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# Alternative Perspective to Funding Public Universities in Nigeria

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## 1. Introduction

The funding model of university education in Nigeria is one of the control measures being utilized by the government as the proprietor of such institution. Such model of funding is determined by policies approved by the legislative and executive arms of the government. Currently, there is low-level of university education funding and it is often a recurrent debatable issue among stakeholders with its effects on quality of university education in Nigeria. The World Bank (2010) study reported that the problem of higher education financing, particularly university education is more acute in Africa than in the rest of the world. Apart from this low-level of funding in Nigeria for instance, this paper examines the funding policies of public universities owned by the Federal Government of Nigeria with a view to proposing an alternative funding policy.

Specifically, this paper draws on historical analysis of funds received by public universities owned and controlled by the Federal Government of Nigeria between the years 2000 and 2009 using the existing funding framework. The Hauptman's (2006) model of funding policies was utilized in order to argue for another funding policy in Nigeria. According to Hauptman, the funding policies are historical or political basis; funding formulas, policy-driven funding; performance-based funding; and categorical and competitive funds. I am of the opinion that the existing funding framework in Nigeria reflects a combination of historical basis, funding formulas, and policy-driven funding of the Hauptman's (2006) model. Therefore, this paper argues for performance-based funding policy in order to position public universities in a national and international competitive environment as a means of attaining sustainable and national development.

## 2. Background

The history of university education funding in Nigeria is as old as the establishment of universities. This dates back to 1948 when the University College Ibadan (UCI) was established following the Elliot Commission's recommendation in Nigeria. The Elliot Commission was set up in the year 1943 "to report on the organisation and facilities of the existing centres of higher education in British West Africa, and to make recommendations regarding future university development in that area" (Fafunwa, 1974, p. 144). Though UCI was affiliated to University of London, it was accorded university status in 1962 and named as University of Ibadan (UI). Ukeje (2002) noted that UCI was funded from two main sources. The Nigerian government provided 70 per cent of the funds while the United Kingdom provided 30 per cent of the total recurrent cost.

Between the years 1960 and 1970, five more universities were established following Ashby Commission's report. The Ashby Commission was set up in the year 1959 "to conduct an investigation into Nigeria's needs in the field of Post-Secondary School Certificate and Higher Education over the next twenty years (1960 – 1980)" (Fafunwa, 1974, p. 152). The four of these five, were regional universities and their year of establishment: University of Nigeria in 1960, Ahmadu Bello University in 1962, University of Ife (now Obafemi Awolowo University) in 1962, and University of Benin in 1970. The fifth one was University of Lagos and was established in the year 1962 by the Federal Government of Nigeria. All these five universities plus UI made six universities in Nigeria as of the year 1975 and are regarded as first generation universities.

These first generation universities were well-funded until the year 1975 by their proprietors, that is, the Federal and Regional: Eastern, Mid-Western, Northern and Western Governments. Ukeje (2002) pointed out that in Ahmadu Bello University (ABU) for instance, from the years 1962 to 1975; there was no substantive difference each year between the amount requested by the University and the amount received from the Northern Regional Government. He further stated that there were years in which the amount received was slightly more than the amount requested. Perhaps, this could be attributed to what Yesufu (1985) stated that between 1950s and 1960s, Northern, Western, Mid-Western, and Eastern Regional Governments devoted from 25% to 30% of their annual budgets to education.

In the year 1975, the Federal Government of Nigeria established seven more universities and also took over the existing four regional universities. This announcement made the total number of universities under the Federal Government's control to be 13 universities. Hence, the Federal Government had the sole control of financing these 13 universities from the year 1975. Onyeonoru (2007) argued that the 1975 period marked the beginning of the problem of university funding in Nigeria. To corroborate his view, he cited Ukeje (2002) that after the 1975/ 1976 session at ABU for the first time, a recorded shortfall of 20 per cent in the amount requested was observed. This situation can be inferred that there is negative correlation between funding of university education and establishment of more universities in Nigeria. This inference can also be supported by the study of the World Bank (2010) on problem of financing university education in the whole of Africa. This means fewer resources competing for establishment and funding of more universities in order to make provision for access to university education.

