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Investing in Africa's High-Level Human Resources: The Challenges and Paradox of Implementing Cost Sharing In Higher Education Policy in Tanzania in the 21st Century

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Abstract

Investing in Africa's high-level human resource, i.e. investing in higher education is critical for Africa's socioeconomic development, given the central role played by higher education in the development of any nation in the 21st century. Tanzania, realizing the critical role of higher education in its development, soon after independence (1961) and until the late 1980's deliberately and strategically invested in higher education to cater for the development needs of Tanzania in the 21st century. During the early 1990s the government introduced a cost sharing policy in higher education in the broader context of implementing social and economic reforms, partly advocated by the World Bank and the International Monetary Fund. This policy to some extent contradicts government's efforts of investing in higher education in order to make it accessible to all Tanzanians and expand the sector in general. This article argues that the introduction of cost sharing in higher education in the 1990s was imperative given the financial austerity and the increasing government's inability to finance public higher education. Such government inability was a result of higher education ever increasing demand. Cost sharing in higher education policy has become counterproductive in the process of investing in highly-needed human resource to make Tanzania competitive in the 21st century, to face the challenges of globalization. Tanzania's higher education sector, compared to other East African countries, particularly Kenya and Uganda, is still small with a total student enrollment of 82,529 (TCU, 2009). For this reason, the government and other stakeholders need to invest more in higher education.

1.0 Introduction

Investing in Africa's high-level human resource, in other words, investing in higher education is critical for Africa's socioeconomic development, given the central role played by higher education in the development of any nation. Tanzania, realizing the critical role of higher education in the development, soon after independence (1961) deliberately adopted a *manpower requirements approach* to educational planning as a strategy of training high-level manpower[1] critically lacking at independence. The Tobias' manpower survey (1962-67), which ultimately led into the establishment of a Manpower Planning Unit in the Ministry of Development Planning and the establishment of the Standing Manpower

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Advisory Committee in 1963, revealed that there were only 12 Tanzanian civil engineers, 9 veterinary doctors, 5 chemists, 1 forestry officer, 8 telecommunication engineers, and 38 graduate teachers.[2]

In the context of above acute shortage of high-level human resource, the Government decided to introduce and implement "tied bursary mechanism" as a strategy of developing and training potential high-level human resource in the most needed skills for socio-economic development in 1964/65. The Government offered full student bursaries-disguised free higher education-for students selected to join higher education institutions but students did not have freedom to choose their preferred courses of study. Tied bursary mechanism was in addition reinforced by "bonding" where the recipient of government bursary was obligated to work for the Government for the minimum period of five years after graduation (Ishengoma, 1989, p.2).

The government continued to invest in higher education with the objective of developing high-level human resource critically needed for development until the early 1990's when cost sharing in higher education policy, a policy intended to shift some of the costs of higher education to students and their parents and other stakeholders in higher education, was reintroduced within the broader framework of the International Monetary Fund/World Bank's sponsored wide-ranging social and economic reforms. The reintroduction of cost sharing in higher education marked the end of guided high-level manpower planning, the advent of free labour market and the end of government guaranteed employment for graduates from public higher education institutions.

This article seeks to discuss the challenges and paradoxes of implementing cost sharing in higher education policy in Tanzania within the overall framework of investing in Africa's human resource, in the context of the conceptual framework of 'human capital theory'. The implementation of cost sharing in higher education in Tanzania is currently a controversial issue which has generated partisan debates, most of which focus on the impact of the policy on access and equity issues, but sidelining the critical issue of the contribution and impact of the policy to human resource development and the implications thereof to the country's socio-economic development.

The article is organized into four major sections. Section 1.0 is an introduction which also revisits the human capital theory and its major assumptions, Section 2.0 discusses the introduction of cost sharing in higher education policy in Tanzania including its rationale and major assumptions, Section 3.0 focuses on the challenges and paradoxes of the implementation of cost sharing in higher education policy and its impact on investing in high-level human resource development through investment in higher education. Section 4.0 makes some conclusions. The thesis of the article is that while the reintroduction and subsequent cost sharing in higher education was inevitable due to government's financial austerity and making some necessary reforms in the public higher education system, its implementation has some adverse impact on government investment in higher education and consequently human resource development.

