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EDUCATION INFRASTRUCTURE AND UNSUSTAINABLE DEVELOPMENT IN AFRICA

A. O. OLUTAYO

Abstract: Rather than creating the appropriate social relations for the means of production, the perspective on development in Africa has hinged on "infrastructure for development" thus leading to underdevelopment. This is because the social relation of infrastructure for development is parasitic and thus cannot reproduce itself. What it does is to accumulate primitive capital for conspicuous consumption rather than the creation of reproductive capital. Consequently, a dependency relation with the source(s) of primitive capital accumulation is almost inevitable if the dominant group in the relationship, with its foundation in the acquisition of formal education, is to continue to subsist. Ironically, this incapacitates the subordinate group(s) as their recruitment processes are conditioned by the powerful ideological state, now global, apparatuses. The paper shows how this process works through the empirical examples of the acclaimed "success" story of Botswana and the perceived "failed" state of Nigeria.

Keywords: Education; infrastructure; development; underdevelopment; Nigeria, Botswana.

Introduction

Economic statistics show clearly that Africa seems to be on the path to sustainable development. This is evident when comparing world economic growth, which improved from 3.5% in 2005 to 3.8% in 2006, with Africa's overall GDP growth rate of 5.7% in 2006 up from 5.2% and 5.3% in 2004 and 2005 respectively (ECA, 2007). These increases were the result of improvements in macroeconomic management and strong global demand for key African export commodities sustaining high export prices, especially crude oil, metals, and minerals. Indeed, the World Economic Outlook (2007) projections still show that sub-Sahara Africa would continue in this trend in 2008. Nonetheless, as the document (ECA 2007) asserted, these improvements rest "on a very fragile foundation" (*ibid.,* 10). This "fragile foundation" is the continued heavy dependence of the whole of the continent on the primary commodities of production, exports, growth, and even consumption, thus exposing the continent to external shocks and potential instability. Any shock in the world prices of commodities would adversely affect the stability of these nations. Implicitly, therefore, the continent has not emerged from its peripheral status of incorporation into the World Capitalist System that occurred more than four centuries ago. It is not surprising, therefore, that measures of poverty have remained virtually unchanged over the past decades with Africa lagging behind in all indicators of social development. Relative to their development

goals, even the seemingly high GDP growth rates are low and, as it stands, only very few African countries are positioned to achieve the Millennium Development Goals (MDGS). This is because only five countries recorded 7% or more GDP growth rates during 1998-2006; with Angola and Mauritania recording as much as 17.6% and 14.1% respectively and sub-Saharan Africa lagging behind in almost all areas including universal primary enrolment.

Unfortunately, even the few enrolled students, especially at the tertiary institutions, have had to "brain-drain" in tandem; it seems, with their "brain-draining" staff. Thus, while the governments continue to increase spending on formal primary and tertiary education, the beneficiaries are, inevitably, forced to migrate as globalization, creating better opportunities elsewhere, enhances their chances. Yet, in today's global economy, as UNCTAD (2007) posits, "Knowledge is becoming more and more important in the global sphere of competition and production. In this context, there is a danger that LDCs will increasingly be marginalized if they do not enhance the knowledge content of their economies and achieve economic diversification through learning and innovation." But how can this be achieved when received strait-jacketed knowledge, through formal education, continues to determine the rate of productivity and industrialization? Ironically therefore, development becomes a "vicious circle" for the "Third World" nations.

To address this question, the remainder of the paper is divided into four parts. The next section briefly discusses the history of the peripheral incorporation of Africa, with specific emphasis on Botswana and Nigeria, into the World Capitalist System, bringing to focus the old argument of the 1950s through 1970s that explains the underdevelopment status of Africa. It was this debate that led to the dependency theory, and its variants, and the emergence of a distinct period "spanning the 1960s and the 1970s…characterized by policies aimed at strengthening economic autonomy" (ECA 2007, 9) during which aggressive diversification oriented policies were pursued. The third section introduces the methods by which a certain "type" of capitalism was perpetuated in Africa through the formal education system, which undermined the indigenous political economy, reorienting development outside the context of the available means of production, thus perpetuating the underdevelopment process. The following section is the core of the paper comparing how these processes have been and are being played out in Botswana and Nigeria. Neither country belongs to the category of low income, weak human assets and high income vulnerability countries. Botswana, however, is a land-locked country with its attendant incapacitations (UNCTAD 2002a and b). In both, the question the paper attempts to ask is, to what extent has technological development been enhanced through knowledge acquisition and innovation? The thesis is that the nature of the elites (at all levels of the society) created in the two nations, as in most of Africa, is that of dependence—limited by formal knowledge—without an innovative "spirit". The final section concludes the paper by arguing that both perpetuate underdevelopment even though one is perceived as a "success" story and the other a "failed state". Yet, the latter seems to have trod the indigenous (genuine) development path before, to which both need to seek recourse.

