



THE ECONOMICS OF RURAL RADIO IN AFRICA

An Introductory Study into the Costs and Revenues

African Farm Radio Research Initiative (AFRRI)
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Ottawa, Canada

March 2008

ACKNOWLEDGMENTS

Economics of Rural Radio was researched and written by Christopher Yordy, an Agricultural Economist based in Canada. It was reviewed by Vijay Cuddeford, Helen Hambly-Odame, Heather Hudson, Martine Ngobo, Doug Ward, Blythe McKay and Kevin Perkins and edited by Patti Ryan and Sheila Huggins-Rao.

Farm Radio International is grateful for the support from The Bill & Melinda Gates Foundation who provided the funding for this report through The African Farm Radio Research Initiative (AFRRI). This report was commissioned as a preliminary study of current research on the economics rural radio in African countries. The results will contribute to AFRRI's overall research design and implementation.

Farm Radio International would also like to thank the National Research Coordinators and partners in Uganda, Tanzania, Malawi, Ghana and Mali and all other radio practitioners including NGOs, Research Institutions, and Government departments for their contributions to this report.

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Abbreviations

APC	Association for Progressive Communications
AC	Alternating Current
AMARC	Association Mondiale des Radiodiffuseurs Communautaires (World Association of Community Radio Broadcasters)
AV	Audio-visual technology
BBC	British Broadcasting Corporation
CAMECO	Catholic Media Council
CB	Citizen Band radio
CBS	Central Broadcasting Service (a commercial radio station of Uganda)
CCI	Canadian Crossroads International
CDMA	Code Division Multiple Access
CGIAR	Consultative Group for International Agricultural Research
CIDA	Canadian International Development Agency
COL	Commonwealth of Learning
CTA	Technical Centre for Agricultural and Rural Cooperation
DANIDA	Danish International Development Agency
DfID	Department for International Development
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
FM	Frequency Modulation Band
GB	Gigabyte
GBC	Ghana Broadcasting Corporation
GSM	Global System for Mobile Communications
HAAC	Haute Autorité de l'Audiovisuel et de la Communication - High Authority on Media and Communication (of Bénin)
HAM	Amateur Radio
HD	Hard Drive
IBRA	IBRA Christian Radio Ministry (part of the Swedish Pentecostal Mission)
ICT4D	Information and Communication Technologies for Development
ICTs	Information and Communication Technologies
IDRC	International Development Research Centre
IGO	International Government Organization
IICD	International Institute for Communication and Development
ITU	International Telecommunications Union
LARRRA	Linking Agricultural Research and Rural Radio
MBC	Malawi Broadcasting Corporation
NAFB	National Association of Farm Broadcasting
NGO	Non-governmental Organization
PC	Personal Computer
PCI	Personal Computer Interface
PSA	Public Service Announcement
RFI	Radio France International
RRRP	Rural Radio Resource Packs
SMS	Short Message Service
UBC	Uganda Broadcasting Corporation
UNESCO	United Nations Educational Scientific and Cultural Organization
VSAT	Very Small Aperture Terminal (Two-way Satellite Ground Station)

I. REPORT SUMMARY

The African Farm Radio Research Initiative began in April 2007. The research for development project examines the effectiveness of radio communications in improving agricultural productivity and food security for rural communities in Africa. The project is taking place in five countries in Africa – Mali, Ghana, Uganda, Tanzania and Malawi. It is hoped that the results from the research will lead to more support for broadcasters to produce interactive and participatory farmer-focused programming.

Prior to implementing the research component of AFRRI, a preliminary study on the economics of radio was necessary in order to determine the costs involved in developing and sustaining farm broadcasting. One of the objectives of the study was to identify the levels of investment required for radio and related ICTs to provide sustainable, effective contributions to smallholder farmers' agriculture and food security needs. The aim of the study was to help ensure that AFRRI explores and develops radio-based communication strategies for farmers that can be continually offered by rural radio stations with appropriate and sustainable levels of public or donor investment.

The field of radio economics in Africa was, prior to this study, virtually unexplored. In part this is because the spending budgets of radio stations are often sensitive information and not publically available. Revenue sources can also be difficult to identify and measure.

An independent agricultural economist was hired to conduct the preliminary study. Following a literature review, a questionnaire was designed and distributed to 15 stations in the five participating countries, requesting information on overall costs associated with operations, programs and staff, and revenues associated with advertising, air time sales, donor and government funding and sponsorships. The report was submitted in March 2008.

The objectives of the current assignment were:

1. To identify the costs associated with:
 - a. establishing and operating radio stations of various sizes and types;
 - b. researching, producing and offering a range of farm radio programs to listeners
2. To identify and analyze revenue streams available to radio stations both for general operations and for specific farm radio programming.
3. To project the changes in expenses and revenues that could result from an increase in the quantity and quality of radio programming aimed at farmers by a given radio station.