1.1 Investment in Education in Tanzania: Theoretical Consideration

The Human Capital Theory, a neoclassic economic theory, links investing in people's education and training to increased productivity at both national and individual levels, increased future income, technological and organizational changes and general economic development of a nation (Bosworth, *et al.*, 1996). The theory extensively developed and prominently advocated by Theodore Schultz (1961, 1963) and Gary Becker (1964), is premised on the major assumption that we can invest in people by educating and training them so that the skills and knowledge they acquire can be utilized in the future for the social and economic development of a nation, and to create wealth in society which can be utilized at the individual and society levels. The major assumptions made by the Human Capital Theory are that education and training:

(a) raise the productivity of workers by imparting useful knowledge and skills;
(b) raise the incomes of workers;
(c) are the most important investments in human capital; and
(d) lead to higher incomes and macro-economic growth.

As Riak (n.d.,13) correctly argues, in the human capital theory model, education is assigned the most important role of producing the needed talents, skills and knowledge by identifying talents and improving them, adjusting curricula, instructional materials and other educational variables to changing needs of the economy and the system and preparing individuals to actively and productively participate in the economy. This argument justifies the role of government in investing and financing (higher) education and training regardless of the financial austerity for the country's social, economic and technological development.

Galabawa (2005, p.84) also argues that the level of achievement in technology - which is the main driver of change and development in the 21st century in a given economy - critically depends on the level of higher education, and that countries with high enrolment ratios in higher education become the leaders in technological innovation and diffusion through higher education research. Galabawa further argues that Tanzania will remain marginalized in technology and economic development if investment in higher education is not increased in such a manner that overtime the country can become a dynamic leader in technology with requisite human capacity. Furthermore, SARUA (2008) also convincingly argues that the level of achievement in technology strongly depends on the level of higher education in a given economy, and that most countries with high enrolment ratios in higher education such as New Zealand, South Korea, Israel and Japan have become leaders in technology.

Because of gross under-funding participation and gross enrolment ratios in higher education are low compared to other SADC countries. For example, available data on gross enrolment ratios in SADC countries for 2004 show that the gross enrolment ratio for Tanzania was 1.0% compared to 3.0% for Kenya, Uganda, Rwanda, and Lesotho, and 2.0% for Burundi. For Mozambique it was also 1.0% as for Tanzania, Botswana 6.0%, Angola 1.0%, Zambia 2.0%, Swaziland 5.0%, Namibia 6.0%, South Africa 15.0% and Zimbabwe 4.0% (GUNI, 2007, pp.383-384). To be competitive in science and technology the 21st century, Tanzania should deliberately invest in higher education to raise its gross enrolment ratios.

In a broader context, the significance of investing in higher education and its relationship to economic development in developing countries is also emphasized by McPherson (2008, p.5) when he argues that:

> *Investing in higher education in developing countries is a critical component to long-term economic growth, stability and poverty reduction. Investment in higher education promotes technological development 'catch-up' and 'leap frogging' allowing countries to gain ground on more technologically advanced societies and maximize economic output.*

Relating investment in higher education to economic growth, SARUA (2008, p.140) observes that higher education is an important form of investment in human capital development. It adds that higher education can be regarded as a high level or a specialized form of human capital and its contribution to economic growth is very significant. SARUA further argues that higher education can contribute to development of a country in the following ways:

- Contributes to the rapid industrialization of the economy by providing individuals with professional, technical and managerial skills;
- Provides knowledge workers who stimulate the growth of the economy, in the current context of transformation of nations into knowledge economies and knowledge societies;
- Creates attitude change, necessary for the socialization of the individual and the modernization and overall transformation of societies;
- Facilitates through teaching and research the creation, absorption and dissemination of knowledge; and
- Contributes to the formation of a nation state and promotes globalization.