The Incorporation of Africa into the World Capitalist System

That Africa is a European colonial creation formed out of hitherto existing nations determining and satisfying their basic needs does not require any argument (Wallerstein

1988; Gana 1985). What has been consistently contested, especially since the work of the American Marxist economist, Paul Baran, titled *The Political Economy of Growth 1957,* is the possibility of realizing development in the exploited Third World nations (Olutayo 1991). Summarized most simply, the book exposed the impossibility of development in Africa (and other Third World nations) based on the nature of the exchange relationship between these nations and the technology-based economies. Prior to this, he had written *The Political Economy of Underdevelopment 1952*, detailing how monopoly capitalism hinders competitive capitalist development in the so-called developing nations. These expositions formed the precursor for the emergence of the radical school of political economy, popularly referred to as the Neo-Marxist School of Political Economy or, one of its variants, the dependency school and known as the underdevelopment school. With these began the need to critically assess the status of the Third World nations (and the implications of such a status) in the World Capitalist System. Generally, it seems, the conclusion was that this incorporation of Africa in the peripheral status explains its underdevelopment and the question was how can these nations change their dependency or underdevelopment status? Fundamentally, it situates the explanation of underdevelopment in Africa, and the Third World, in the external conditioning of the state. It was, as Ollawa (1983) observed, an approximation of the scientific transformations in the natural sciences because of its methodological achievements and the theoretical innovations.

Without joining arguments, at least not at this juncture, some of the constraints to the emergence of African capitalism have been summarized by Kennedy (1988) to include, among others: (1) the often obstructive and/or ineffective nature of state power and political ideology from the colonial period through to the present. (2) Africa's past and continuing position of dependency in the international economy resulting in limited capital resources and market opportunities, and preventing the exercise of national autonomy. (3) The competitive threat of superior foreign capital endowed with considerable advantages not available to local entrepreneurs. (4) The legacy of an inappropriate and unsupportive traditional society and culture characterized by particularistic obligations and an ethos anti-pathetic to individual accumulation. (5) The as yet incomplete establishment of what Marxists call the social relations of production (that is, a sufficiently differentiated class system in which labour, too, has become fully commoditised). (6) The unpredictable national environment for business enterprise associated with an inadequate, unreliable education system and communications infrastructures which pushed up production costs, and increased the risk of interference and unnecessary regulation from officialdom. (7) The quality of entrepreneurial endeavour manifested by local capital itself.

Specifically, Nigeria and Botswana were incorporated into the British indirect rule system, which favoured the indigenous traditional elites in the latter rather than in the former. In addition, indirect rule was more indirect in Botswana than in Nigeria. In world capitalist system parlance, Botswana may be said to have been located on the periphery of the periphery. Botswana, though a British colony, was more of a protectorate and a reserve under the South African apartheid regime, itself an outpost for raw material exports to Britain, and only labour was required from Botswana to work in the South African mines (Makgala 2006; Tsie 1996; Good 1992). In so far as labour was forthcoming, the indigenous socio-political arrangement was, more or less, untouched especially because its administration—from

Mafikeng—was outside the protectorate. Thus, the indigenous ruling elites consolidated their exploitation of the ruled while ensuring "good relations" with the colonial government. Thus the impact of colonial capitalism was limited.

In fact, education was given least attention with many attempts of South Africa to incorporate Botswana. Thus, from the pre-colonial period, community schools, under the respective chiefs and organized mechanisms, through the assistance of the missionaries, were born as a response to the restricted access to primary education. This continued into the colonial era. Botswana did not have its first secondary school until 1965, at the time of self-government. And most Batswana who could afford secondary school chose to attend schools in South Africa funded by missionaries such as Tiger Kloof and Lovedale (Dale 1995) The independence era saw a diminishing role of community involvement mainly because government was in the process of establishing new structures. In this new structure, primary education was brought under the control of the District Councils, and secondary education, which had been totally neglected by the Colonial administration, was brought under the direct centralized control of the government. Within the first decade of independence, government could not control the upsurge in the demand for secondary education and the communities had to be mobilized to take over.

