

HUMAN CAPITAL THEORY AND EDUCATIONAL POLICY STRATEGIES IN SUB-SAHARAN AFRICA: A RETROSPECTIVE OVERVIEW

Moses Oketch
Institute of Education
University of London
m.oketch@ioe.ac.uk

ABSTRACT

Human capital theory is a powerful, and yet also viewed as a narrowly conceived, understanding of the benefits of education to individuals and society. For many years since its proper formulation in the early part of 1960, during which time education has been modelled as investment leading to economic growth and development, the theory has informed government policies in education and attracted criticism and generated debate over the tension concerning who benefits from education and how education should be organised and funded. This article reviews the influence of the theory in the education policy strategies of sub-Saharan Africa from the 'manpower planning' era, through the 'rate of return' era, the 'endogenous growth and endogenous development' tenets and the debates over 'quality versus attainment'. These are all discussed in relation to educational access, expansion, finance and curriculum relevance.

Keywords: human capital theory, rate of return, educational planning, endogenous growth, sub-Saharan Africa

INTRODUCTION

This article presents a discussion on the evolution and challenges to human capital theory (HCT) since the 1960s and how the theory, and the discipline of economics of education upon which the theory is advanced, has transformed itself in the face of criticism to make itself relevant and influential in the educational planning arena. The aim is to examine how the interpretation of HCT has changed over time and how this is reflected in the education policy strategies of African countries. The rest of the article is organised as follows. First, I trace the origins of the theory and discuss how in the theory's heyday, which coincided with the gaining of independence in much of sub-Saharan Africa (SSA), it was applied in the discussions justifying investment in education and the decisions which governments took. Second, I present the dwindling influence of the theory in the 1970s and discuss why this was so, and the implication for educational planning in the subcontinent. Third, the 1980s was a difficult period in SSA, sometimes referred to as the 'lost' decade. I trace the theory through its rate

of return tenet during this period and reflect on how this affected the way education is organised and financed. Fourth, the 1990s marked a turning point in education with the Jomtien conference, which focused on placing the government back in the driving seat of educational finance and the increased attention paid to basic education. I discuss the gains and consequences of this refocusing, particularly in relation to higher education finance and quality. Fifth, the millennium era marked the arrival of the Millennium Development Goals (MDGs) and the centrality of universalising basic education. Here I trace the theory's focus on externalities and the idea of quality as driving and defining human capital theory.

In its heyday in the 1960s, human capital theory was a powerful justification for spending in education and linking education to economic development everywhere, including in the emerging independent nations of sub-Saharan Africa (Psacharopoulos and Woodhall 1985). The first conference of African ministers of education held in Addis Ababa, Ethiopia, in 1961 clearly captured this notion in making it clear that secondary education was where the manpower needs lay, and therefore, governments regarded this as part of the national transformation agenda (Unesco 1961). Indeed, the conference neatly put it that educational expansion caused economic development, a notion buttressed by human capital theory (Forojalla 1993).

This faith in the role of education in economic transformation as argued by Forojalla led to the declaration at the conference that Universal Primary Education (UPE) should be attained by 1980. There was also a declared goal of 30 per cent transition to secondary education for those children completing primary education, and 20 per cent enrolment for post-secondary education (Forojall 1993; Thompson 1981). In any case, the African ministers of education attending the conference were aware that poverty, ignorance and disease had to be tackled, and education, seen within the manpower framework, was high on the agenda (Oketch and Rollestone 2007; Unesco 1961). Educational planning over the period of the 1960s therefore focused on expanding access, governments having clearly accepted the thinking on the economic value of education (Psacharopoulos and Woodhall 1985), but the link where manpower was to be found was not merely in universalising basic or primary education, but instead secondary and subsequently tertiary education as a first step of creating what was then needed manpower to replace the colonial administration with Africans (Oketch and Rollestone 2007).

