Fallacies in Educational Economics
Some Heresies Relevant to African Planning

Stephen P. Heyneman
Comparative Education Center
University of Chicago

In the past decade a large amount of literature has been generated concerning the role of schools in developing the economies of the new African states. One group of "adaptation" arguments(1) has suggested that schools should be "geared toward" or "relevant to" the needs of the rural environment. Among the accusations often made by adaptationists was that the nature of an "academic" curriculum had exacerbated the problem of urban unemployment. The question of curriculum arguments has been dealt with elsewhere(2). Here we will criticize indirectly the adaptationist view of the role of schools in urban unemployment by reviewing some labour market research and concentrating upon the most recent and comprehensive study of the rate of return data, that of the Carney and Thias Kenyan study.(3)

Another group of "empirical" arguments(4) has suggested that school leavers act in response to economic pressure and that the decision to attend school, to choose between an academic or an agricultural curriculum, or to migrate from or to an urban area can be explained monetarily. Here we will differ and suggest that though we cannot agree with these adaptationists who call for massive educational investment without sufficient regard for rates of return, neither can we agree that the private motives for educational investment are primarily monetary.

Surprises in the Labour Market Structure: a Response to the School Leaver Migration Problem

Although many concerned with development planning in Africa still discuss the "target worker"(5) or "life style worker"(6) this type of employee may be vanishing rapidly from the scene. The trend, which has been noticed by many,(7) may be toward a stabilization of the wage labour force. For example, the median number of years a Nairobi African employee has worked for a particular firm was only 1.1 in 1953, but 1.4 in 1968.(8)

The urban labour force may today be stabilized to the point where realistic employment expectations may be normal, even in rural areas. As a result, less employment turnover can be expected in the towns as a "natural function" of African wage labourers whose "real homes" are supposed to be in rural areas. As a summary result, the less urban migration of primary school leavers one might discover in the future. It is possible, then, that the stabilization of labour and employment perceptions may help to create a peak of urban open unemployment. Perhaps this peak has already been reached.

Stabilization of the wage labour force can be expected to stimulate on
the job investment and the creation of technical skills by individual firms. Worker productivity can be expected to increase through implementation of new management policies, and investment in training regardless of minimum wage constraints. Investment in on the job training should lessen the demand for technical schools that, hypothetically, could free the resources previously allocated to vocational schools for more productive purposes.

Evidence from Kenya suggests that, except for secondary school leavers, the "colonial wage" scale may be gone. Independent African governments may actually pay less than salaries available in the private sector. The study in Kenya discovered that primary school and university graduates earned less in the civil service than in the private sector. Overemployment, increased amounts of job security, and fringe benefits in the public sector may account for the differences in earnings of primary school leavers. The fact that university graduates in the private sector may have more opportunity to sell their services on a world market and may have more specialized training could account for their differential remuneration. On the other hand, secondary school leavers, perhaps because they often become teachers, are the exceptions in Kenya and on the average earn more in the public than in the private sector.

Monopoly or monopsony positions due to collective bargaining are important in Kenya only for persons with less than nine years of schooling. Labour unions are generally weak in Africa, and their presence probably does not raise incomes significantly. Unlike the situation in more developed areas, there is no evidence of large and prestigious firms hiring more than the necessary skills for their jobs.

Wage Increases which Lower Standards of Living

Experimentation with raising minimum wages may not increase worker efficiency, it may not improve health consumption habits, and it is definitely not necessary for the stabilization of the urban labour force. Instead, raising a minimum wage may exacerbate unemployment in an economy already subject to overemployment. In Tanzania, the government hoped to increase worker efficiency by raising the worker's living standards in the urban areas. By raising the minimum wage, the total earnings were increased from £2.2 million pounds in 1962 to 3.6 million pounds in 1965. But while the amount of earnings increased, the absolute number of employed decreased from 397,028 to 333,755; the ranks of the unemployed were swelled by the 63,273 mostly low skilled and domestic workers whose jobs had become too expensive between the years of 1962 and 1965.