With the First National Commission of 1976, the recognition of the communities led to a joint partnership with the government. In this partnership, local communities were expected to elect a local Board of Governors; provide land for building the schools; build half of the number of required staff houses; manage the schools; and be responsible for the recurrent expenditure of the schools. While, with active assistance and support from the World Bank, the government was to provide the teachers and control the curriculum to ensure the quality and equity of education (Moorad 1997). Consequently, what was to be taught was not to be determined by the local communities and, as such, it was not in the interest of the people but for an existence outside their local communities. Even with the integration of vocational skills into the secondary school curriculum in the 1970s, tagged education-with-development, there has been little or no impact on the "practicality" of education, especially with the incorporation of the "brigades" into the formal system of education since the 1980s (Botswana 2007; Parsons 1999). Thus, the subordination of the indigenous economy to the World Capitalist system was, first and foremost, realized through the emphasis on formal education with the curriculum being in contradistinction to the indigenous economy.

In a way, this constituted the basis of ineffective state power and an ideology dependent on the possession of formal education with external requirements. Ironically, it is the possession of formal education that determines the basis of legitimacy. (We shall come back to this later).

Nigeria, as noted above, was incorporated into the World Capitalist Economy in terms of a peripheral status but with the peoples having more direct access to the colonial officials, though, initially, through their chiefs. Unlike Botswana's experience, however, education was made available to Nigerians, albeit in the urban areas. Christian missionary societies were the pioneers in this direction with the colonial government giving grants-in-aid as well as contributions from voluntary agencies and communities. Indeed, by the 1930s, the contributions of town and tribal unions, voluntary agencies, and philanthropists had become a major factor in education financing (Ukeje 2002). Yet, with the involvement of the colonial

government's grants-in-aid, and the control of the curriculum, the dependency on formal education as the civilizing institution for the incorporation of Nigerians into governance began. Again, as in Botswana, the communities were only to supply the land and board, which was later reconstituted in favour of the ruling elites. Their "ticket" for ascension into the ruling position was the attainment of a European formal education. It had nothing to do with the possession of the indigenous means of survival (Olutayo 2002a).

Survival is now redefined in terms of the possession of formal education. Children were no longer learning incidentally, through the imitation and emulation of adults' achievements in the indigenous environment; neither was the inculcation of indigenous wisdom by means of folklore transmitted for survival within the environment, nor were the institution of age-grades and apprenticeship scheme relevant any longer (Hull 1987). All these, according to Fafunwa (1974), were to ensure the development of the child's latent physical and intellectual skills and character; the inculcation of respect for elders who knew the environment within which the children would grow; the acquisition of specific vocational training and the development of a healthy attitude towards honest labour and a sense of belonging and active participation in family and community affairs; and the understanding and appreciation of cultural heritage.

In Botswana, as in Northern parts of Nigeria (though more diversified due to its size and terrain, see Solivetti 1994; VerEecke 1989), gender differentiation of occupation was clearly delineated. Boys were taught to care for goats, track strays, and milk animals. They became familiar with special healing herbs, gathered edible berries and roots, located water sources, hunted animals, and discovered elements of survival. As they grew older, boys were prepared for men's roles and work, learning hunting skills, herding and plowing. It was an education for life centred on identifying animals, killing and preserving the meat, and utilizing the skins for clothing, shoes, dairy products, hides and skin, and other items, and the main male occupation was cattle-raising. The women were engaged in agriculture and it was around this that young girls were socialized, learning how to cook, farm, and handle domestic chores. During harvest, they transported dried grains to the village, stored them, and later, sifted and ground them into porridge, which was the dietary staple. Young girls also thatched roofs, washed clothes, and fetched water. Indigenously, there were "formal" schools meant to initiate the children into their different roles. In the words of Hull (1987, 383):

> For centuries, such ceremonies (initiation) were an essential part of life in Bechuanaland, and many villagers were not eager to replace them with formal, religious, or school education. The modification or abolition of these ceremonies caused a great deal of conflict with the indigenes.

Yet, change did come, with the increasing establishment of European formal schools and the deemphasizing of local traditional life being replaced with imported foreign values and attitudes.