In east Africa, for example, there was a direct effort to tailor educational planning with the notion that it leads to economic development. In Uganda, the focus was on secondary education, and in Kenya, while the focus was on secondary education as spelt out in *Sessional Paper No. 10*, the primary education needed in order to transition into secondary level also expanded. Fees remained a barrier in both Kenya and Uganda and the model of education that developed, clearly supply driven through the social demand model approach of the human capital thinking, was also elitist. Tanzania took a different path by focusing on basic education relevant to 'Ujamaa' philosophy, insisting that there were no jobs for secondary expansion and this level of education would not serve the needs of the mostly village-based, agricultural Tanzania (Oketch and Rollestone 2007;

Ssekamwa and Lugumba 2001).

A few years after independence many sub-Saharan Africa countries, which had followed the manpower planning model, began to debunk it due to the mismatch between the production of educated individuals and the needs of the labour market, so that the manpower planning framework influenced by human capital dominated the framework for educational planning only for a short period. Nonetheless, over the years, human capital theory has remained relevant and powerful in guiding national education planning even though at the same time attracting heavy criticism. Except for a lull soon after independence in the 1970s when the manpower planning model variant of the theory was challenged, there was resurgence in the 1980s and 1990s through an emphasis on rate of return analysis and the use of earnings profiles. This basically marked a reinvention of the economics of education after a period of challenge by those who argued that learning and curriculum was more than simply looking at education as a form of economic investment.

HUMAN CAPITAL THEORY

Human capital theory, which primarily founded the discipline of the economics of education, ruled the roost in the 1960s. As Blaug (1985) puts it, at this time, no self-respecting Minister of Education would speak on education policy without an economist as his or her right hand. It is based on the idea that investment in education is needed as a fundamental aspect of a country's strategy for achieving development. The key to economic development for a country is to see the increased education of the human workforce as a capital investment rather than a form of economic consumption. The theory was also influenced by two principles: 1) that social demand for education is a good thing and that education has to be expanded; 2) that manpower planning was a useful forecasting tool that is helpful to educational planners. These were the days, according to Blaug, of Denison's (1962) 'sources-of- growth accounting' then generally 'believed to have demonstrated the precise quantitative contribution of education to economic growth'.

But in the 1970s, this profound dominance and influence of economics of education experienced serious setbacks as the enrolment explosion in those parts of the world, which had experienced expanded education since 1945, began to see a decline and SSA, which had embraced the social demand approach, began to come to terms with its inability to cope with social demand for education and a realisation that not everyone needed to be educated and offered white-collar jobs as a result. As noted by Forojalla (1993), education was a key item on the agenda of independence and once independence was attained, a social demand had been triggered. Governments made efforts to expand access at basic levels and improve literacy. In east Africa, for example, several steps were taken including abolition of racial segregation of schools and scrapping of standard four examinations, which had been in place during the colonial time and proved a significant barrier to transitioning to the next level of grade 5. Some have argued that

this examination was used to limit the number of Africans who received education on the basis that the political economy of colonial system did not want educated Africans, and educated Africans would have challenged colonial rule itself (Bogonko 1991). The result was a merging of all the levels of education into a consolidated seven years of primary education with one examination taken at the end of year seven (Oketch and Rolleston 2007).

All these efforts led to tremendous access for Africans who had been excluded from education previously, but fees still remained a barrier. The whole notion of such policies was that expanded access to education improved literacy and that the general increase in educational attainment would spur economic growth and address social inequalities (Forojalla 1993). However, criticisms soon started to emerge. The first criticisms were that the 'earlier optimism that expansion of education would effectively equalize life chances in industrialized societies gave way to a new pessimism about the possibilities of altering the distribution of incomes by educational means' (Blaug 1985:17). In other words, rather than addressing inequality, education was now becoming the source of income inequality. In SSA, this period coincides with the realisation that governments could not cope with social demand and the promises made for education started to be challenged with large numbers of youth completing school but not being able to be absorbed in the civil service or in the modern private sector.