Tanzania like other newly independent sub-Saharan African country embraced the human capital theory by investing in high-level human resource through investment in higher education. Realizing the critical shortage in high-level manpower resource,

(a) Sheer need for other-than-governmental revenue by public higher education institutions;
(b) Improved equity and access to higher education;
(c) Improved efficiency of higher education, particularly internal efficiency; and
(d) Improved producer responsiveness, i.e. higher education responding to the labour market needs by offering demand-driven academic programmes (Johnstone, 2003a, pp.353-356; Johnstone & Shroff-Mehta, 2000, pp.2-3; World Bank, 1994, pp.6-8, 13).

Proponents of the sheer need for other-than-governmental revenue rationale argue that public higher education institutions are forced to supplement their governmental revenue through cost sharing and other revenue diversification activities due to decreasing public resources allocated to these institutions due to competition from other politically and socially compelling needs requiring also government funding.

The equity and expanded access rationale, on the other hand, is based on the argument that since higher education in many developing countries is undertaken by a very disproportionate number of children, predominantly from middle, and upper income families who receive higher private returns from it, then these few ought to contribute to its costs, while expanded access is related to expanded higher education capacity due savings from cost sharing.

Another rationale of cost sharing is supported by the presumption of greater and improved internal efficiency and producer responsiveness of public higher education institutions to the labour market needs because of competition and because of the fact that some of the higher education costs are borne by the consumers/buyers (students and their parents). The major assumption in improved internal efficiency is that payment of tuition or other related costs to higher education will make students and their families more discerning consumers and universities more cost-conscious and responsible providers of quality higher education. This view is also supported by the World Bank when it argues that "the introduction of fees in higher education would improve the internal efficiency of the system because it would provide appropriate incentives to both students and higher education managers to scrutinize costs more closely (World Bank, 1986, pp.23). In the following section we discuss the re-introduction of cost sharing in higher education in Tanzania, including rationale and forms of cost sharing adopted.

2.2 *Re-introduction of Cost Sharing in Higher Education Policy in Tanzania:*[3] *Rationale and Forms*

Cost sharing in higher education in Tanzania was officially reinstated in the late 1980's, as pointed out earlier in this article, due to the severe economic crisis as part of implementing wide-ranging economic and social reforms under the

IMF/World Bank sponsored structural adjustment programmes (SAPS) and largely due to the government's severely decreasing ability to finance public higher education.

2.1.1 Government's Objectives in Reinstating Cost Sharing in Higher Education
!!!In government's view, the reintroduction of cost sharing in higher education became necessary in order to maintain the quality of academic programmes, improve access to higher education, while at the same time containing government fiscal expenditure in public higher education (URT, 1998, p.76). Containing government fiscal expenditure in higher education in our view constitutes rolling back public investment in high-level human resource with adverse impact on the country's overall human resource development.

Specifically, in reintroducing cost sharing in higher education, the government had the following objectives:

(a) Arrest the decline in access and quality of higher education due to under-funding by requiring the beneficiaries of higher education to contribute to its costs;
(b) Rationalize the level of government contribution to higher education;
(c) Introduce a legally protected students' loan scheme;
(d) Require students recognize that higher education has more private returns than social rates of return and hence an obligation on their part to contribute to its costs; and
(e) Make higher education system more responsive to the labour market (Ishengoma, 2006, p.329; URT, 1998, p.76).

2.1.2 Forms of Cost Sharing in Higher Education Adopted in Tanzania
The implementation of cost sharing in higher education in Tanzania has for long taken the following forms:

(a) Imposition of user charges on lodging and food, albeit heavily subsidized by the Government;
(b) Introduction of privately-sponsored students programmes in public universities;
(c) Introduction of a various revenue diversification activities and commercialization of students' municipal services in public universities;
(d) Official encouragement of the establishment of the tuition-dependent private higher education sector;
(e) Abolition of students' stipends and allowances; and
(f) Establishment of the Higher Education Students' Loans Board (HESB).