Formal Education and "Capitalism" in Africa

Unlike in modernization theory, with its precursor from the works of Max Weber, capitalism from Marxist and neo-Marxist perspectives recognizes the centrality of the creation, ownership and control of technology to the development of any nation (Olutayo

2002b). It was, however, modernization theory that was applied to Africa. Aside from the economic motive, European colonialism was to *civilize* the *heathen* from *the Dark Continent*. This, indeed, according to Wilmot (1985, 49), was in line with the *original* Latin definition of education-*educere*-meaning to "lead out of…a movement from ignorance to knowledge, from foolishness to wisdom, from darkness to light". So, it was not a deliberate attempt to perpetuate underdevelopment, but the subjective and contextual definition used by the colonizing authorities. Even "science" was to be defined in terms of this generalizing principle that Europe had decided to create (Olutayo 2006). It was what they knew and had that they gave. Thus, the history and experience of the colonized was irrelevant compared to that of the colonizing *authority*. And the experience, as explicated by Rostow (1990; 1960) was expected to progress in stages.

To achieve this, formal education was required to create the "new men" who would replace the colonial agents. A group of people, with a new orientation, different from the *primitive* peoples, as in the enlightenment period, but ready and willing to reject their former ways, were needed. They were the ones expected, as in 19th century Europe, to question the status quo in their societies with a view to breaking down the existing patterns of inequalities. It was, as Fanon (1967) said, *Black Skin, White Masks.* As expected, the new Africans, realizing the economic advantage inherent in this new status, began to internalize their inferiority to the whites and, for them, their destiny was to be white! This new orientation meant learning from the whites how they organize their societies such that, when they take over the power positions in their own societies, this could be replicated. In this context, trade and commerce was emphasized rather than industry. It was in this respect that "development" was envisaged. Indeed, the law of comparative advantage recognized trade mainly in terms of the products to which the environment in question is *best suited*. As such, industry was more advantageous for the Europeans and agricultural trade for the Africans. With time, it was expected, the latter would "catch up" with the former in the production of technology. In other words, commercial capitalism was immediately possible, while industrial capitalism may come later—once the *appropriate technology* from Europe had been learnt.

As adumbrated above, education in Botswana was the product of the missionaries but with the active connivance of the chiefs and with their control of cattle production (Hull 1987). It was the invitation extended to a missionary explorer, John Campbell, by converted Chief Mothibi of Bathloping, to send instructors that led, with the assistance of Robert Moffat, to the establishment of the Kuruman Mission station in 1824. Converts were to be selectively chosen among those who showed an ability to understand the bible, that is the ability to read and interpret the bible, write and lead a sound moral life according to European/biblical doctrines. Later, by 1876, the requirement was the ability to preach the bible, cope with white men, understand elementary business transactions and the value of land, and evangelize the Batswana. The curriculum included Bible study, theology, scripture, moral exegesis, geography, arithmetic, history, and manual work. According to Hull (1987, 385), by 1899 when a new central school was established, the missionaries believed that

> the teacher-trainees had to be isolated from their nonreligious influences of the villages and imbued with the full values of the Christian boarding school. Their attitude was to seclude students from their "heathen villages" and bring them the spirit and work of God.

By the beginning of the 20th century, there were already twenty schools serving about one thousand students. Six of these schools were operated by local initiative under the authorities of the chiefs. Also, the British created a special office of education with responsibility for supervising and directing the growth of education in the southern African region. It, furthermore, witnessed the granting of grants-in-aid as well as the control of the curriculum. Fundamental, however, were the growing indifferences between the local chiefs and the missionaries, which led to the eventual takeover of most of the schools by the local communities. The crux of this misunderstanding was the fact that the missionaries were neglecting traditional handicrafts, which found ill favour with the local chiefs. The traditional handicrafts were reinstated by the colonial regime especially since the locals were increasingly financing the schools. During the war years, however, attention was no longer paid to Botswana schools but had moved to those in South Africa.

In all these, unlike in Nigeria, where colonial capitalism expanded the production of hides and skin as well as the leather industry, snatching it from the Northern Arabs (Adebayo 1992), the colonial government did not direct attention to the political economy of cattle production in terms of improving its management in Botswana; nor was there any interest in the development of possible available mineral resources insofar as South Africa was acting as the active intermediary—Botswana being a land-locked economy. Secondly, the children of chiefs, having access to European ways of life, were becoming the new elites. Yet, it was the political conflicts among these educated children and chiefs in their own rights that eventually decided the type of capitalism. For Nigeria, the situation was far more complex. Formal education was more diffused among the citizens, thus there were more conflicts for colonial positions on the issues of Africanization. Basic to the aim of Africanization was to ensure that the school curriculum and pedagogical methods would assist in enhancing African identity and would simultaneously prepare indigenous Africans to occupy various positions. It was not the possession of technical know-how in industry but in administration that was central. This process started in pre-colonial Nigeria, whereas in Botswana it was felt more with independence. It was "seek ye first the kingdom of power, and all other things shall be added unto you". The administration, therefore, was to inhibit dissension, as much as possible, collect taxes, regulate trade and provide "social amenities".