The first attempt at a solution was to find ways of retaining schooled youth in the rural areas so that they do not go to the cities in search of what was now clearly scarce employment in the civil service. The manpower model, led by the social demand approach, and upon which the first expansion strategy rested, began to experience cracks in sub-Saharan Africa. The first educational policy response was to advocate a more vocational education and curriculum (Oketch 2007; Foster 1961). Hence, within a few years of independence, when Ministers had attached great hope in education, vocational education was introduced and promoted as a means to addressing unemployment of the schooled and the now perceived mismatch between education and the needs of the labour market. But even this approach of vocationalisation was based on a false premise that the problem of youth unemployment was not education itself, but the curriculum that prepared youth for white collar jobs that were now in extremely limited availability.

Massive investment in vocational education in Ghana, Kenya and other places ensued in the 1960s and 1970s, but this did not stop demand for more education. The World Bank supported vocational education and provided both expertise and resources for vocational education, still under the notion of manpower planning tenet of the human capital theory (Middleton *et al.*, 1993). However, Philip Foster, based on his study of Ghanaian youths, termed this 'the fallacy of vocationalisation'. (Foster 1962) warned about the limitations of schooling in being able to change society (King and Martin 2002) and noted that those with vocational education remained unemployed longer than their counterparts who had received general education. General, academic education had a higher social value than vocational education so that, for example, the children

of the political elite were not interested in vocational education and even those with vocational curriculum saw it as a stepping stone to more general education. As a result, vocational education failed to become the solution to the collapse of the manpower planning model of human capital theory in sub-Saharan Africa due to the failure of the labour market to absorb the products of education (Oketch 2007).

Authors writing on education and inequality around this period such as Jencks *et al.* (1972), as noted by Blaug, ‘were harbingers of the new scepticism about education that now swept through the First and Third World’ (Blaug 1985: 17). Faure *et al.*’s (1972) influential report on ‘Learning to be’ faulted the existing education systems and recommended a model of learning that would ‘alternate schooling and work throughout the lifetime of individuals’. But even this recommendation did not take root and, with educational expansion becoming unsustainable, the focus shifted away from quantitative expansion to qualitative reforms. On this, economists were seen as less useful than psychologists and psychometricians, and thus the economists were less prominent in the educational planning scene in the 1970s than a decade earlier (Blaug 1985: 18).

However, as noted by Blaug (18):

Nevertheless, the economics of education did not die out in the 1970s as a field of academic study. On the contrary, the decade saw a vigorous development of the subject into new directions, such that we can now distinguish a well-defined second, as contrasted with a first, generation economics of education.

The second generation abandoned manpower projections and the idea of a social demand approach as providing sufficient basis for educational planning (Blaug 1985: 18). This is because there was a need to reconsider educational financing, which earlier had been taken for granted in the manpower approach model. More children were demanding education than available or affordable places could accommodate and international agencies such as the World Bank, which had used a manpower planning model and later on promoted vocational education, was now looking for a massive shift of focus and investment towards basic education rather than secondary or higher education. Also abandoned in the second generation was the notion of manpower-planning/forecasting as a tool for educational planning. This was, as Blaug puts it, ‘because it begs too many questions about the relationship between the structure of occupations in an economy and the educational requirements for jobs, not to mention the notorious inaccuracy of such forecasts for any period in the future that is longer than 1 or 2 years’ (18).

RATES OF RETURN ANALYSIS

Gone was manpower planning and in its place was the ‘rate of return’ approach. A rate of return approach meant that the various levels of education were subjected to study of the extent to which they accrued benefits to society and to individuals in terms of both social and private benefits. It included in some instances earnings profiles, but mostly

looking at costs against benefits. Simply put, it began to provide the narrative that basic education was the most profitable form of investment that governments could make as a contribution to the public good, whereas secondary and tertiary education had greater personal or individual benefits in terms of lifetime earnings. To the economists and governments in SSA, it offered a tool and framework to alter how education was being funded and to justify the massive investment in basic education and the idea of universal primary education.