A similar situation occurred in Kenya at the suggestion that large firms, for social reasons, hire an unproductive number of workers. Within weeks, the number of unemployed had been swelled from new migration of rural school leavers and peasants after hearing about the new "jobs" available.

In the present concern over the lack of educational quality in Africa, most educationalists view the problem as a function of a lack of investment in material, research and facilities. But the lack of educational capital may be more due to misallocation of that already available than to any other
single factor. Teacher salary increases since independence have accounted for a fair portion of the money spent on education. Since 1961, the percentage of Gross Domestic Product allocated for educational purposes in tropical Africa has increased from 3% to 4.2%. However, without the increases in teacher salaries and with the same increment in capital expenditure, the rise would only have increased the percentage from 3.0 to 3.3. Three-quarters of the increase of educational expenditures in tropical Africa have been put toward raising teacher salaries. Yet there is evidence indicating that an increase in teacher salaries does little or nothing for pupil performance on standard examinations.

Incentives for Private Investment in Schooling: "Uneconomic"?

There appears to be small measurable monetary incentive to send a child to school if he is to remain in the rural areas. Returns to primary education in Kenyan urban areas average 11% above that of rural areas, while returns to urban secondary education averaged 30% more. Though education was associated with an increase in a landowner's crop production of £23 per year, since a fifteen year old had less than a 30% chance of becoming a landowner by age 27, most private incentive for primary and secondary education in Kenya must be perceived as non-agricultural in nature. Perhaps this is a hypothesis which is valid for much of Africa.

The persistence of uneconomic attitudes to investment in primary education may be a common characteristic of the consumer. In 1960, there were 117,000 Kenyan Standard VII leavers. Forty-two percent could expect to find employment. In 1966, there were 688,000 leavers, and only 5% could expect to find employment. In Kenya, only one out of four of the presently unemployed will find a job in the next ten years. Unemployment grows by approximately 100,000 annually. Yet despite the increasingly gloomy returns, an increasing portion of the population is willing to invest in primary education. Is this "mass emergence" likely to be a temporary phenomenon due to a "perception lag" in the returns? Or is this seemingly uneconomic persistence due to other, less recognized phenomena? The latter seems more likely.

Private net returns for Kenyan primary education do not compare favourably with the net returns from savings investments. But even though rural people are almost certain to lose money, they continue to invest in their children's schooling. There are six possible reasons.

First, the first five or six years of primary education are nearly free of opportunity cost. Secondly, the individual, due to ignorance, may not know any alternative investment or, thirdly, he may not be quick to perceive a comparison of earnings from such diverse sources as banks versus schools. Fourthly, an "energy of despair" phenomenon exists; a peasant may wish to gamble with a likely lack of profit in the unlikely hope of receiving very large returns. Fifthly, non-economic benefits of schooling may be worthy of major investment. Schooling may, in fact, have been incorporated into the norms and expectations of certain "traditional" African societies. Lastly, large unmeasured benefits in bride price returns accrue through the investment in female education. And bride "price" phenomena are by no means limited to traditional societies or to traditional individuals.
Public Incentives for Investment in Schooling: a Confused State because of Data and Policy Inconsistencies

Problems in data consistency make it difficult to decide upon public investment policy. The range of social returns to primary education, for example, lends little credence to the data's validity. Uganda's 1965 figure of 66% (27) contrasts highly with Northern Nigeria's 17% (28) and Kenya's 36% (grades 5 – 7) (29). Further doubt is cast upon the matter when the Kenya figure is altered to 5% after accounting for various non-educational variables which tend to influence lifetime earning streams. Still other figures may be equally confusing in any comparative context (30).

Regardless of the accuracy of previously collected data, the Garney and Thias study clearly indicates that unless careful estimates are made for social, ability and job related factors which may influence earning, the data will be very much in doubt. After being adjusted for age, tax and socio-economic, and exam score variables, the probability of obtaining positive rates of return were altered considerably on the primary and secondary levels. Private rates for primary schooling dropped from 33% to 5%; secondary rates dropped from 36% to 19% (urban only) (31). Differences in income between Kenyan primary education certificate failures and passers were, without any other factor, 27% associated with the simple holding of the certificate. Because of intervening variables, the unadjusted social rates of return had to be devalued by over 40%.