Methodology

The economics of farm radio in Africa has never been studied before. We were unable to find any scholarly articles about the “economics of radio” or even radio and economic development. Economic modeling of communication strategies has overlooked broadcast radio, focusing on one-to-one technologies such as cellular and land-line telephony. There are a few case examples of the costs and revenues of particular stations, but nothing that generalizes or analyses according to different radio typologies or broadcast ranges. One reason for the paucity of literature is that, in most African countries, private and independent community radio did not exist even 10 years ago: publicly funded state radio was the only game in town. Further, the cost

and revenue structure has changed substantially. For example, recording equipment that used to cost thousands of dollars a decade ago can now be attainable for \$100 or less. The availability of desktop computers, Internet connectivity and mobile phones has lowered the cost of obtaining and storing information for broadcast.

The scarcity of secondary research data made it necessary to gather original data directly from radio stations. Information about revenues and costs proved to be quite sensitive, and of questionable reliability. AFRRI decided to gather additional information through existing Farm Radio International (FRI) network partners and participating AFRRI stations, specifically radio stations with which FRI has a relationship with and could contact repeatedly. Though this was a practical and fairly accurate source of data, it cannot be extrapolated widely. The small sample size allows a consideration of the specificities of costs and revenues of certain stations, and reflects the high variability among the stations selected. Having said that, the data does indicate the types and ranges of costs and revenues that apply to various types of radio station in Africa.

Findings

The study revealed a number of lessons about the economics of programming for rural communities. The following is a brief summary:

The Typology

The “typology” of radio is an import variable to consider when analyzing the economics of radio. Public, commercial and community/associative radio stations have different mandates, different types of revenue available to them, and different cost structures. Public radio can usually count on public allocations for the majority of its revenues, and has a mandate to serve the entire country. Commercial radio is driven by the profit motive, and cannot rely on public or significant donor revenues. It is willing and able to broadcast community-oriented farm radio, but needs to know that this programming attracts an audience (as big or bigger than music programs) and will therefore appeal to advertisers. Community radio is mandated to meet the communication needs of its listeners, and has socio-economic development objectives. Though largely supported by volunteer staff, it cannot ignore revenues, but must look for creative ways of generating income, since conventional advertising dollars may be unavailable or restricted, and listening audiences are often among the poorest of the poor

There are three broad categories of costs: start-up, operating, and programming. Based on the literature and the survey of AFRRI partners, the costs of start-up can be as low as \$650 for a “micro-station” with a broadcast range of 2.5 kilometers (in Mali), to \$8 million for a public broadcaster with the signal strength to serve an entire country (in Tanzania). The actual start-up expenses of AFRRI partners range from \$7500 to \$8 million. Removing these two extremes, the average start-up cost of AFRRI partners was \$100,000. This roughly corresponds with the “all-in” costs of 30,000 Euros for community radio equipment, installation and training (excluding potential import duties) quoted by the Radio Netherlands Training Centre. According to AMISNET (Agenzia Multimediale Informazione Sociale), costs a basic radio station with minimal equipment costs 6000 Euros, excluding shipping, duties, installation, and training, whereas 26,000 Euros would be the cost for a more advanced radio station, including equipment for an in-house production studio.

The AFRRRI partner survey suggested that annual operating costs have an equally startling range of \$20,330 to \$541,000 per annum for public broadcasters, \$2,500 to \$930,000 per annum for commercial stations, and \$2500 to \$286,000 for community stations. There was no additional literature available on operating costs of stations beyond this study.

The Costs

The costs of programming are largely dependant on the level of interactivity of the program format, the accessibility of additional resources to produce specialized programs, and the type of station producing the program. The study found that community stations tended to invest more resources in interactive programming with community involvement and less on in-studio formats. The cost of a reporter in the field (which is a common format for agriculture and food security reporting) was \$297 USD per program for a commercial station in Uganda, and \$107 USD per program for a community station in Malawi.

Educational farm radio programming must compete for airtime with other, less expensive and very popular programming such as music and evangelical preaching. Other studies have revealed that more participative, interactive programs with farmers (featuring, for example, phone-in shows, field interviews, listening groups, and talk shows with local experts) are often popular enough to compete with music and other low-cost formats. The cost of such programming is therefore a significant factor in determining whether and how much will end up on the air. The study of AFRRRI stations reveals that the average cost of rural production ranges from just over \$100 for one phone-in show, to over \$130 for a program with audience participation in production to \$300 to record and air a “village debate”. Therefore, an investment of \$500 per week, or \$26,000 per year would finance the production and broadcast of 3-6 hours per week of interactive farm radio programming.

The Revenues

There are 5 broad categories of revenues available to radio stations: NGO/IGO grants or loans; direct funding from government; private capital (for commercial stations); program generated revenues (music requests, greetings/announcements, airtime sales, PSA sales, advertisements) and other internally generated revenues (subscription fees, fundraising). Program and other internally generated revenues account for between 0% and 100% of revenues, but is normally less than 10%. NGO/IGO grants and loans make up over 90% of station revenues.