As a result of an increasing demand for university education in Nigeria, the Federal Government of Nigeria established nine more universities between the years 1980 and 1990. And also between the years 1991 and 2009, five additional universities were established. Therefore, as of year 2009, the number of federally controlled universities in Nigeria was 27. One of the main arguments for increase in the number of universities is provision of access to qualified individuals. For instance, Okojie (2010) reported that degree student enrolment increased from 104 in 1948; 1 395 in 1960; 40 000 in 1976; 172 000 in 1988; 448 000 in year 2000; and to over 950 000 presently.

### 2.1 Funding framework

One of the recommendations of Ashby Commission set up by the Federal Government of Nigeria in 1959 was "a National Universities Commission should be set up to have undisputed control over the affairs of the universities, particularly in terms of finance, staff and courses" (Fafunwa, 1974, p. 155). In response to this Ashby Commission's recommendation, the National Universities Commission (NUC) was established in the year 1962 as an advisory agency to ensure adequate funding of universities in Nigeria.

Prior to taking over of existing regional universities in the year 1975, the NUC was reconstituted through Decree No.1 of 1974, as a statutory body for receiving block grants from the Federal Government and allocating them to federally controlled universities in accordance with such funding formula or parameters as may be laid down by the National Council of Ministers or Federal Executive Council, and performing other related functions. The block grants are separated into capital and recurrent grants. Comprehensively, the funding mandate of NUC is in three dimensions. The dimensions are:

- enquire into and advise the Federal Government on the funding needs, both recurrent and capital, of university education in Nigeria and in particular, to investigate and study the financial needs of universities in order to ensure adequate provision;
- receive block grants from the Federal Government and allocate them to federal universities in accordance with such formula as may be laid down by the Federal Executive Council; and
- to take into account in advising the Federal and State Governments on university finances, such as grants that may be made available to universities by corporate bodies or institutions and institutions both within and outside Nigeria. (NUC, 2011)

The funding parameters instituted by the Federal Government and directed to NUC for implementation can be viewed as a policy or control measure to direct the affairs of these federally controlled universities in terms of financial issues. This funding formula is usually initiated by the NUC in consultation with the universities based on financial needs assessment of universities and later being forwarded to the Federal Government for approval. This is in line with the funding mandate of NUC.

From the inception of NUC in 1974 as a statutory body, the funding formula for allocating funds to these federally controlled universities has consistently been reviewed based on several factors, such as generation of universities, that is, the year of establishment, number of degree students admitted, number of academic and non-academic staff, and ratio of science and humanities based disciplines. As a result of these factors, the funding formula keep on changing. For instance, Esenwa (2011) examined the role of NUC since inception and projected what the future is likely to be for NUC. He stated that one of the critical aspects of the funding mandate of NUC is to review the funding parameters for allocating funds to universities based on the approved funding policies by the Federal Government. For Esenwa, since the year 1974, the funding formula has been revisited twice, that is, in the year 1982 and also in the year 1989.

Okojie (2010) described the current approved funding criteria used by NUC to disburse funds to universities. These funding parameters or criteria according to Okojie are:

- capital grants on the basis of generation (year of establishment) of the university;

- ratio of personnel costs to overheads- 60:40;
- library 10%, research costs 5%, capacity building 1% of the total recurrent-minimum;
- academic to non-academic funding 60:40;
- expenditure on central administration- 25% maximum; and
- internally generated revenue- 10%.

A comprehensive interpretation of this formula for allocating funds to universities in Nigeria is stated in the World Bank (2010) study as normative input-based approach. Hartnett (2000) was cited in World Bank's study. According to the World Bank (2010),

> The National Universities Commission in Nigeria has long employed a normative approach to input-based budgeting for Nigeria's federal universities. In calculating an institution's budget recommendation, academic staff members are derived from student numbers using normative guidelines for student-staff ratios that vary by discipline. Likewise, administrative support staff numbers are determined from academic staff numbers using similar guidelines…. Additionally, 10 per cent of each university's recurrent grants is to be devoted to the development of that institution's library, and 5 percent is earmarked for research…" (World Bank, 2010, p. 44).