The introduction of the privately-sponsored students programmes in public universities as part of income-generating strategy has resulted into the introduction of market or profit-driven academic programmes, some of these not pertinent in developing the critically required high-level human resource requisite for the country's development. Cost sharing in higher education in Tanzania is largely implemented through HESLB, established in July 2005, which provides interest-free loans ideally to the needy students enrolled in all public and accredited private higher education institutions to cover cost of meals and accommodation, books and stationery, field practical work, research, tuition and special faculty requirements. The implementation of cost sharing policy in higher education in Tanzania, in the context of investing in key human resources for economic development, has not been without challenges, contradictions and paradoxes. In section three below we attempt to unravel these challenges, contradictions and paradoxes.

3.0 Challenges and Paradoxes of Implementing Cost Sharing in Higher Education
While the introduction of cost sharing in higher education in Tanzania was absolutely necessary due to financial austerity, its implementation has not been without challenges in the context of investment in high-level human capital. One of the challenges or impacts of cost sharing in higher education is that because of the government assumption that public higher education institutions have to generate their own internally generated incomes to support some of their operational and research costs and that higher education has more private returns, compared to social returns, budgetary allocations to the tertiary and higher education sub-sector, compared to other sectors which are not very critical in the development of high-level human resource has generally declined. This has had adverse impact on the quality on the human resource produced in public higher education institutions. In other words, government investment in higher education has declined during the implementation of cost sharing in higher education policy.

Government budgetary allocations to individual public higher education institutions have also been declining since the inception of cost sharing. Yet, the 1999 *National Higher Education Policy* acknowledges the critical role of higher education in developing critical human resources for the development of the nation. Table 1 shows budgetary allocations to education sub-sectors from 1995/96-2006/07, while Table 2 shows projected resource requirements for the education sub-sector from 2004/05 to 2008/09.

Data in Table 1 shows that while total Government budgetary allocations to the education sector increased by 92% from 1995/96 to 2006/07, while the percentage share of the allocation to tertiary and higher education sub sector declined from 22% in 1995/96 to 16.7% in 2004/04, rising to 21.9% in 2006/07; budgetary allocation to teacher education sub sector-also an important education sub sector in human resource development-systematically declined from 2.4% in 2001/02 to 1.1% in 2006/07.

Table 1: Budgetary Allocation by Educational Levels 1995/96-2006/07 (Million Tsh)

Year	Total Ed. Sector	Education Sub-sector							
		Primary and Non-Formal		Secondary		Teacher Education		Tertiary and Higher	
		Total	*% Share*	*Total*	*% Share*	*Total*	*% Share*	*Total*	*% Share*
1995/96	76,504	51,602	67.5	6,608	8.6	1,458	1.9	16,836	22.0
1996/97	92,631	63,519	68.6	7,838	8.5	1,954	2.1	19,320	20.9
1997/98	102,343	68,896	67.3	7,894	7.7	2,639	2.6	22,914	22.4
1998/99	107,457	78,000	72.6	7,857	7.3	2,600	2.4	19,000	17.7
1999/00	138,583	92,845	67.0	10,492	7.6	2,752	2.0	32,494	23.4
2000/01	218,051	144,658	66.3	21,453	9.8	5,261	2.4	46,679	21.4
2001/02	323,864	236,618	73.1	24,359	7.5	5,872	1.8	57,015	17.6
2002/03	396,780	289,718	73.0	29,876	7.5	6,646	1.7	70,540	17.8
2003/04	487,729	361,425	74.1	32,464	6.7	7,700	1.6	86,140	17.7
2004/05	504,745	322,196	63.8	92,045	18.2	6,189	1.2	84,315	16.7
2005/06	669,537	418,455	62.5	104,483	15.6	8,540	1.3	138,059	20.6
2006/07	958,819	618,534	64.5	119,987	12.5	10,439	1.1	209,859	21.9

Source: Adapted from URT (2006). *Basic Education Statistics in Tanzania (BEST) 2002-2006 National Data.* Dar es Salaam: Ministry of Education and Vocational Training, p. 91.