As a result, any cost analysis or combination cost and manpower projection analysis must be initiated with considerable caution and sophistication. There is a critical minimum of data requirements which cost analysis must meet if it's data is to be regarded as acceptable. With the Garney and Thias study and its shortcomings (32) comes a realization that this minimum level will have to be escalated further still.

Moreover, policy alternatives based upon cost analysis are unclear. For example, high social rates of return (23%) are found for Kenyan 6th Form pupils, yet this may not be as much a call for further government investment for that educational level than it is a need to force savings revenue from that level's graduates and utilize the increased social income in more "needed" areas. Government subsidy with more of an eye on political goals than on economic efficiency can result in over subscription at various schooling levels. Though the amount of productivity associated with Kenyan primary education is insignificant and though the percentage of Standard VII graduates able to secure wage employment has dropped from 42% to 3% in six years, the government is committed to providing universal primary education because of a political campaign promise.

Previous efforts at cost localization have had little effect since the central government is committed to paying for teacher salaries and those salaries account for 86% of all primary recurrent expenditures. Rural people are prepared to invest because opportunity costs are close to zero and because government is frozen in its pattern of subsidization; a smaller portion of the available local savings is utilized than would otherwise be the case if a more "market-like" effect were allowed to operate. Because a peasant seems to persist in investing in primary education regardless of
the paucity of return, one finds it hard to defend a policy of centrally paid teachers when the burden could be alleviated through local initiative. It might be helpful to free educational systems from further over-subsidization and let a more natural market act upon the demand for schools.

In Conclusion

From the evidence indicating a degree of labour stabilization, one must conclude that school leavers are subject to monetary notions in their decision to migrate. Schools and school curriculum are probably not a creator of urban unemployment as much as is the knowledge of material benefit implicit in the decision to move. Increased or decreased opportunities such as those caused by manipulation of minimum wages may be more important as a factor in creating movements of people than is an increment in schools or an emphasis upon "academic" learning.

From the evidence already in, it seems unlikely that an increment in schools will benefit the society unconditionally. Even though the evidence is radically altered by the inclusion of socio-economic factors and it contains nagging policy inconsistencies, it is rather clear that social investment at some educational levels is uneconomic. With this in mind, in the search for an economic stimulant in an underdeveloped society, it might be advisable to pay closer attention to investment in things other than schools.

Notes


2. Ibid.


5. "Target worker" refers to the concept of marginal labour commitment in which a basically traditional rural migrant seeks wage employment only for as long as it takes to acquire a specific item or monetary goal.


10. "Colonial wage scale" in this context refers to the level of wages and associated benefits which were attached to particular expatriate appointments in the civil service.

11. Carney and Thias, op. cit., pp. 4 and 100.

12. Ibid., p. 4.


20. Ibid., p. 97.

21. Ibid., p. 130.

22. Guy Hunter, "Manpower and Educational Needs in the Traditional Sector, with Specific Reference to East Africa," in Unesco, op. cit., pp. 166-68.


25. Ibid.


29. Carney and Thias, *op.cit.*, Table 6.9, column 1.

30. Referred to here is Smyth and Bennett's use of Central Planning Bureau information setting a figure of 25% employment for those expected to leave primary schools (p. 317). A question might be raised not only as to the size of this figure but to its temporal and spatial consistency. A further question might be raised as to the average length of employment obtained.


32. The study's data collection with regard to rural agricultural output is less sophisticated than should be expected with so important an occupational category. Non-civil servant rural wage earners, whose incomes may be boosted by their crop-growing opportunities, are ignored. The consideration of rural civil servant wage earners such as primary teachers as "urban workers" leads to misconceptions and confusion as to the placement of wage earners and their various cost of living. Furthermore, the study makes an attempt to isolate determinents of school output, yet despite the study's thoroughness in some areas, it ignores the important variables of teacher attitudes, peer group attitudes, the socio-economic background of the school population, the types of curriculum, and the pedagogical techniques, all of which represent important portions of school achievement variance.