Based on the funding criteria, the funding trends received by NUC and to be disbursed to public universities controlled by the Federal Government of Nigeria between the years 2000 and 2009 were examined below. Okojie (2010) reported the trends of funds received by Federal Universities as shown in Table 1.

| Year | Recurrent Grants (Naira) | Capital Grants (Naira) |
|---|---|---|
| 2000 | 28 206 218 865. 91 | 1 936 785 632. 00 |
| 2001 | 28 419 719 502. 84 | 4 226 691 359. 00 |
| 2002 | 30 351 483 193. 00 | |
| 2003 | 34 203 050 936. 33 | |
| 2004 | 41 492 948 787. 01 | 11 973 338 699. 00 |
| 2005 | 49 453 098 168. 72 | 8 822 869 440. 00 |
| 2006 | 75 400 267 475. 00 | 6 976 416 815. 00 |
| 2007 | 81 757 053 487. 00 | 8 808 205 850. 00 |
| 2008 | 92 219 484 808. 00 | 14 414 135 937. 00 |
| 2009 | 98 028 449 198. 00 | 10 571 861 732. 00 |

Source: Okojie (2010)

Table 1. Trends of Funds received by Federal Universities in Nigeria

In Table 1, in the year 2000, 28 206 218 865. 91 Naira was received as recurrent grants and 1 936 785 632. 00 Naira was also received as capital grants for the entire 27 federally controlled universities as at that period. As of year 2009, 98 028 449 198. 00 Naira was received for recurrent grants and 10 571 861 732. 00 also received for capital grants for the entire 27 universities. The percentage increase in recurrent grants between the years 2000 and 2009 was 247. 54 per cent and for capital grants was 445. 85 per cent.

The increase in funding figures between the years 2000 and 2009 seems encouraging and impressive. However, universities operate as international institutions. This implies that Nigerian universities obtain both teaching and research inputs from not only the immediate environment, but also outside the shore of Nigeria. Therefore, the real value of these funds should be determined using US Dollars as a bench mark. As of the year 2000, the average exchange value of one US Dollar to one Nigerian Naira was 86 Naira. Based on this calculation, the recurrent grants received by the entire 27 federally controlled universities was USD 327 979 289. 14 and the value for capital grants was USD 22 520 763. 16. In the year 2009, the average exchange value of one US Dollar to one Nigerian Naira was 158 Naira. Therefore, the recurrent grants received by the entire 27 federally controlled universities was USD 620 433 222. 77 and the value for capital grants was USD 66 910 517. 29. The percentage increment in recurrent grants between the years 2000 and 2009 was 89. 17 per cent and for capital grants was 197. 11 per cent.

The implication of this funding analysis reflects the observation of the World Bank (2010) study that there is problem of financing qualitative university education in Africa. Apart from the low real value fund between the years 2000 and 2009, the upsurge in degree students' enrolment, that is, over 100 per cent as reported by Okojie (2010) is yet another dimension to compound the problem. The earlier study by Saint, Hartnett, and Strassner (2003) also found that between the years 1990 and 1997, the real value of government allocations for higher education declined by 27 per cent- even as enrolment grew by 79 per cent. Although there was slight increment between the years 2000 and 2009 in the real value of fund especially in capital grants, such increment seems to be incommensurable with the rise in degree students' enrolment for instance.

Okojie (2010) admitted that most federally controlled universities' administrators complain of inadequate funding and they are not allowed to charge undergraduate tuition fees. The effects of this funding problem could have resulted to some of Obanya's (2002) earlier observations on deterioration of physical facilities; internal and external brain drain among the intellectual class; and overstretching of teaching, research and managerial capacities in Nigerian university system. In relation to the university's mandate on research for instance, Olayiwola (2010) also claimed that,

> Since most research input and equipment are imported, the purchasing power of the naira has been weakening as a result of the devaluation of currency. Most of the input in the form of books, journals, and laboratory equipment could not be sustained for research activities. (Olayiwola, 2010, p. 152)

As a result of these daunting teaching and research situations, universities' administrators have consistently identified funding issues as a critical challenge in discharging their functions effectively.

The effort of the Federal Government of Nigeria to address the funding issue in not only the university sector, but the entire education system was demonstrated by the establishment of Education Trust Fund (ETF) in the year 1993. ETF was created via Education Tax Decree No. 7 of 1993, Laws of the Federation of Nigeria and amended by Education Tax Decree No. 40 of 1998. This body is saddled with the responsibility of administering the entire 2 per cent education tax on profit from every company registered in Nigeria. Specifically, the ETF Board of Trustees administers the tax revenue imposed by this Decree and disburses the same amount or fund to federal, state, and local governments educational institutions in addressing the following areas:

- works centre and prototype development;
- staff development and conference attendance;
- library system at the different levels of education;
- research equipment procurement and maintenance;
- higher education book development fund;
- redressing any imbalance in enrolment tax mix as between the higher educational institutions; and
- execution of the 9-year compulsory education programme. (ETF, 2011)

Therefore, it could be concluded that ETF is established to assist or supplement in the execution of projects relating directly to the teaching, learning and research functions of public universities and other public educational institutions in Nigeria.