Table 2 shows high scenario of projected resource requirement for education sub-sectors from 2004/05 to 2008/09, as percentage of the total education sector allocation.

Table 2: Projected Resource Requirements 2004/05-2008/09

Education Sub-Sector	Year				
	2004/05	2005/06	2006/07	2007/08	2008/09
Primary Education	64.1	64.8	57.9	51.5	41.8
Secondary Education	23.9	24.0	30.7	38.3	49.7
Higher Education	**7.9**	**7.3**	**7.3**	**6.5**	**5.4**
TVET	1.4	1.4	1.6	1.5	1.3
Teacher Education	1.4	1.2	1.1	1.0	0.86
Adult Education	0.9	0.8	0.7	0.6	0.5
General Education Administration	0.2	0.3	0.3	0.2	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Adapted from URT (2007). *Education Sector Public Expenditure Review, 2005.* Dar es Salaam: Ministry of Finance, p.112.

As is the case with the budgetary allocation to the tertiary and higher education sub-sector, the projected resource requirements for the higher education sector show a declining trend from 7.9% (2004/05) to 5.4% in 2008/09 implying declining investment in high-level human resource to contain the government expenditure in higher education, as stipulated in the government's objectives for instituting cost sharing in higher education.

The implementation of cost sharing in higher education has also adversely affected government's recurrent and capital development funding of public higher education, currently based on capitation grants to universities developed from unit costs of different courses and student numbers to be enrolled in a given academic year. This poses another challenge in investment in high-level human resource. Table 3 below shows the trends in government budgetary allocations compared to the institutions' budget requests for some selected public universities from 1999/00-2005/07.

Table 3: Public Universities Budgetary Request vs. Government Budget Approval, 1999/00-2005/07 (Tsh mill.) [Recurrent Budget]

Institution	Academic Year	University Budget Request	Govt. Approved Budget	Request/Govt. Approval Ratio
University of Dar es Salaam Main Campus	1999/00	35,928,810,522	15,909,010,234	44.2
	2000/01	26,971,097,194	22,295,585,316	82.6
	2001/02	23,703,220,309	12,962,933,600	54.0
	2002/03	22,703,220,309	13,112,908,820	54.7
	2003/04	29,442,119,596	16,869,293,885	57.0
	2004/05	30,142,200,195	17,861,103,881	59.0
	2005/06	44,524,155,229	28,416,449,520	64.0
	2006/07	76,600,000,000	28,800,000,000	38.1
Muhimbili University College of Health Sciences	1999/00	14,592,031,187	5,352,082,300	36.6
	2000/01	12,306,194,720	6,072,368,200	49.3
	2001/02	13,862,429,628	6,072,368,200	43.8
	2002/03	10,903237,118	6,204,186,800	56.9
	2003/04	11,391,441,768	6,824,605,480	59.9
	2004/05	12,401,250,008	6,841,105,000	55.1
	2005/06	6,345,249,546	4,448,233,700	70.1
	2006/07	14,484,458,344	7,681,458,144	53.0
University College of Lands and Architectural Studies	1999/00	3,609,723,263	2,048,276,500	56.7
	2000/01	4,211,566,222	2,587,680,510	61.4
	2001/02	4,060,795,959	2,829,670,520	69.6
	2002/03	4,927,370,176	2,842,827,422	57.6
	2003/04	4,002,679,505	3,078,483,303	77.0
	2004/05	4,601,509,400	3,375,885,576	66.1
	2005/06	5,103,194,896	3,375,885,576	66.1
	2006/07	5,209,246,445	3,503,421,145	67.0
Sokoine University of Agriculture	1999/00	9,735,000,000	6,798,000,000	69.8
	2000/01	11,262,000,000	8,312,000,000	70.3
	2001/02	10,817,000,000	9,184,000,000	85.0
	2002/03	14,969,000,000	8,454,000,000	56.4
	2003/04	17,501,000,000	10,055,000,000	57.4
	2004/05	17,173,000,000	11,171,000,000	65.0
	2005/06	NA	NA	NA
	2006/07	NA	NA	NA

Source: Adapted from UDSM *Facts and Figures 2005/06; 2003/04* and *2006/07* (Dar es Salaam: University of Dar es Salaam, 2006, 2004 & 2007) pp. 164-165; 155-156; & 168-169; URT *Review of financial sustainability in financing higher education in Tanzania* (Dar es Salaam: Ministry of Higher Education, Science and Technology, 2005) p.31.