The sale of airtime is an important revenue for most stations. Rates charged for 30 minutes of airtime ranges from \$60USD to \$450USD. Rates charged for 30-second advertisements also range widely, from \$2 for a 30 second “spot” on a weekday to \$36 for 20 seconds on the weekend.

Conclusions

The study revealed that there is great variability to costs and revenues associated with radio programming for farmers, depending on the type of station, and the policies and broadcasting culture of the country. While it is generally less expensive to operate programming through community stations than commercial and public stations, the sustainability and potential reach of the programming from community stations is bounded by the limited resources available. The costs associated with trained personnel and management range from country to country but the

human resource investment contributes to the long-term sustainability of farm radio programming.

Further research is needed on the specific requirements of certain stations for production and management of programming for farmers. There is no shortage of investment for starting up radio stations (in particular community stations), but the common challenge remains the sustainability of such stations beyond the initial investment. A larger study of the economics of radio should involve country case studies, including the different types of stations operating in the country, and the varying management and programming styles used. This study could then inform potential investors on the detailed resources required to support educational programming for farmers in a particular country.

II. INTRODUCTION: RURAL RADIO IN AFRICA

Background

'More than ninety years after the world's first station was founded, radio is still the most pervasive, accessible, affordable, and flexible mass medium available. In rural areas, it is often the only mass medium available' (Girard, 2003).

Historically in Africa, the main challenge that rural radio has faced is an unequal playing field for both radio frequency allocations and funding, with a majority of resources in the hands of public radio stations. Until the 1980s in many francophone countries, and the late 1990s in many Anglophone countries, national media policies favoured public broadcasting corporations. But this situation has changed for most countries in Africa as media liberalization, political pluralism and private media development are advancing hand in hand (Andriantsoa et al., 2005; Fardon and Furniss, 2000; Hyden et al., 2003).

There are now three different types of rural radio services—public, private/commercial and community — and an analysis of the costs and revenues of a sample of radio stations can provide an indication of how each station manages their funds. Thus, an understanding of the funding of rural radio begins with and depends on an understanding of the types of existing radio stations in Africa.

All radio stations face three types of expenses: start-up costs, which may be classified mostly as fixed costs, and include such basic structures as the antenna, buildings, property, and transmission equipment (which becomes a radio station's asset base), and operating costs, which in most cases are classified as variable costs, such as salaries or stipends and electricity or generator fuel. The cost of producing programs is generally subsumed in operating costs, but may form a third cost type when considered as a separate cost from day to day station operations. On the income side, radio revenues may be derived from the start-up revenue provided by grants or private capital, or from operations revenue through airtime sales and fundraising events. Ultimately, each radio station's ability to gain revenues from various sources that at least match and ideally exceed the start-up and operating costs determines its financial sustainability (Alumuku, 2006: 50).

To measure the costs and revenues of rural radio, a radio station's statement of accounts can show the station's operating costs. But these statements alone do not explain the costs of programming and revenues for airtime and advertising sales, nor are they available because of confidentiality issues or for smaller stations with no bookkeeper. Information on the costs and airtime sales of different types of programming for rural radio should also be considered. These costs could vary considerably, depending on the station. Airtime sales for various types of programming for public service announcements (PSAs) or educational programming, for example, could be sold at a discount rate, donated or broadcast for free.

It is important to identify the specific ways that radio stations are able to solicit audience participation—for example through phone-in shows, talk shows with local experts, reporters in the field, or shows with listening groups or listener involvement in production. All of these types of shows have varying costs; and because programming that solicits a higher quality of participation tends to be more effective in carrying development messages, it is important to identify differences in production costs for this type of programming (Girard, 1992; White, 1994). The value of rural radio does not depend only on the amount of money spent on

establishing rural stations, but also on the quality of programming and rural listeners' level of involvement.

The level of community participation in radio station activities is also relevant when determining the costs of rural radio. This includes a variety of different programming formats such as field visits and on-site reporting, community forums and the use of mobile phones for phone-in and phone-out shows. Community mobilization and marketing of particular programmes targeted at specific communities requires staff time and resources for transport, depending on the distances to certain communities from the station. In other cases, station volunteers are involved in the day to day operations of some stations, often come from nearby communities, and invest their time. The costs involved in community participation vary according to the station, the type of involvement, and the approach the station takes. Thus, an analysis of the costs and revenues of rural radio must take into account the costs of community accessibility and level of participation.

'It is harder to serve rural audiences where people have to walk several kilometres just to reach a cellular phone network area, yet this scenario characterizes many regions that are served by rural radio' (Okello, 2007: 14).