ETF as a body collaborates with relevant institutions such as NUC, States Universal Basic Education Boards (SUBEBs), and National Commission for Colleges of Education (NCCE). ETF also works directly with each university in the area of identification of projects to be executed and disbursement of funds. To disburse this tax revenue across all the levels of education, the sharing formula is:

- the higher education section receives 50 per cent;
- the primary education section receives 40 per cent; and
- the secondary education section receives 10 per cent. (ETF, 2011)

The distribution formula within the higher education section is in the ratio of 2: 1: 1 as between universities, polytechnics, and colleges of education respectively. Among the universities, Eze (2011) reported that all universities are funded equally irrespective of the duration or year of establishment.

The disbursement of funds by ETF started in the year 1999, that is, six years after its establishment. Table 2 presents the total amount of money disbursed across all the levels of education based on the executed intervention projects between the years 1999 and 2008.

| Institutions | Total Allocation (Naira) | Disbursement (Naira) | Outstanding (Naira) |
|---|---|---|---|
| Universities | 26 439 877 960. 12 | 15 705 503 511. 93 | 10 734 374 448. 19 |
| Polytechnics | 13 505 479 288. 00 | 9 169 512 231. 45 | 4 335 967 056. 55 |
| Colleges of Education | 13 786 121 431. 00 | 9 944 817 430. 00 | 3 841 304 000. 00 |
| Monotechnics | 4 205 350 000. 00 | 3 220 480 000. 00 | 984 870 000. 00 |
| SSEs | 16 608 299 569. 75 | 11 831 596 419. 65 | 4 776 703 150. 10 |
| SPEBs | 33 554 302 747. 90 | 22 165 386 610. 99 | 11 388 916 136. 91 |
| Total | 108 099 430 995. 77 | 72 037 296 204. 02 | 36 062 134 791. 75 |

Source: ETF (2009)

Table 2. ETF Intervention Projects in Institutions Nationwide from 1999 to 2008, Disbursement as at 30/6/2009 0:00

From Table 2, the total allocation for universities was 26 439 877 960. 12 Naira between the years 1999 and 2008. As of the year 2009, Nigeria had 58 public universities: 27 federal and 31 federally controlled universities. Out of the 27 federally controlled universities as at that period, National Open University of Nigeria, Lagos was excluded from the intervention project. Therefore, the entire allocation for 26 federally controlled universities intervention projects was about 12 060 295 209. 88 Naira based on equality formula among the entire 57 public universities. However, the rationale behind the exclusion of National Open University of Nigeria, Lagos was not reported by ETF (2009), this is subject to further investigation.

### 2.1.1 Implications of the existing funding framework

Saint, Hartnett, and Strassner (2003) conducted a wide study on higher education in Nigeria with particular reference to university education. They concluded that the present funding framework "does not serve the country's longer term development interests" (Saint et al., 2003, p. 17). In a broader report, they noted that, "Historically, university funding has been distributed in broadly equitable ways across both institutions and disciplines with little concern for their performance. The result has been to create a system of excessively homogenous institutions" (p. 16). This implies that consideration is given for geographical location of universities and possibly other historical factors in the allocation of funds. This could be informed by the view that growth and development of universities in Nigeria has been tailored towards correction of educational imbalance among the states and for promoting national development.

In the years following the study by Saint et al. (2003), the findings could be generalized to not only Nigeria, but most African nations. This is confirmed by the study of World Bank (2010) which claimed that, "African governments ought to consider the adoption of performance-based budget allocations in place of historically determined allocations" (p. 6). They observed that performance-based funding has been limited to South Africa alone in the whole of Africa; while countries such as Botswana, Ethiopia, Mozambique, and Tanzania are already considering its adoption (World Bank, 2010).

As regards the ETF sharing formula to public universities, Sams (2011) concluded that the ETF executive secretary admitted that misappropriation of funds is the major challenge to the implementation of education policies in Nigeria. This could be attributed to equality formula of allocating funds among the public universities. There is no room for healthy competition or allocation of funds based on outcomes or certain criteria. Heads of various institutions could perceive funding of such projects as compulsory with little responsibility or input.