Perhaps of central significance is the fundamental difference in Botswana's and Nigeria's experience, conditioned, first, by their locations—the former being land-locked and, for a long time, under threat from the Apartheid Regime in South Africa. Thus, Botswana experienced a later and more limited incorporation into colonial merchant capitalism. Secondly, and due to the more indirect access, the cattle chiefs had a greater hold on its politics and economy, unlike in Nigeria, where there was more direct access and, therefore, the penetration of industrial capitalism, in terms of manufacturing, though largely in the hands of the Europeans, was more extensive (Olutayo, Bankole 2002c). With more people having greater access to formal education in Nigeria, due to the different experiences of incorporation, there were different consequences for social, political and economic relations in the two countries. This is more that the essence of the acquisition of formal education was, and still is, to join the elite group, and that there were, and still are, unequal contestations for the "kingdom of power" and, therefore, there is experience of more conflicts in one than the other. The extent of conflict inherent in the different societies depends on what is

available to be shared rather than created. This, for instance, has been used to explain, even in Botswana, an increase in identity politics alongside exclusionary ideas of nationality and citizenship, as minority claims for greater cultural recognition and plurality are countered by alleged majoritarian aggression in the maintenance of the status quo (Solway 2002; Werbner 2002; Good 1999; Curry 1987). By extension, there has been an increased awareness of and distinction between "locals" and "foreigners" even when the government is claimed to be encouraging foreign investments (Nyamnoh 2002). Perhaps two issues need to be drawn out from here. These are the roles of labour activism and the military in government in the two nations.

Though in 1948 there was an exclusively formed Francistown African Employees' Union-for the Police Federation in Bechuanaland (Orr 1966), it was only in 1977 that a labour movement, in the interest of workers, was established in Botswana (Mogalakwe 1994). Consequently, the labour movement has been very weak, such that strikes and other forms of agitation have been very rare. According to Tsie (1996), five major explanations may be given for the weakness of the labour movement. These include the low level of industrialization that Botswana inherited from British colonial rule informed by the *designation* of the country as a labour reserve for South Africa; the low level of wage labour in the country until the 1980s; poor organization and the lack of effective leadership as a result, perhaps, of limited experience; the "might" of the state in establishing minimum wages rather than the outcome of collective bargaining; and the lack of effective understanding of labour legislation by workers, union leaders, employers and labour officials. Indeed, as Molomo (2001, 3) observed, "Politicians and civil servants who took over the reigns of power lacked the technical know-how to formulate policy. Instead, at least for the first two decades, they relied on expatriate personnel." Yet, by the 1990s, the civil service had developed into an autonomous, professional, apolitical and technical institution. Consequently, it has been relatively easy for governments to practice what Molutsi and Holm (1990) refer to as "corporatism", where those who could have been politically active are, largely, government officials who are not expected to actively participate in politics. These, especially the top civil servants, take policy initiatives on behalf of government; persuasion is presented as consultation in incorporating dissenting voices; government dominates the communication processes and ministries create and control most organized groups.

In what later became Nigeria, trade unionism began in 1905, or earlier (Orr 1966). By this period, Nigeria had become the first African nation to form trade unions organized exclusively by Africans. And these unions, in the Lagos Colony and Southern Nigeria Protectorate, were formed by civil servants. These civil servants were mainly interested in agitating for increased wages but, later, were involved in the struggle for independence and were at the forefront of the liberation struggle; they were active in opposing colonial rule, in nationalist movements and the politicians of post-independence could not afford to ignore them and their unions (Ihonvbere 1997). Essentially, therefore, their interest was in the need to replace the European colonial officials. Even though the colonial government was using educational adaptation for a different purpose (Marah 1987), they opposed it without considering the advantages of agricultural and technical education for the development of the nation. Rather, with their observation that Europeans who had liberal education worked in offices and possessed higher prestige, they detested working in the field and opted for

office jobs. This was one of the reasons for the first military coup in Nigeria (Utomi 1985). Contests were organized around who gets the largest portion of the "national cake", which Joseph (1987) aptly referred to as "bureaucratic prebendalism". And, since both the civilian and military regimes are faced with the same economic, social and ethnic cleavages, the military was always and still is involved in politics.