Purpose and Objectives of the Study

Little is known about the economics of rural radio programs and projects in Africa. This is largely because start-up and operating costs have been difficult to measure for radio stations of different sizes operating under different models (that is, public stations, commercial/private stations and community-based stations). There is limited knowledge available of the possible revenue streams for radio stations and the particular support needed to sustain farm radio programming. Without this knowledge, it is difficult for potential funders to know what type of investment is required or how much (if any) ongoing subsidization will be needed to take advantage of the enhanced educational and agricultural information accessibility that radio provides. The purpose of this study is to examine the feasibility of sustaining rural radio given the associated costs and revenues.

This study has three specific objectives. The first is to identify the costs incurred at radio stations (start-up costs, operating costs— including production costs—and the cost of programming with community involvement). The second is to identify and analyze the revenue streams available to radio stations, including loans, airtime sales, donors, classified ads and fundraising events. The third is to understand the basic technological, human and financial investment needed to sustain radio stations according to their size and type of station.

The report is organized into two sections to reflect the two main research approaches. The first section outlines the current knowledge available on operating and maintaining a radio station in Africa. It is largely based on a desktop review of available literature and an examination of existing information provided by stations or published in previous reports. The desktop study looks at the estimated costs of rural radio, the costs of starting a radio station including equipment purchases, and ICT usage in radio communication projects. Three main types of radio stations found in Africa are discussed to provide a basic framework within which to assess the varying costs and revenues of rural radio. The second section concentrates on new research findings from recent in-depth interviews and a detailed survey. The study concludes by

summarizing the key findings and suggesting areas where further research into rural radio economics is needed.

III. CURRENT KNOWLEDGE ON THE ECONOMICS OF RURAL RADIO IN AFRICA

What is Known

Radio plays the most significant role of any communication technology in the transfer of information in African countries because spoken word on broadcast radio is the principal means of information transfer where literacy rates are low (CTA, 2006). However, the economics of rural broadcast radio in Africa is a topic that has not received much attention. Part of the challenge is the difficulty in measuring the costs and revenues associated with the impact of radio on communities listening and engaging with radio. For example, community and associative radio are often the only types of stations that broadcast in minor languages and in remote areas where radio has considerable benefits for communities. These benefits are difficult to measure. They include radio programmes that transfer relevant information, build agricultural knowledge and strengthen social networks and communications in remote areas. Few studies have been conducted on the economics of radio because measuring the benefits of radio requires listener surveys into the remote farming areas of Africa as a gauge of each station's listenership—and such studies are quite costly to undertake. Also, little is known about the costs and benefits of radio in developing countries, based on funding mechanisms for different public, private and community radio models.

While there are only two telephone lines for every hundred people in Africa, there are twenty radio receivers per hundred (Girard, 2003). In Mali, for example, there are only 17 televisions for every 1000 persons but 180 radios (ITU, 2004).¹ Even in rural areas most households have access to a receiver. Radio stations are also common. Fifteen years ago there were only ten independent (non-State) radio stations in all of sub-Saharan Africa; now there are thousands, many of them located in small towns and serving rural communities (Girard, 2003).

The limited information on the economics of rural radio in Africa can be related to the overall scarcity of impact assessments and evaluations of radio-based communication projects (Fraser and Restrepo Estrada, 2002: 69; Shah et al., 2001). In Nigeria, where only state-run and commercial stations exist, a few studies have considered the impact of radio on agriculture (Yehaya and Badiru, 2002; Onemolease and Adisa, 2007)². The purpose of these studies was to assign a statistical value to the level of access to specific mass media channels, and to test the hypothesis that there is a relationship between the choice of media channel and the adoption of technologies for farming.

A study testing a similar hypothesis of accessibility, but with a focus on price information, was conducted in Ghana. This study examined the economic impact of community radio by looking at two villages: one where community radio was present versus one where it

¹ Retrieved from http://africa.rights.apc.org/index.shtml?apc=se_1&stat_country%5B%5D=21827&stat_country%5B%5D=21813&stat_country%5B%5D=21831&Submit=Compare+selected+countries

² In Nigeria, there are radio stations that may be considered community stations but operate as commercial stations, and generate income for the owners of the stations. A network of community stations is poised to arrive in the near future.

was not, using a double difference over time comparison (Yordy, 2007).³ One study focusing on community radio was an evaluation of the impact of radio programming on agricultural systems in Mali (Sangaré, 2001), in which the general economic constraints of such programming was discussed.

An evaluation study based in Burkina Faso included a cross-sectional analysis of radio stations, a financial analysis, and a comparison of funding amounts for rural radio. Burkina Faso was one of the first countries to undergo liberalization of the media, so the study made reference to the percentage of the Government of Burkina Faso's expenditures that went to each radio station, including community and associative radio stations.

Literature available from other institutions, such as the Information Society at the World Bank and UNESCO, The International Institute for Communication and Development (IICD), a non-profit research group based in The Hague, may include project evaluation reports with reference to rural radio economics, though none appear to offer an economic analysis.