Data in Table 3 gives us a larger picture of almost systematic budget cuts in government funding of public universities, again implying a decline in investment in high-level human resource. Because of the assumption that these institutions are supposed to generate extra income through revenue diversification activities, the government rarely approves more than 60% of what is requested by public universities, yet many public universities in Tanzania rely heavily on government funding for their operations to such an extent that budget cuts adversely affect their mission of producing quality high-level human resource for the development of the country. Because of the budgetary cuts, public universities are forced to admit a certain number of students who can be sponsored by the government through the Higher Education Students Loans Board (HESLB), leading to a decline in admission rates in many public universities and consequently gross enrolment rates, although the number of high school leavers has been increasing. With effect from 2002/03 academic year, the government has imposed a quota on the number of students to be admitted under its sponsorship in each degree programme and by faculty in public universities through HESLB, a practice which has in fact lead to the wastage of potential high level human resource. This policy was abandoned in the subsequent years, but later reinstated in 2009/10 academic year.

Table 4 shows the trends in undergraduate admission rates at the University of Dar es Salaam.

Table 4: Trends in Undergraduate Admission Rates at the University of Dar es Salaam, 2000/01-2006/07

Year	Applied	Admitted	% Admitted
2000/01	5,325	2,015	37.8
2001/02	5,276	2,776	52.6
2002/03	6,171	3,423	55.4
2003/04	6,036	3,582	59.3
2004/05	8,616	4,264	49.4
2005/06	17,164	4,475	26.0
2006/07	15,185	7,049	46.4
Grand Total	**63,773**	**27,584**	**42.2**

Source: Adapted from UDSM Facts and Figures 2005/06, and 2006/2007, University of Dar es Salaam.

Data in Table 4 generally show the declining trends in admission rates at the University of Dar es Salaam from 37.8% (2000/01) to 26% in 2005/06 mainly due to the University's implementation of the new government's policy for student sponsorship in the context of cost sharing. As a result of the new government policy on student sponsorship through HESLB, the University of Dar es Salaam has raised the minimum entry cut-off points from 4.0 to 4.5 for females and 5.0 for male direct entrants to between 6.0 to 15 points for physical sciences and 8-15 for humanities and social sciences depending on the degree programme. These entry cut-off points are also stipulated by HESLB part of the eligibility criteria for the loans. One of the HESLB loan criteria is outstanding academic performance in A-Level final examinations. Raising of the cut-off points at the UDSM is one of the reasons for declining admission rates.

3.1 Higher Education Students Loans Board (HESLB): The Challenge and Paradox

Available research evidence shows that raising of cut-off points at the University of Dar es Salaam has excluded the majority of the children from lower socio-economic classes from securing loans because the majority of them are unable to compete academically with children from upper and middle class families who attend elite high schools and have access to intensive and expensive private tuition classes where they are couched on how to answer examination questions and consequently are able to excel in their final examinations to qualify for the government loans. This means the investment in high-level human resource through loans provided by HESLB is skewed and pro-rich implying that the government is only developing upper and middle class human resource.

A study by Ishengoma (2004) found out that there was very close association between parents' socio-economic class (measured by occupation) and cut-off points (division or class) attained in final high school examinations. Table 5 shows the association between father's occupation and son's or daughter's attainment (cut-off points), at the University of Dar es Salaam.