The military in Nigeria was a colonial creation. It was not just for the purposes of quelling riots and demonstrations but was effectively used in surmounting opposition to colonial rule, in wars of conquest and punitive expeditions to enforce colonial rule. They were, first, conscripted as general labourers for clearing and building roads, for constructing defensive positions; as porterage for carrying military equipment and food to and from the front line or the scene of military operations; and some were organized into military transport corps under direct military control on a casual basis (Killingray 1989). And as has been variously noted, the advent of WW1 necessitated the recruitment of Africans into the rank and file. They, in the process, became the "black mercenaries" for a colonial administration disjointed from the civil society. Since they were colonial appendages, their loyalty was to their employers who recruited them (mostly) from societies whose men were, in European eyes, "steady, reliable, unquestioning, and unflinching in combat" (Welch 1975, 239). The ethnic coloration of independent Nigeria was created. It was this military that perpetually, in a way, assisted the dominance of one part of the country over the others and the prevalence of coups in the country. Yet, it has been argued that the men in the military also represented their own personal interests.

Luckily, for Botswana, the military has been (relatively) successfully kept at bay from politics. In fact, this has also been informed by the colonial experience and its location. Indeed, the Botswana Defence Force was only formed by an act of Parliament on 15th April 1977, by which period Nigeria had witnessed two coups and a civil war involving the military. Even the establishment of Botswana's military was not as a result of any conventional war but the political volatility of Southern Africa (Henk 2004, Kenosi 2002). Until the recent incorporation of the military into politics by the civil authorities, the military had developed into a capable, well-educated and self-disciplined force.

Education Infrastructure and Unsustainable Development in Africa: Botswana and Nigeria

Among others, two main points derive from the form of education and the type of capitalism in Africa. First, colonial education was informed by the modernization theory known, mainly, as "Europeanization". And the orientation of development is the policy of "catching up" with Europe at a gradual speed. This "catching up" includes the "development" orientation of providing services such as roads and railways, water, electricity and public schools, among others—as enunciated in the Colonial Development and Welfare Acts of 1929 (Olutayo 1991; Abbott 1971). Often named the "Public Works Department", its activities are geared mainly towards enhancing trade in raw materials with Her Majesty's Government and this was what education infrastructure centred around. It was to ensure the "free market" and the progress of nations was in terms of economic growth (Nordenbo 1995). Attached to this, education, and this is the second important point, was a higher level of

prestige. A prestige, in the words of Davis and Kalu-Nwiwu (2001, 5), that "shifted students' attention away from their indigenous environment and toward the colonialist environment. Value derived less from education for living as from education for earning a position in the colonialist scheme". Thus, formal education is perceived as the "ticket" for securing positions of opportunity to accumulate wealth and status rather than the creation of wealth. It is not surprising; therefore, that education has continued to constitute the space within which competition and crisis manifest themselves. To acquire an education is to occupy a limited position in the administration and those ethnic groups which encountered Europeans first tend to exclude others from such positions on the exit of the colonialists. With independence, therefore, the contestations heightened, leading to coups and counter-coups in Nigeria, the Cameroons, Ghana, Ivory Coast, among others.

While acknowledging the landmark strides Botswana has achieved in the provision of Education For All (EFA), the assessment report identified fundamental gaps in the implementation of the Vision 2016 document in terms of the capacity of the "expanded vision" not reflecting the local context (The EFA 2000 Assessment: Country Report—Botswana). Furthermore, it seems clear that the attainment of the expectation may be derailed not just because of increasing drop-out rates but also because of the low level of public awareness of education policy even among those charged with the responsibility for implementing education policy in the different sub-sectors. Using the 1997 statistics, it was found that teachers certified to teach, according to the new national standard in Botswana, accounted for only 3.7%. This, it seems, has put pressure on the government to train more teachers who, ironically, prefer to stay in urban areas. Of course, again, this constitutes a carry-over from the colonial orientation of prestige, even in geographical location.

Of major concern is the nature of the link between education and the economy. As the most frank and commendable speech of His Excellency, Mr. Festus Mogae, attested, the prestige, one may adduce, has started to manifest itself in, to use his words, "consumerist lifestyles" even against the background of a poor work ethic (State of the Nation Address 2006). This is further exacerbated by growing youth unemployment necessitating the interest of the government in upgrading the quality of the brigades and possible transformation to technical colleges.