The limited availability and accessibility of impact studies and evaluations of rural radio may be due to the fact that in many African countries, private and independent community radio did not exist 10-15 years ago—not in Ghana, Nigeria, Liberia, or many other West African countries.⁴ Thus, studies that seek to measure long-term downstream impacts (beyond the life of a project) would not yet be available.

The following is an overview of the findings on the costs and revenues and supporting mechanisms found from a desktop study.

Estimated Costs of Rural Radio

The cost of a rural radio station depends very much on the size and typology of the station. Public radio stations tend to have different cost structures than smaller commercial and community stations. The cost of erecting an antenna with 500 watts of power to serve a small community area is much lower than the cost of establishing national coverage and repeater systems relying on much larger transmitters and antennas. In this way, radio may be a classic example of a service sector with increasing returns to scale because there is a high fixed cost, but a constant marginal cost. The high fixed costs are identified as the start-up costs for the station; but once established, broadcasting towers may last for decades with minimal depreciation.

In 1997, the estimated cost of erecting a community radio station in Mali was US\$22,500.⁵ This station ran on solar power and employed six full-time staff with an average salary of \$112 per month (Myers, 1997). A more recent study concluded that a fully operative community FM station can now be set up at a cost of US\$10,000 to US\$15,000, and would reach an area with a 50-mile radius (Sposato and Smith, 2005: 219). Simpler transmitter antenna

³ The double difference over time comparison is an impact assessment method that examines metrics of interest in two time periods for the community of interest (e.g. a community with access to radio) and the counterfactual (a community with no access to radio). The goal of this comparison is to show the change over the life of a given project or intervention. For more information on impact assessment methods see: http://impact.cgiar.org/methods/key_cons.asp.

⁴ Before liberalization, the only broadcaster was the state broadcasting corporation. Private radio can be described as a state-independent commercial enterprise, whereas independent or community radio came out of non-profit origins. Hence the changes that private and independent media brought in the way of regulatory policies, as well as new opportunities for low-cost solutions in local language broadcast, were significant (Fardon and Furniss, 2000: 3).

⁵ All dollar figures are in US dollars unless otherwise stated.

combinations without the added expenses of mixers and broadcasting equipment can be bought for as little as \$650 (Sposato and Smith, 2005). Listening to radio or having access to one is affordable across all African countries, with receiver units now costing approximately \$5 plus the cost of batteries (Kenny, 2002: 144; Sposato and Smith, 2005: 219).

A per listener cost analysis can demonstrate the links between start-up costs and the outcomes and potential benefits for listeners. An evaluation report by Francis Rolt, conducted by Oxfam in 1995 for Radio Daande Douentza in Mali, estimated a cost of 40 cents per listener over the life of the project, which served 92,500 listeners (Myers, 1997: 104, Kenny, 2002: 145).⁶ So while the station had start-up and operating costs of \$30,000 and the project had \$7,000 in costs related to implementation and travel for relevant experts, the cost per listener was actually quite low.⁷

Cost of Equipment at Start-up

The \$650 low-level transmitter and antenna package constitutes a very basic setup, and is a scenario that can be found in virtually all African countries (not including individual tariffs, customs clearance and transportation costs in each country). A UNESCO study outlining the purchase costs of a micro radio station operating without the use of a computer estimated the total costs of equipment at start-up as low as \$642, when updated with current prices from relevant websites (see Table 1) (Worsoe and DaniCom, 2004: 38). This basic set-up requires just a microphone connected to a vertical omni-directional antenna. The radio amateur, or show host, can listen to the program via the mixer and a set of headphones. Such a system is capable of reaching a small village and surrounding areas with a radius of approximately 2.5 kilometres. It can be operated on 100 – 250 volts AC, or on a 12-volt car battery. The antenna comes with a 25-meter coaxial cable that can be connected to the transmitter (see Table 1).

A second, more expensive option is the computer-based micro radio station (see Table 2). This kind of station runs from a PC with a built-in FM transmitter PCI card. The output of the PCI card is connected to a booster that takes the power up to 15 watts, and the booster is connected to the vertical FM transmitting antenna (the same model as that which came with the stereo transmitter in Table 1). The headset and microphone can be connected to a PC, while the radio station is controlled through a software package such as WinAmp and RealPlayer; production is accomplished using sound editing software. An additional soundcard such as Audiophile would be required for some types of editing (at an additional cost of \$130), but SoundBlaster X-Fi cards (usually used for gaming) can be obtained for as little as \$70 with sufficient bit processing to provide professional-quality communications (Worsoe and DaniCom, 2004: 12). Adding a computer to the basic radio station setup allows for basic production and editing functions that may not be accomplished when using a direct to broadcast voice signal.

⁶ According to Save the Children Fund (another organization involved in this project), before Radio Douentza began broadcasting, only 6 per cent of farmers were marking trees and managing naturally occurring harvest varieties. Since the establishment of agricultural programming, the figure has risen to 44 per cent of farmers. Radio announcements were also shown to have increased enrolment in literacy courses by 120 per cent (Myers, 1997; www.comminit.com).