However, rate of return analysis was still based on the notion that education is an engine for economic growth (Schultz 1963; Becker 1965; Oketch 2006). The central argument being that investment in humans is similar to investment in other means of production. Following education, humans have enhanced economic value through the set of skills and knowledge that they acquire, and such a skills set increases their productivity as workers (Hanushek and Woessman 2008). In terms of planning, the rate of return framework is seen to offer a framework that has been applied to predict the private demand for education, and thus determining who should pay for that education. It has been used in planning to assess what is referred to as the social value of expenditure in education, and, at its peak, was the entry point of the cost-sharing planning framework that was introduced in the 1980s (Inoue and Oketch 2008).

Psacharopoulos is famous for spearheading the rate of return framework of human capital theory, particularly in educational planning when he worked at the World Bank. He produced the 1985 book together with Maureen Woodhall, which became the basis for educational investment decisions and influenced the way the World Bank engaged with sub-Saharan Africa countries on matters of educational access expansion and finance (Psacharopoulos and Woodhall 1985). He wrote a substantive work on rates of return in 1994 that made a strong case for greater social returns to basic education in sub-Saharan Africa and high private returns to tertiary education (Psacharopolous 1994). The main argument that was developed and strengthened a lot more in the 1980s and 1990s was that private benefits were higher with tertiary education and social benefits were greater with basic education. In essence, governments would reap greater benefits if they provided primary education freely (and possibly to some extent secondary education) and let individuals pay for tertiary education. The data and the arguments were highly criticised (see e.g. Bennel 1996). Several other scholars of higher education in SSA also criticised this view as it seemed to undermine government commitment and investment in higher education, providing the foundation that would later on in the 1990s dismantle the elite model of the university system that had prevailed in much of SSA. It meant that students admitted to higher education institutions such as universities were in the future to contend with loans rather than grants and the idea that a degree was 'free' became a thing of the past. This was heightened in the 1990s when governments were compelled to restructure their entire education systems following a 1988 report of the World Bank that had questioned state subsidies to higher education (World Bank 1988).

As the Jomtien conference on basic education was held in 1990, the global focus,

even in SSA, was on basic education. The idea of costsharing, which had been introduced in the 1980s as part of structural adjustment programmes to reduce greater social demand, was agreed to have been detrimental to improving national literacy in several countries, and by 1990 the Bank along with SSA countries were arguing against any form of cost sharing in basic education (Oketch and Inoue 2008). Nonetheless, various forms of fees remained but the rate of return discourse had already massively altered the financing of higher education by removing heavy subsidies to tertiary education on the basis that those who gained university education would end up with greater personal benefits in terms of higher earnings and therefore, they should contribute to this education privately, through loans and private funding of their education. These heightened tensions between the Bank and several African governments, which were not happy with annoying the 'middle' class that benefitted from publicly subsidized university education. The argument advanced by the Bank then was that this system of state subsidy to higher education was morally unjustifiable as it amounted to the large poor masses subsidising the education of the few rich students who managed to gain a place in the elite and competitive university system (Oketch 2003). There was a strong call for restructuring the funding to universities and for many universities in SSA the 1990s saw the widespread introduction of direct tuition fees and enterprise activities within universities. In extreme cases, what have been referred to as 'parallel' programmes were introduced and these were seen to provide extra revenue to the universities. Indeed, in Kenya for example, the public universities now to enrol more parallel (i.e. self-financing) students than those on government subsidy. This is another aspect in which human capital theory has influenced educational planning by shifting resource allocation between the various levels of the education system (Oketch 2003).

To sum up so far, human capital theory led to policies on education in Africa directed towards expansion of access under the social demand approach. It also made the direct case in development plans concerning the 'causality' between education access and economic development of African countries. Also, HCT became dominant in linking education to development strategies of the 1960s and 1970s through the development plans in Africa.

