and the emphasis on family-related roles for women (Atsenuwa, 2003). On a general note, concerted efforts should be made by the government to reduce those constraints that encourage high rates of secondary school dropout by female students. Strong educational foundation is needed at primary and secondary school levels. It is, however, important that both the physical and knowledge infrastructure be adequately provided for by both the private and public sectors.

The spread of mass education constitutes a fundamental social transformation and a watershed in the attainment process, because it opens up previously unavailable status mobility routes (Beutel & Axinn, 2002:109). Mass education as Beutel and Axinn (2002) suggest, is a strong instrument for social and economic transformation in any society. Specifically, the dimensions of social change are likely to have an important impact on educational attainment in the following ways:

- a) Expansion of academic institutions: the proliferation of schools will most likely promote enrolment and attainment as schools become increasingly available, the cost of sending children to school will decline, and parents will find it easier to send their children to school. In the same manner, the nearer the schools are to the homes, the more common school attendance is likely to become.
- b) Availability of wage labour employment opportunities is also likely to stimulate greater educational attainment, because school enrolment allows individuals to invest in their human capital in order to increase their chances of obtaining a wage labour job and mobility among jobs. This is particularly true in Nigeria, where the British system of formal education adopted throughout the country gives the impetus for individuals to think of getting white-collar jobs. As a result, as wage labour employment opportunities increase, motivation to enrol in schools is expected to increase as a means of securing these jobs. Likewise, we expect motivation to educate children to increase with longer exposure to wage labour jobs nearby.
- c) The proliferation of industries and markets is likely to increase school enrolment and educational attainment, although this may be effected indirectly. As industrialisation and markets spread throughout rural areas, goods and services become more widely available, but only to those that have the money to purchase the goods and services. In effect, Beutel & Axinn (2002) believe that the expansion of industries and markets is

expected to increase the demand for money, which may encourage individuals to pursue wage labour jobs and higher wages among the jobs, and the desire to obtain higher paying jobs is expected to motivate educational attainment.

Provision of physical infrastructure such as transportation will facilitate access to schools, wage labour employment opportunities, and markets. By increasing access to these other social institutions, each of which is expected to drive and motivate educational attainment by itself. An improved transportation infrastructure is likely to increase school enrolment especially in urban areas. Nigeria's major cities experience such bad traffic congestion that people and motorists spend hours on the road before they can reach their various destinations within the cities. The chaotic transport and traffic situation is adduced to poor road and rail network transportation systems. This will act as a disincentive to educational enrolment and attainment especially within and just outside the cities (Beutel & Axinn, 2002).

Attention should be concentrated on providing additional funds for the education sector. Many Nigerian children have no access to basic education, and the majority of the nearly 19 million that are lucky enough to enter primary schools, (both public and private), are given sub-standard education (UNICEF, 1999). According to Hugo (2003) "he who opens a school door, closes a prison". In the light of this, the government should stand tall and face the challenges of encouraging every Nigerian child to complete a basic primary school education by 2015.

The following section discusses the crucial role of an efficient health care service in achieving a healthy population and labour force. This is needed to promote increased productivity and sustainable development in Nigeria.

4.5.2 The importance of health care service as growth support sector for attaining the MDGs in Nigeria

No matter where a health care discussion begins, the conversation soon turns to issues of affordability. Employers and employees complain about high premiums, patients and providers note high treatment costs, and policy-makers lament high and rising spending. Each perspective presents a different aspect of the same problem (Henderson, 2002:2). The importance of good health across all categories of Nigeria's population cannot be

overemphasised. Dasgupta (2004:114) says that improved health status implies fewer working days lost due to ill health and fewer resources spent on health care. Consequently, economic productivity increases. Between the 1950s and 1970s, health indicators improved substantially in many African countries as they invested heavily in public health services, and their governments enthusiastically endorsed the general international consensus on the relationship between health development and poverty that culminated in the acceptance of the primary poverty healthcare strategy (Bloom, Belshaw & Livingstone, 2002:426).