⁷ With FM radio, the number of listeners who can tune in depends on the geographic setting of the radio station. This is because, unlike AM waves, the FM signal is a “line of sight” from the radio tower. Signal strength is based on height above average terrain, which must be taken into consideration when calculating the number of listeners who can benefit from a project.

Table 1: Costs of a Micro Radio Station

Studio Equipment	Brand	Type	Qty.	Price USD
Analogue mixing console (4 track)	Behringer	UB502	1	\$60.00
Dynamic microphone	Behringer	XM8500	1	\$30.00
Professional headphones	Behringer	HPM 1000	1	\$20.00
FM radio/walkman player	Sony	SRF-56	1	\$10.00
FM Stereo Transmitter Package			1	\$522.00
1 watt transmitter with 110 VAC-220VAC PSU	Veronica	Stereo ERP system	1	Included
5/8' vertical omni-directional transmitting antenna	Veronica		1	Included
Antenna cable 25 meters RG 213 with connectors	Veronica		1	Included
Stereo audio limiter	Veronica		1	Included
	Total			\$642.00

Sources: Worsoe and DaniCom, 2004; and updates as of January 27, 2008 from: www.behringer.com; www.sony.com; www.veronica.co.uk.

Table 2: Costs of a Computer-Based Micro Radio Station

Studio Equipment	Brand	Type	Qty.	Price USD
Computer and monitor	Dell	Inspiron 531	1	\$529.00
Headset and microphone	Creative	Fatal1ty	1	\$50.00
FM stereo transmitter on a PCI card with software with 15-watt booster	PCS Electronics	PCI Max 2007+	1	\$328.00
5/8' vertical omni-directional transmitting antenna	Veronica		1	\$104.00
	Total			\$1,011.00

Sources: Worsoe and DaniCom, 2004; and updates as of January 27, 2008 from: www.dell.com; www.creative.com; www.pcs-electronics.com; www.veronica.co.uk.

Table 3: Costs of a Fully Operational Community Radio Station

Item Description	Brand	Type	Qty	Total USD
Analogue mixing console	Yamaha	MG-124C	1	\$260.00
Studio condenser microphone	Behringer	C-3	2	\$140.00
Monitor loudspeakers (Pair) w. amplifier	Behringer	TruthB 2031P	1	\$240.00
Professional headphone	Behringer	HPM 1000	4	\$80.00
4-channel headphone amplifier	Alto*		1	\$144.00
Telephone hybrid 1	D & R*	TH 1	1	\$220.00
Sound card	Creative	Audigy	1	\$70.00
8-channel line box	Behringer	Ultra DIPro DI800	1	\$100.00
Mic stands	Proel*		2	\$90.00
Shielded audio cable 100m with 30 pieces, XLR male, 30 pieces female and 30 pieces RCA	Proel*		1	\$153.00
PC for audio editing: dual-core with 120GB HD 1GB RAM, DVD, CD-WR, monitor, Windows Vista	Dell	Inspiron 531	1	\$529.00
2 channel compressor/limiter	Alto*		1	\$189.00
Satellite receiver (subscription not included)	WorldSpace	Tongshi DAMB-R	1	\$230.00
Antenna	WorldSpace		1	\$50.00
MPEG-L2 Portable recorder	Maycom*	MP3 recorder	4	\$,840.00
Professional headphones	Behringer	HPM 1000	4	\$80.00
Omni interview microphone	Audio Tech	AT 804	4	\$280.00

ITEL 30 watt transmitter	itel*		1	\$1,700.00
Omni-directional transmitting antenna	itel*		1	\$120.00
Antenna cable (50 meters)	itel*		1	\$300.00
Battery backup and surge protection UPS 350 VA	APC	APC CS 350	1	\$40.00
Total equipment	Total			\$6,855.00

Sources: Worsoe and DaniCom, 2004; and updated as of January 27, 2008 from: www.yamaha.com; www.behringer.com; www.altoproaudio.com; www.d-r.nl; www.dell.com; www.itelcast.com; www.proelgroup.com; www.worldspace.com; www.maycom.nl; www.bswusa.com; www.veronica.co.uk

A small but fully operational community radio station will cost several thousand dollars more than a micro station (see Table 3). The cost of start-up for such a community station (considering equipment only) is listed at \$6,855.00⁸ (Worsoe and DaniCom, 2004). However, according to the UNESCO study, these costs do not include broadcasting licenses or other initial fixed costs for property and buildings that would be included in start-up expenses. In some cases, NGO-operated radio stations may use existing buildings; also, donated buildings – by municipal governments, for example – are used. Thus they total less than the quoted value for start-up costs, which is closer to \$15,000 (Sposato and Smith, 2005: 219). All in all, it is evident that all equipment for a small community radio station may now be purchased for less than \$10,000. According to RNTC, the cost of setting up a local radio station, including studio and production equipment, transmitting material, power and regulation, customs clearance, transport (from Europe) and storage costs would be US\$107,798.27 (69,567.11€). A fully operational radio station has advantages over a micro radio station in that the purchase of stereo equipment and monitor speakers allows a host to shuffle between music and interviews in a studio. A single computer with a line out to radio allows for basic music and talk, and is the studio environment that most people expect when they visit a radio station in Africa. The additional equipment makes the work of the radio host much easier: she or he can put callers on the air, and take off his or her headphones and cue music using the monitor speakers.