THE ENDOGENOUS GROWTH MODEL

More recently, Lucas (1988) and Romer (1990) have reinvigorated the original human capital approach with a discussion on technical change and endogenous growth. Here technology is brought into the focus and there is a shift in the discourse on human capital away from attainment to quality, information communication and technology (ICT) and innovation. What matters now is not simply attainment, but innovation. Endogenous growth (or growth originating from within) highlights the diminishing returns to physical capital offset by high value innovation. ICT becomes central to productivity, and here we see many education planning frameworks in Africa incorporating ICT in their education strategy papers.

Also as diminishing returns to primary and secondary education occur though quantitative expansion and EFA such as in Ghana, Malawi, Uganda, Kenya, it is no longer enough simply to have primary and secondary education. Quality becomes a major issue of concern and Hanushek and Woessman (2007) argue that Human Capital Theory can no longer be framed only in terms of access. The tension between access and quality remains a key issue in SSA (Oketch 2012). SSA countries are under pressure to improve quality and there is no doubt that expansion of access has undermined quality and that even poor parents are willing to bypass state-subsidised education in order to send their children to the sorts of schools that have been referred to ‘private schools for the poor’ for the sake of quality (Oketch *et al.* 2010; Oketch *et al.* 2011).

So, it can be said that, at the moment, human capital theory has produced the tension between expanded access and quality in several countries in SSA. There are those education economists, such as Hanushek and Woessman, who are advocating for a redefinition, which moves the notion of human capital from attainment as originally conceptualised to one that pays specific attention to quality. This debate also feeds into the role of the private sector or what has been referred to as the relative effectiveness of the private sector in education versus the effectiveness of public provision.

Another aspect of the expanded version of human capital is the inclusion of what is referred to as non-market social benefits of education. This is linked to human development through the works of Amartya Sen’s (1999) capability approach. This expanded version of human capital is a reconfiguration of the rate of return to incorporate aspects such as the contribution of education to democracy, better health, to tolerance, what are referred to as non-market benefits (Appiah and McMahon 2002; McMahon and Oketch 2010). This leads to advocacy for greater public investment in all levels of education in order to achieve not only economic but a whole range of other social benefits.

Education strategies that emphasise the role of education in youth empowerment and civic education are gaining strength and lifelong learning discourse begins to emerge in the education strategy plans of African governments. There is growth in part-time courses, on the job training, the quest for new knowledge and a greater emphasis of the provision of the skills and capabilities that would lead to greater employability and self-employability of youth. In this regard, HCT remains a powerful justification on expanding education and funding education. The debates are over whether the public funding should be extended to private provision, but not over whether education is a worthwhile investment. Thus, to date, the theory has developed in its formulation from the simple access and attainment in the 1960s around manpower planning, to the rate of return that was narrowly conceived in terms of social and personal benefits, to the endogenous growth models and endogenous development framework that seeks to recapture the wider returns or benefits of investment of education to society by spurring innovation and technical change and creating tolerant and open-minded societies. All these calls and formulation have affected how education is financed and the role that

education plays in the national psyche in terms of its contributions to individual well-being and national development.

So, a summary of human capital phases and education policy strategies in Africa would be as follows:

- 1960s and 1970s: HCT influences education in terms of attainment; manpower planning is the dominant aspect of human capital theory in African education.
- 1980s and 1990s: Structural adjustment in cost measures and rate of return analysis become a dominant interpretation and empirical focal point of HCT in Africa's education systems. The focus of finance is shifted to individuals benefiting from education.
- 1990s-2000-present: A revisitation of human capital with endogenous growth coming out strongly. Here ICT policies are added and education systems incorporate ICTs in their education strategies. There is also diminishing return to investment in basic education in terms of individual/private rates of return and the quality of education becomes a major issue. Lifelong learning incorporated.
- Endogenous development becomes a key focus and HCT now includes measures that include emphases of a social nature and political democracy and stability.