Table 5: Father's Occupation and Student's (Cut-Off Points) of UDSM Undergraduate Students (in numbers and percentages). N=2,390

Father's Occupation	Division				Total
	I	II	III	IV	
Professional/Technical	420 (42.6)	390 (34.7)	91 (33.3)	2 (22.2)	903 (37.7)
Administrative/Managerial	40 (4.06)	54 (4.8)	13 (4.7)	0 (0)	107 (4.5)
Clerical & Related Workers	28 (2.8)	27 (2.4)	10 (3.6)	0 (0)	55 (2.3)
Sales Workers	4 (0.4)	9 (0.8)	2 (0.7)	0 (0)	15 (0.6)
Service Workers	1 (0.1)	10 (0.9)	2 (0.7)	0 (0)	13 (0.5)
Agriculture/Farming	452 (45.8)	556 (49.5)	133 (48.7)	7 (77.8)	1,148 (48)
Transport Equipment Operators & Labourers	28 (2.8)	56 (4.9)	12 (4.3)	0 (0)	96 (4.0)
Other	12 (1.2)	21 (1.8)	10 (3.6)	0 (0)	43 (1.8)
Total	985	1,123	273	9	2,390

Source: Ishengoma, J. M. Cost Sharing and Participation in Higher Education in sub-Saharan Africa: The Case of Tanzania. Doctoral Dissertation (State University of New York at Buffalo, 2004).

The data in Table 5 reveals that 460 students (46.6%) whose fathers were professionals or technocrats and administrators or managers, who formed 0.4% of the total adult population in 2000/01, passed with Division I in their final examinations, 444 (39.5) passed with Division II, 104 (38%) passed with Division III, and 2 (22.2%) passed with Division IV. Four hundred and fifty two (452) students (45.8%) whose parents were peasants forming more than 80% of the total population passed with Division I, 556 students (49.5%) passed with Division II, 133 (49%) with Division III and IV. One of the conditions for obtaining a loan from HESLB is that the applicant must have obtained Division I for males and Division I or II for females.

In the context of our data in Table 5, this condition implies that the children from upper and middle classes have a competitive edge in securing government loans. As we pointed out earlier, the above scenario means only children from high-income families are able to benefit from government investment in high-level human resource through HESLB. There is abundant empirical evidence to show that the children of the wealthy in all countries disproportionately benefit from public investment in higher education. As also Castrol-Leal *et al.* (1999) cited in Omari and Mjema (2007, p.22) correctly observe that public social spending in education programmes in African countries favour not the poor, but those who are better off.

The government also admits that the very poor students have a remote chance of entering higher education institutions because with the introduction of cost sharing and liberalization of secondary schooling, the transition from lower to advanced levels of education is confined to children from advantaged homes because of the high private costs involved (URT, 2002, 49).

There is also evidence that because of cost sharing in higher education which also compels higher education institutions to supplement their governmental revenue through income generation activities, government investment in research in higher education institutions has declined, although research is very crucial in human resource development and general capacity building worth government investment. External donors contribute more to research funding in public higher education institutions. Higher education institutions are also supposed to internally generate funds for research within the cost sharing in higher education framework. Table 6 below shows available data on research funding levels by source at the University of Dar es Salaam and its two constituent university colleges (now autonomous universities) 1999/00-2003/04.

The data in Table 6 generally shows inadequate contribution and declining trend of the government to research funding at the University of Dar es Salaam for the surveyed years compared to external donors; yet, as we pointed out earlier investment in research in very critical in human resource development.

Table 6: Research Funding Levels by Source at the UDSM, 1999/00-2003/04 (mill. Tsh)