In Nigeria, the technical college has a chequered history dating back to the colonial regime. Even at independence, its relevance to national development was misconceived (Oranu n.d.). It is believed that vocational and technical education is intended for those who are incapable of pursuing academic programmes. Even the polytechnics are not regarded as important to national development relative to university education, thus there have been continued inadequate political will by the government, poor funding and incentives to teachers in these schools as well as, fundamentally, problems concerning attempts to catch up with the rapid changing technological changes in the world. As with other levels of education, the schools have been examination oriented with no emphasis on pre-vocational subjects at the primary and junior secondary school levels; this has been coupled by inadequate facilities. Ironically, the 6-3-3-4 system of education in Nigeria has continued to neglect this important ingredient of a basic infrastructure at the primary school level and only those who have not performed well at the junior secondary level are expected to revert to technical colleges. Two decades ago, more than 13 million pupils attended 35,000 public

primary schools; approximately 3.7 million students attended about 6,500 public and private secondary schools; and about 125,000 postsecondary level students attended 35 colleges and universities (http://www.onlinenigeria.com/education/index.asp accessed 19th September, 2007).

Ironically, the elitist oriented universities, totalling more than fifty now, have been affected by the inadequate attention paid by the various governments which has led to a brain drain of both staff and students. Perhaps what Nigerian universities are now most known for its academic instability caused by one strike or the other and, unfortunately, compounded through the preponderance of "gang" activism, erroneously labelled "cultism", leading to "war" and the killing of members and innocent staff and students (Olutayo 2006). (This is, perhaps, one of the reasons, though, not the main one, why about twenty private universities have been approved). Interestingly, this "war" is not limited to the universities but seems to have extended even to secondary schools! It is not surprising, therefore, that many employers now complain about the quality of graduates (Bollag 2002).

Conclusion

Obviously, the inadequacies identified with the modernization theory of development necessitated the criticisms from the dependency school, which in turn brought to light the implied underdevelopment in the socio-economic relations of the Third World nations. Yet, as adumbrated above, the argument transcends the dependency relations. It encompasses the outcome of the implications of incorporation into the World Capitalist economy as a periphery and the creation of "new" social structures. These social structures are perpetuated through the educational system rather than just through the listing of a plethora factors identified above by Kennedy (1988). Unfortunately, this educational system merely reproduces the modernization framework with the assumption that development, progress and improving human welfare are essentially about increasing the amount of goods and services people can buy. It is sad, however, that for most of the African nations the trade is mainly in raw materials rather than in the manufactured end-products (Ghose 2001; ITF 2001). Development is, therefore, according to Trainer (2005), erroneously referred to as basically being about increasing the volume of production for sale, thus economic growth is, more or less, equivalent to development. And it is the skills with which to achieve these that education teaches. In this, the school is expected to prepare and select people for jobs under competition. And in the cases of Botswana and Nigeria, as in most African nations, they are prepared as technocrats and scientists who will be devoted to developing and producing new products. Thus, the key to success is doing well at school, which thereby encourages students to be over-focused on paper certificates, at any cost. Consequently, by the second semester, students hardly remember what was taught in the previous semester.

Unfortunately, even what they are taught is never informed by the local socio-economic and cultural contexts. Thus, it can be concluded, that this is unsustainable. Today, and in spite of the remarkable growth of Botswana—with its highest level per-capita growth of any country in the last 35 years and its widely recognized prudent macroeconomic management; a progressive provision of infrastructure with a significant proportion of the population having access to basic services as well as social safety nets and income transfer programmes

for the poor and the disadvantaged—other socio-economic development indicators show, according to Clover (2003, 4), its overdependence on diamond, like Nigeria's crude oil, resulting in "high unemployment levels and unacceptably high levels of poverty and inequality, both in terms of assets (primarily cattle) and income". According to the Human Development Report (2006), the human poverty index is 48.3% and the population living on below $2 a day was more than 50%, with the ratio of richest 10% to poorest 10% being about 78%.