### 2.1.2 Performance-based funding

As a result of not only dwindling funds received by universities in Nigeria, but also mismanagement of funds, it becomes important to amend the formula of allocating these funds for efficiency and effectiveness. The existing funding framework appears to be input-driven and consideration is not given to the outputs (Hartnett, 2000; World Bank, 2010). To minimize the wastage of available paucity funds allocated to federally controlled universities, there is need for incorporation of quality and relevant academic indicators and research outcomes as predictors of allocating funds. This is because "performance-based allocations would encourage institutional autonomy as institutions must function under full management control" (World Bank, 2010, p. 6) of the available meager funds rather than being constrained by government bureaucracy that restrains universities to function effectively and efficiently.

Salmi and Hauptman (2006) mentioned how performance-based funding differs from other funding formulas in the following ways:

- they [performance-based funding] attempt to reward institutions for actual rather than promised performance;
- they use performance indicators that reflect public policy objectives rather than institutional needs; and
- they include incentives for institutional improvement, not just maintaining status quo. (Salmi & Hauptman, 2006, p. 64)

Based on these distinctions, research of Nigerian universities for instance, should be tailored to societal needs and ultimately for national development. Universities need to conduct relevant and quality researches and improve the quality of graduates because funding for the following year may be tied to quality and relevance. This refers to the observation of World Bank (2010) that universities "are to be judged on the basis of their performance" (p. 6) and contributions towards national development.

The outputs of universities in terms of research outcomes and quality of graduates are usually given prime places in terms of universities assessment globally and for sustainable development. The ranking of universities has mostly been focused on quality and relevant outputs of the universities. Take for instance, most of the purposes and goals of webometric rankings of universities have a focus on academic indicators and research outputs or outcomes of universities before making judgment. Therefore, efforts need to be made to address the low rankings of Nigerian universities both regionally and globally, poor quality of graduates, and irrelevant research outcomes to national development through the funding mechanisms as a critical factor.

Olayiwola (2010) argued for research outputs for allocating research funds in the dual support system of funding in Nigeria. These research outputs could be one of the indicators of performance in allocating funds to federally controlled universities. The suggestion of Olayiwola (2010) on the reports of Research and Development (R & D) fair or ranking of universities being done by NUC on yearly basis could be used as a tool for allocating funds to federal universities in Nigeria. More so, the World Bank (2010) study mentioned the common output indicators to be "number of graduates, the rate of student repetition, the number of minority, women, or regionally disadvantaged students who are admitted, and research productivity" (p. 45).

The Table 3 describes the features and impact of the potential progression of funding mechanisms from a combination of historical, input, and normative-based to performance-based funding on society.

From Table 3, it can be inferred that allocation of funds to federally controlled universities in Nigeria could progress from the combination of historical, input, and normative-based, which

| Budgeting modality | Key feature | Requirements for data and technical expertise | Impact on sector performance |
|---|---|---|---|
| historically-based | rewards negotiation skills | minimal | maintain status quo |
| input-based | rewards expansion of inputs | moderate | encourages growth |
| normative | rewards adherence to defined norms | moderate | encourages uniformity |
| performance-based | rewards outcome achievements | considerable | encourages quality and relevance |

Source: World Bank (2010)

Table 3. Funding Mechanisms

emphasized adherence to defined norms and inputs-oriented towards rewarding outcome or outputs, which encourages quality and relevance of such performance. Nigeria as one of the developing nations needs qualitative and relevant research to solve societal problems and also to reduce the already existing gap between developed and developing nations. Therefore, emphasis should be placed on performance-based funding mechanism in order to establish healthy competitions among Nigerian universities.

In performance-based funding as an outputs-driven approach to allocating funds to universities, emphasis should be placed on agreed or consistent indicators or outcomes for evaluating universities in order to allocate funds. Herbst (2007) stated that,

> The rationale of performance funding is that funds should flow to institutions where performance is manifest: "performing" institutions should receive more income than lesser performing institutions, which would provide performers with a competitive edge and would stimulate less performing institutions to perform. Output should be rewarded, not input. (Herbst, 2007, p. 90)

To ensure fair play among the universities based on Herbst's (2007) rationale, the agreed indicators ought to have been explicitly and unambiguously expressed to all the federally controlled universities at the outset. These indicators can also serve as a means of self-evaluation before the national evaluation for allocating funds. It is on this note that promotion of competitive trait among universities would be enhanced.