CONCLUSION

The interpretation of human capital theory has evolved over time and Africa's education policies have adjusted to each phase by incorporating the new interpretation. This has affected how education is organised and funded. The first generation of economics of education focused on manpower planning; the second generation on rates of return; the third generation on endogenous growth and endogenous development; and the fourth generation on issues around quality and the tension between access and quality. In all these there is clear evidence that these are linked to human capital theory and we see a theory that transforms itself to address the criticisms and, in so doing, influences education strategies pursued by African governments. The contribution of the theory is not viewed in terms of economic development alone, but there is also now clear evidence of modelling investment in education on political accountability and democratic movements. Indeed, it can be concluded that, as ever, human capital theory still provides a strong framework and relevance to educational development in sub-Saharan Africa and that with the now expanded measurement of social, non-market benefits or externalities of education (McMahon and Oketch 2013), the role is no longer purely economic. As education becomes firmly accepted as an end in its own right, rather than a means to an end, the discourse of human capital will continue to evolve.

REFERENCES

- Abdi, A. 1998. Economic liberalization and women's education: Prospects for post-apartheid South Africa. *McGill Journal of Education* 33: 71–84.
- Alexander, R. 2008. *Education for all, the quality imperative and the problem of pedagogy. Creative Pathways to Access Research Monograph No. 20*. London: Institute of Education, University of London.
- Appiah, E. and McMahon, W.W. 2002. The social outcomes of education and feedbacks on growth in Africa. *Journal of Development Studies* 38: 27–68.
- Bategeka, L. 2005. Universal primary education (UPE) in Uganda: Report to the inter-regional inequality facility-policy case study. Uganda, Institute of Development Studies, University of Sussex.
- Becker, G. 1965. *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- Bennell, P. 1996. Rates of return to education: Does the conventional pattern prevail in sub-Saharan Africa? *World Development* 24(1): 183–199.
- Blaug, M. 1985. Where are we now in the economics of education? *Economics of Education Review* 4(1): 17–28.
- Bond, P. and Dor, G. 2003. *Neoliberalism and poverty reduction strategies in Africa*. Discussion paper for the Regional Network for Equity in Health in Southern Africa (EQUINET). Harare, Zimbabwe: Canadian International Development Research Center.
- Bogonko, S.N. 1992. *Reflections on education in East Africa*. Nairobi, Kenya: Oxford University Press.
- Carnoy, M. 1995. Structural adjustment and the changing face of education. *International Labour Review* 134(6): 653–673.
- Denison, F. 1962. *The sources of economics growth in the United States and the alternatives before us*. Washington DC: Committee for Economic Development.
- Dore, R. 1976. *The diploma disease: Education, qualifications and development*. Berkeley and Los Angeles: University of California Press.
- Forojalla, S.B. 1993. *Educational planning for development*. New York: St. Martin Press Inc.
- Foster, P.J. 1965. The vocational school fallacy in development planning. In Anderson, Bowman (ed.), *Education and economic development*. Aldine, Chicago.
- Inoue, K., Oketch, M. 2008. Implementing free primary education policy in Malawi and Ghana: Equity and efficiency analysis. *Peabody Journal of Education* 83(1): 41–70.
- King, K. and Martin, C. 2002. The vocational school fallacy revisited: Education aspiration and work in Ghana 1959–2000. *International Journal of Educational Development* 22(1): 5–26.
- Klees, S.J. 2008. A quarter century of neoliberal thinking in education: Misleading analyses and failed policies. *Globalisation, Societies and Education* 6(4): 311–348.
- Klopp, J.M. and Janai R. Orina. 2002. University crisis, student activism, and the contemporary struggle for democracy in Kenya. *African Studies Review* 45(1): 43–76.
- Knight, J.B. and Sabot, R.H. 1990. *Education, productivity, and inequality: The east African natural experiment*. Oxford, UK: Oxford University Press.