However, the concern for health care services began to decline because of economic problems arising from declining foreign revenue and the structural adjustment programmes embarked on by these countries. This focused market solution in 1980s and led to drastic reduction in public expenditure. This invariably affected public expenditure on public health care delivery. For instance, Table 4.12 illustrates Nigeria’s federal allocation to health (1990-2005).

Table 4.12 Federal government of Nigeria national budget allocation to the health sector, 1990-2005

Year	Amount (“N” million)	% of annual federal budget
1990	904.9	2.5
1991	1,091.8	1.4
1992	1,051.1	2.0
1993	2,652.2	1.5
1994	3,042.3	4.4
1995	5,060.9	5.2
1996	4,838.0	3.4
1997	7,343.0	5.0
1998	11,291.96	4.6
1999	13,727.30	4.5
2000	14,806.43	2.7
2001	20,128.0	3.9
2002	12,608.0	4.7
2003	6,431.0	4.7
2004	18,207.0	4.7
2005	18,207.0	4.7

Source: 1) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December 2004 p165
2) Central Bank of Nigeria Annual Report and Statement of Accounts, 31st December, 2005 p194

The total government budget to the health sector between 1990 and 2005, as shown in Table 4.12, was under six percent. However, since health plays an important role in achieving growth and development in any economy, the government needs to prioritise its programmes in favour of investing more in grass roots primary health care systems. Evidence has shown that the rich (politicians) prefer private hospitals overseas when they are sick for quick medical attention,

diagnosis and medication even at the highest possible cost, while the poor generally go to public hospitals to obtain health care services.

However, it has often been truly alleged that public hospitals are poorly run and serve as mere consulting centres due to lack of drugs and equipment. Most public hospitals do not experience three hours of constant electricity supply in Nigeria. Low morale and poor dedication of medical personnel due to low remunerations and other incentives are also problems in the health care sector. With about ₦100 billion of debt relief released to the country, money is available to refurbish and equip all the public hospitals, including the famous University Teaching Hospitals, and to build additional clinics at primary rural community level to tackle the escalating rate of the HIV/AIDS pandemic in Nigeria. Nigeria is ranked third in the world in terms of HIV/AIDS prevalence rates (UN Report, 2005). The World Bank (2006:293) states that the life expectancy at birth in the country is now 44 years and 45 years for male and female respectively.

4.6 Summary of the main findings and conclusions

In this chapter, attention was concentrated on the analysis of the relevance of the growth sectors namely agriculture, manufacturing and mining (solid minerals); and the growth support sectors, namely education and health care delivery in Nigeria. The analysis shows that the agricultural, manufacturing and mining and quarrying sectors have potentials for creating more jobs and income, reducing poverty and increasing productivity for the sustainable economic development of Nigeria. There is a strong linkage between the three important growth sectors in Nigeria. Agriculture provides strategic raw materials for the manufacturing sector and manufacturing in turn supplies farming tools and equipments and inputs such as fertiliser to agriculture. Furthermore, a dynamic manufacturing sector is expected to facilitate the transformation of the agricultural sector in terms of building, designing or fabricating suitable, cost-effective machinery and technology to increase production, and also absorb and train extra labour from agriculture.

The mining sector can complement agriculture in rural economic transformation since its activities are rural-based. Both sectors are poverty-reduction driven. Therefore, poverty alleviation policy measures of encouraging proliferation of well-organised small-scale mining operation could easily be incorporated in the mining and agricultural sectors. Care should also

be taken by the government to protect the environment and the health and safety of the people engaged in these sectors, by minimising environmental hazards such as erosion and pollution. Farmers should be encouraged not to switch their labour to mining activities. There is a strong need for Nigeria to deregulate its policy strategy on mining as many countries in the continent have done. This will encourage the national, state and local governments to all work together in harnessing the growth and development potentials of the growth sectors.

Meanwhile, the education and health care sectors play an important role in providing the much-needed human capital and technical know-how. The interaction of these sectors could bring about rapid social and economic transformation required to attain sustainable economic development in Nigeria. In each of the sectors, great potential and investment are required both from internal and external sources to boost gross output growth. In the next chapter, the empirical and analytical frameworks of the study are discussed.