Salmi and Hauptman (2006) identified four types of allocation mechanisms that could be considered under performance-based funding. The four mechanisms are:

- performance-set asides: a portion of public funding for tertiary education is set aside to pay on the basis of various performance measures;
- performance contracts: governments enter into regulatory agreements with institutions to set mutual performance-based objectives;
- payments for results: output or outcome measures are used to determine all or a portion of the funding formula: for example, tertiary education institutions are paid for the number of students they graduate, sometimes with higher prices for graduates in certain fields of study or with specific skills; and

- competitive funds, which support peer-reviewed proposals designed to achieve institutional improvement objectives. (Salmi & Hauptman, 2006, p. 64)

Based on Salmi and Hauptman's (2006) classifications, I am of the view that a careful integration of performance set-asides and competitive funds allocation mechanisms could be utilized in Nigeria. This means that at least 50 per cent of the entire grants from the Federal Government should be put aside and allocated on a competitive means among the federally controlled universities. The quality and relevance of research outputs for instance to national development could be assessed through peer-review among the universities for allocating funds. Salmi and Hauptman (2006) pointed out that the number of academic indicators and research outputs could vary from one to as many as 12. These indicators should be decided collaboratively by universities, NUC, and other similar bodies or critical stakeholders of university education in Nigeria, such as Education Trust Fund (ETF), professional organizations, among others.

The remaining 50 per cent of the entire grants from the Federal Government could be allocated to federal universities based on other factors such as students and staff, programs, and facilities. This is to prevent low-performing universities from moving towards extinction as a result of non-availability of funds. This model of funding mechanism hopes to classify Nigerian universities into high-performing and low-performing universities within a given or specific period of time, rather than classification based on year of establishment or other geographical factors. The classification hopes to be on relevance or contributions to national development.

Nigeria should take a leaf out of South Africa's book on performance-based funding. Salmi and Hauptman's (2006) study also corroborated by the study of World Bank (2010) that South Africa is the only African nations which "has for a number of years set aside most of its core budget for teaching, research, and other services based on multiple performance measures" (Salmi & Hauptman, 2006, p. 65). For the past few years, South Africa has been leading the continent in terms of relevance and quality of research or outcomes from universities. Although, it can be argued that South Africa has invested more on university education than Nigeria. But, the little available funds provided by Federal Government can still be utilized efficiently and effectively among the federally controlled universities to a certain extent for ensuring national development, if the allocation of funds is based on output or performance.

## 3. Conclusion

Although I acknowledged the limitation of over-dependence on one source of funding universities, that is, the government. But, the little available funds by the government could still be used efficiently and effectively to a certain extent. Therefore, the current state of funding framework of federally controlled universities in Nigeria demands calls for a paradigm shift. The currently existing framework emphasizes input-driven policy without given any consideration to output-driven mechanisms. The argument of this paper is not in terms of quantity of universities, but the quality of universities in Nigeria. Performance-based funding policy based on certain outcomes or criteria for allocating both NUC and ETF grants can re-position federally controlled universities in Nigeria both nationally and internationally for sustainable development.

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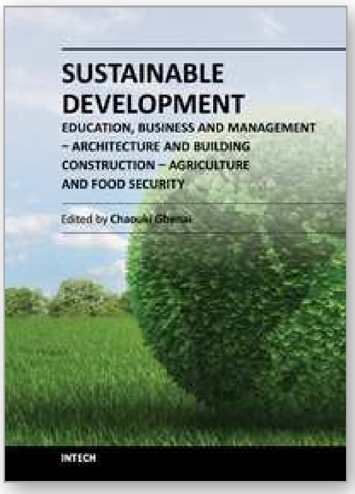


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Securing the future of the human race will require an improved understanding of the environment as well as of technological solutions, mindsets and behaviors in line with modes of development that the ecosphere of our planet can support. Some experts see the only solution in a global deflation of the currently unsustainable exploitation of resources. However, sustainable development offers an approach that would be practical to fuse with the managerial strategies and assessment tools for policy and decision makers at the regional planning level. Environmentalists, architects, engineers, policy makers and economists will have to work together in order to ensure that planning and development can meet our society's present needs without compromising the security of future generations. Better planning methods for urban and rural expansion could prevent environmental destruction and imminent crises. Energy, transport, water, environment and food production systems should aim for self-sufficiency and not the rapid depletion of natural resources. Planning for sustainable development must overcome many complex technical and social issues.