- Limage, L.J. 1999. Literacy practices and literacy policies: Where has UNESCO been and where might it be going? *International Journal of Educational Development* 19(1): 75–89.
- Little, A. and Miller, E. 2000. *The international consultative forum on Education for All 1990–2000: An evaluation*. World Education Forum, 26–28 April 2000, Dakar, Senegal. Paris: UNESCO.
- Martin, C.J. (1982). Education and consumption in Maragoli (Kenya): Households' educational strategies. *Comparative Education Review* 18(2): 139–155.
- McMahon, W.W. 1987. The relation of education and R&D to productivity growth in the developing countries of Africa. *Economics of Education Review* 6: 183–194.
- McMahon, W.W. 1999. *Education and development: Measuring the social benefits*. New York: Oxford University Press.
- Middleton, J., Ziderman, A. and Adams, V.A. 1993. *Skills for productivity: Vocational education and training in developing countries*, World Bank. New York: Oxford University Press.
- Mukudi, E. 2004. The effects of user-fee policy on attendance rate among Kenyan elementary schoolchildren. *International Review of Education* 50(5/6): 447–461.
- Mundy, K. 1999. Educational multilateralism in a changing world order: UNESCO and the limits of the possible. *International Journal of Educational Development* 19(1): 27–52.
- Oketch, M., Mutisya, M., Ngware, M. and Ezeh, A.C. 2010. Why are there proportionately more poor pupils enrolled in non-state schools in urban Kenya in spite of FPE policy? *International Journal of Educational Development* 30(1): 23–32.
- Oketch, M.O. 2007. To vocationalise or not? Perspectives on the current trends and issues in technical and vocational education and training (TVET) in Africa. *International Journal of Educational Development* 27(2): 220–234.
- Oketch, M. and Rolleston, C. 2007. Policies on free primary and secondary education in east Africa: Retrospect and prospect. *Review of Research in Education* 31: 131–158.
- Oketch, M.O. 2006. Determinants of human capital formation and economic growth of African countries. *Economics of Education Review* 25(5): 554–564.
- Oketch, M.O. 2003. Affording the unaffordable: Cost sharing in higher education in sub-Saharan Africa. *Peabody Journal of Education* 78(3): 88–106.
- Pritchett, L. 1996. *Where has all education gone? Policy research working paper, R/1581*. Washington, DC: The World Bank.
- Psacharopoulos, G. and Woodhall, M. 1985. *Education for development: An analysis of investment choices*. Washington, DC: Oxford University Press/World Bank.
- Psacharopoulos, G. and Patrinos H.A. 2004. Returns to investment in education: A further update. World Bank Policy Research Working Paper 2881.
- Psacharopoulos, G. 1994. Returns to investment in education: A global update. *World Development* 22(9): 1325–1343.
- Schultz, T.W. 1963. *The economic value of education*. Columbia University Press.
- Sen, A. 1999. *Development as freedom*. Oxford: Oxford University Press.
- Sifuna, D.N. 2007. The challenge of increasing access and improving quality: An analysis of universal primary education intervention in Kenya and Tanzania since 1970s. *International Review of Education* 53: 687–699.

- Ssekamwa, J.C. and Lugumba, S.M.E. 2001. *A history of education in east Africa*. Kampala, Uganda: Fountain Publishers.
- Stasavage, D. 2005. Democracy and primary school attendance: Aggregate and individual level evidence from Africa. AfroBarometer Working Paper #54.
- UNECA-UNESCO. 1961. *Conference of African States on the development of education in Africa (ED/181)*. Addis Ababa: UNESCO Publishing.
- UNESCO. 1990. *World declaration on Education for All and framework for action to meet basic learning needs*. World Conference on Education for All: Meeting basic learning needs, Jomtien, Thailand: 5–9 March 1990. Paris, France: UNESCO.
- UNESCO/GTZ. 2009. *The Basic Education in Africa Programme (BEAP): A policy paper – responding to demands for access, quality, relevance and equity*. UNESCO: Paris.
- Wolf, A. 2002. *Does education matter? Myths about education and economic growth*. London: Penguin.
- Woodhall, M. 2004. *Cost-benefit analysis in educational planning*. Paris: UNESCO IIEP.
- World Bank. 1978. *World development report*. Washington, DC: World Bank.