⁸ Revisions have been made to the prices quoted in the UNESCO study to account for inflation and cheaper technologies.

BOX 1. INNOVATIVE FUNDRAISING

Radio Maria Tanzania: Sustainability through Fundraising Strategies

Radio Maria Tanzania has developed an effective fundraising strategy that rivals the fundraising work of many smaller North American charities.

- a) They have a promotions office that coordinates fundraising efforts.
- b) They form “Friends of Radio Maria” clubs around each station and task these clubs with raising sufficient funds to operate the station.
- c) They recruit monthly donors. They have 1200 monthly supporters in Tanzania. The names of donors are announced on the radio, and all donors receive regular thank you letters (they maintain a computerized fundraising data-base).
- d) They offer NGOs airtime for their programs, and ask the NGOs to “pay what you can” (they don’t have set airtime fees).
- e) They invite donations of cash, products (mostly farm products) and expertise on the air.
- f) They organize period auctions/markets, and use the radio to i) invite listeners to bring in-kind donations of farm products (etc) to the radio compound or church on the auction/market day and ii) invite buyers to come and get good deals on products at the auction/market. All proceeds go to the station (and the market/auction days provide a chance for buyers and sellers to make longer term connections).

As a result of these strategies, some stations within Tanzania are largely self-sufficient. The Arusha station, for example, raises its entire operating budget from fundraising.

Supporting Rural Radio in Africa

Many development agencies and donors provide a variety of funding and support to rural radio. Some of the major supporters of rural radio communication projects include: United Nations Educational Scientific and Cultural Organization (UNESCO); The European Commission (EC), including funding for the CTA; German-based CAMECO; The Food and Agriculture Organization of the United Nations (FAO); The United Nations Children’s Fund (UNICEF); and The Canadian Government, specifically The International Development Research Centre (IDRC) and Canadian International Development Agency (CIDA)(Ahade, 2000). Support for rural radio can be direct, through start-up and operations support or indirect through other activities and programme-specific supports such as training, resources or specialized equipment donations.

Other sources of funding include the BBC World Service Trust, Deutsche Welle and The Radio Netherlands Training Centre (RNTC). Their main focus is training support but they have supported other activities, including rebroadcasting centres for a local BBC station, publications on local media empowerment and democracy, and provision of satellite dishes and decoders to pick up radio signals from abroad.

Among the major radio broadcasting donors, UNESCO has perhaps the longest track record in funding rural radio initiatives. The first innovations in rural radio began in the 1950s, when the Farm Radio Forum in Ghana was inspired by Canada’s own farm radio forum (sponsored by the Canadian Federation of Agriculture and the Canadian Broadcasting Corporation). Funding for Farm Radio Forum in Africa came from UNESCO. UNESCO is recognized for supporting community radio initiatives even before a clear definition of rural and community radio had emerged. The first work published by UNESCO on the topic of community radio was *Access: Some Western Models of Community Communications – The Role of*

Community Media in Development by Frances Berrigan, which appeared in 1981 (Fraser and Restrepo-Estrada, 2001: iii). Since then, UNESCO has been involved in setting up rural and community radio stations in diverse locations in Africa, including Homa Bay in rural Kenya in 1982 and Radio Ada in Ghana in 1998 (Quarmyne, 2006: 3). It is difficult to verify the exact amount of funding provided by UNESCO for rural and community radio in Africa. Many initiatives that include radio do not distinguish all the costs associated with radio (UNESCO, 2000).

The Food and Agricultural Organization of the United Nations (FAO) has spearheaded work on the connections between radio and agriculture. The First International Workshop on Farm Radio Broadcasting was held in Rome with the FAO in 2001, and, “Radio: the One to Watch,” was published, based on the findings (FAO, 2001).

Organizations that work with funds from other administrative bodies to support rural radio include the World Association of Community Radio Broadcasters / Association Mondiale des Radiodiffuseurs Communautaires (AMARC), the National Association of Farm Broadcasting (NAFB) in the U.S.A., and formerly the International Service for National Agricultural Research (ISNAR), which no longer exists but was once part of the Consultative Group for International Agricultural Research (CGIAR), and was involved with the Linking Agricultural Research and Rural Radio (LARRRA) project (FAO, 2001).