Year	Govt.	External Donor	Other Sources	Total	% Govt. Contribution
A. UDSM Main Campus					
1999/00	388,000,000	1,700,000,000	0	2,088,000,000	18.5
2000/01	10,000,000	2,003,000,000	0	2,013,000,000	0.5
2001/02	9,000,000	1,587,000,000	0	1,596,000,000	0.5
2002/03	11,000,000	1,049,000,000	501,249,000	1,561,249,000	0.5
2003/04	13,000,000	2,202,000,000	404,048,000	2,619,048,000	0.5
B. Muhimbili University College of Health Sciences					
1999/00	5,100,000	220,900,830	0	226,000,830	2.2
2000/01	15,748,010	214,164,000	0	229,912,010	6.8
2001/02	19,988,630	239,506,000	0	259,494,630	7.7
2002/03	24,176,820	234,599,000	0	258,775,820	9.3
2003/04	272,036,010	920,655,000	4,780,500	1,197,471,510	22.7
C. University College of Lands and Architectural Studies					
1999/00	10,000,000	75,000,000	NA	85,000,000	11.7
2000/01	11,000,000	92,000,000	NA	103,000,000	10.6
2001/02	14,000,000	70,000,000	NA	84,000,000	16.6
2002/03	17,000,000	176,000,000	NA	193,000,000	10.5
2003/04	17,000,000	144,000,000	NA	161,000,000	10.5

Source: Adapted from UDSM (2004) *Facts and Figures 2003/04* (Dar es Salaam: University of Dar es Salaam, 2004) 61, 100 & 135

While external donor support is also important in research capacity building and human resource development in higher education institutions, heavy donor dependence for research funding might be counterproductive in the whole process of human resource development in these institutions.

Furthermore, external donors for research have their own research agenda which might not necessarily coincide with the nation's research priorities aligned to human resource development plans. Ishengoma (2007) also observes that heavy donor dependence for research in higher education institutions erodes efforts to invest in human resources internally. In the following section we make some conclusions.

4.0 Conclusions

In this article, we have attempted to argue that while the re-introduction of cost sharing in higher education policy in Tanzania was (probably) inevitable, because of the declining government ability to finance public higher education, its implementation and interpretation (or misinterpretation) in public higher education institutions has adversely impacted government's level of investment in high-level human resource because of the misconception of revenue diversification and free labour market. Government investment in higher education through budgetary allocations to public higher education institutions, as our data shows, has declined due to the misguided assumption that public higher education institutions are supposed to internally generate income by undertaking various income-generation activities, some of which are not necessarily related to the core missions and functions of higher education institutions. However, available research evidence shows public higher education institutions are not generating much income from revenue diversification activities for various reasons including lack of transparency in the way these activities are conducted.

To some extent, the government has absolved itself of the responsibility of developing high-level human resource through sustainable investment in higher education in the name of cost sharing. Investment in human capital approach which guided the process of educational planning at all levels has completely been abandoned in favour of free labour market, yet Tanzania is not yet fully-self-sufficient in qualified high-level manpower and still employs 'expatriates' in some key areas. As our data also show government's investment in higher education through HESLB is essentially problematic and contradictory because apparently this investment benefits only a certain segment of Tanzania society and the notion of cost sharing through the loan scheme is somehow misleading because ultimately the student will repay the whole loan, although it is said to be interest-free at 100%.

Because of the declining budgetary allocations to public higher educations, these institutions have been forced to embrace market principles by introducing market-driven courses which attract fee-paying students although some of these courses might not be very useful to the nation's high-level human resource needs for socioeconomic development. This practice contradicts the whole notion of investing in critical human resource for the country's socioeconomic development because of 'marketization' of higher education. A marketable degree course is not necessarily relevant to the country's needs for human resources and consequently not worth investing in.

There is urgent need to revisit the whole policy of cost sharing as it currently contradicts the whole essence and principle of investing in human capital necessary to enable Tanzania compete with other African countries in science and technological developments, to face the challenges of the 21st century, which *inter alia* include globalization.

Notes

1. High-level manpower in the context of this article refers to category A jobs or occupations, i.e. occupations requiring a university degree or its equivalent. The term will be used interchangeably with high-level human resource.
2. See Tobias, G. (1963). *Tanganyika Manpower Resources 1962-1967*. Dar es Salaam: Government Printer.
3. Cost sharing in higher education policy is not a new policy in Tanzania; it had existed in post-independence Tanzania until 1967 when the government adopted socialism.

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