Indeed, the inequality pattern is not unexpected as most mineral-based economies are often susceptible to, as Pillay (2002) once observed, "enclave development", which involves the employment of skilled local and foreign personnel who are paid the best salaries but always in the minority thus creating an island of poverty in the midst of plenty. As the editorial comment of The Tswana Times (2007, 4) states, "despite the considerable investment in both education and training, levels of unemployment remain persistently high especially amongst school graduates who have completed their secondary school education". Even in higher education, the skills are for raw material export goods, more so where the manufacturing base has not grown enough to offer large scale employment and higher incomes (Mogae 2005). This is clearly brought out from the fact that even though mining production contributes about 40 percent to Botswana's GDP, it absorbs only 4 percent of total employment (Iisimi 2006). Unfortunately, in the words of Clover (2003, 9):

> Diversification is further hampered by the restrictions that result from Botswana's membership of a free trade area, the South African Customs Union. This effectively allows South Africa to prevent its customs union partners from protecting their nascent industries behind tariff barriers.

As His Excellency, Mr. Mogae (2005), posited, attempts to industrialise have not been totally successful and even import substitution has proved difficult to implement. This, perhaps, may be a result of what has been termed the "Dutch disease" in which the natural resource sector is generally capital-intensive and asset specific thus bringing about few positive externalities to forward and backward industries. Indeed, the Minister of Finance and Development Planning, in presenting the Budget 2006 to the National Assembly, further acknowledged, among others, the high and rising rate of unemployment heavily concentrated among the increasingly educated youth; inadequate progress in diversifying the economy; high incidence of poverty, especially among the rural population; and the international fluctuations in exchange rates and mineral prices, on which the nation depends, thus making planning and budgeting difficult. The latter, of course, shows the relevance of the dependency theory but it is further cemented with the form of education which, as the Vision 2016 hopes to achieve, needs to be innovative and adapt imported skills and technology to local conditions. How can this be achieved without an indigenously informed educational system?

Nigeria, with its abundant mineral resources, is dependent on crude oil and is bedevilled with "resource curse". This refers to the inability of resource-abundant economies to grow relative to resource-scarce economies (Sachs and Warner 1995). In other words, it is assumed that abundant natural resources should promote growth since resource endowment can give a "big-push" to the economy through more investment in economic infrastructure

and more rapid human development (Sachs and Warner 1999). And one of the most crucial explanations to resource curse has been given as governance in its inability to promote economic development because, it is argued, natural resources sow seeds of discord and conflict among domestic stakeholders such as politicians, developers, local ethnic groups and citizens or tax-payers. Nigeria, of course, clearly belongs within this category as conflict over natural resources seems to be endemic. Yet, as shown above, the historical-sociological explanations shed more light on the situation. Simply stated, the colonial experience created a social structure dependent on access to formal education (and the military) as the main source to prestigious administrative positions which were unequally available to some ethnic groups on whose land the administrators achieve their status-management of oil revenues. Thus, the administrators are more like corrupt rent-seekers since what they are interested in is massaging their own prestige. Unfortunately, this orientation has percolated down in a top-bottom strategy to the institutions of learning with virtually no hope of expecting a rosy future. In spite of these bleak scenarios, the inequality pattern in Nigeria seems to be levelling off when compared with Botswana as the human poverty index is about 41% compared with Botswana's 48.3%; and the ratio of richest 10% to poorest is only about 18% (Botswana's 77.6%); while the share of income or consumption for the poorest 30% is 6.9% that of Botswana is just 2.9%. And while the richest 20% and 10% in Nigeria's share of income or consumption is 49.2% and 33.2% respectively, that of Botswana is 70.3% and 56.6% respectively. Ironically, these inequality patterns manifest themselves due to the unequal educational patterns which neglect informal education.

Except, of course, if the localization of knowledge is vigorously pursued; an endeavour that even the so called private universities do not seem to engage in! In both Botswana and Nigeria, as in most African universities, there is, therefore, a need to redirect attention to the application of informal knowledge, along with the formal. The relevance of the former is in ensuring a robust/total/holistic education that combines the knowledge of the immediate environment with imported technology. It is only in this way that knowledge adaptation becomes feasible. Yet, it requires, also, a reorientation of the value system that deemphasizes local indigenous knowledge from which the formally educated should learn. Consequently, the reward system needs a fundamental reappraisal. Such a reappraisal should take the innovative "spirit" into consideration as it encourages the local manufacture of technologies. As suggested elsewhere (Olutayo and Omobowale 2007), the strategy involves the "educated" in their "ivory towers" going down from their heights to learn from the indigenous producers below. In doing this, they are to activate a synergy between what they already know with what they now need to know. This is because the idiosyncrasies of those below would, in the final analysis, define the possible attainment of independent development.

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Department of Sociology,
Faculty of the Social Sciences,
University of Ibadan,
Ibadan, Nigeria
Tel.: (+234) 8038064665
E-mail: lantopamtu@yahoo.com