Since 1979, Farm Radio International (formerly known as Developing Countries Farm Radio Network) has been supporting radio broadcasters in Africa by providing free information on agriculture and food security specifically for small-holder farmers. The organization has recently expanded to include additional supports such as a weekly news service for African broadcasters and an annual script-writing competition with broadcasting equipment as prizes.

The Centre for Agricultural and Technical Cooperation (CTA) of the Netherlands similarly supports rural public radio stations with its Rural Radio Resource Packs (RRRPs). Through this initiative, a panel of experts (all from developing countries) submit material on diverse topics; the material is compiled to produce CDs and brochures that are distributed among partner radio stations throughout Africa.⁹ These resource packs tend to be more readily available to public broadcasters than to smaller stations, which broadcast in local languages because resource packs are offered only in English and French. The average annual funding for the Rural Radio Resource Packs initiative is estimated at approximately €200,000 per year. That figure covers the provision of expert materials, sub-regional workshops with local journalist teams, and travel expenses and meetings (CTA, 2006).

Catholic Media Council (CAMECO) facilitates rural broadcasting development by linking funding organizations (most of which are Christian) with potential broadcasters in developing countries, such as the Catholic radio station Radio Maria in Malawi and Tanzania. CAMECO’s main purpose is to provide a network to link broadcasters and media organizations with donors, which often target Christian-affiliated organizations. Figures for funds issued

⁹ Topics included in recent publications of the Rural Radio Resource Packs are: agrobiotechnology and food security, agroforestry, backyard rabbit rearing, beekeeping, cassava, climate change and natural resources management, crop storage and marketing, diversified and integrated farming, farmer and village organizations, village-level food processing, integrated pest management, land and agricultural reform, livestock feeding, niche markets, organic agriculture and biological control of pests, processing of oil seeds, rural credit and financial management, rural producers as agents of innovation, small ruminants, small-scale irrigation and water management, small-scale processing of dairy products, storage of food grains and pulses, sustainable soil fertility, and young people in agriculture (CTA, 2008). The project is currently under evaluation to determine the next phase of the resource development.

directly from CAMECO are protected by a confidentiality agreement. However, it has been noted that religious-affiliated stations rank among the better-equipped regional radio stations on the continent. For example, a U.S.A supported Transworld Radio based in South Africa has an annual budget of approximately \$40 million (Sullivan, 2007).

CAMECO has a presence in all African countries and supports all types of media, including radio. Radio projects made up approximately one quarter (24.6 per cent) of the total number of funding packages facilitated by CAMECO. Radio projects included some combination of funds for equipment, program production training, and building and fixed assets (CAMECO, 2008).

ICT Costs and Usage by Radio Stations

Information and Communication Technologies (ICTs) are typically defined as sets of equipment (both new and not so new) for human and digital communication (Hambly and Hafkin, 2002). Broadcast radio is a communication medium that is older than computers, personal data assistants, e-mail, global positioning systems and the Internet. These days most radio stations rely on one or a combination of these technologies to carry out their work.

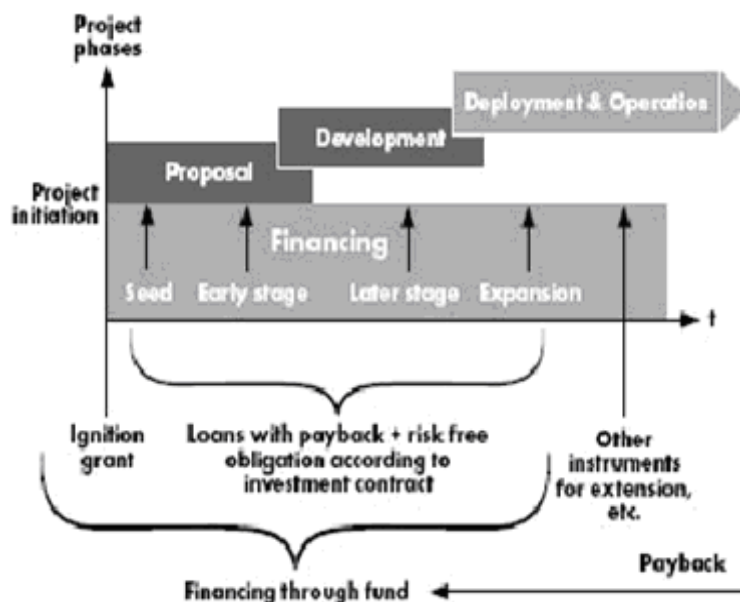
One of the major challenges for any technologically driven communications initiative is to find ways to provide appropriate technologies that will be sustainable for the intended beneficiaries, the farmers. The chief problem for many small radio stations has been budgeting and planning to continue operations, ensuring that there is a sufficient equipment base and technical expertise to keep the radio station going after donor funding ends (Quarmyne, 2006). In addition to having computers, a radio station's inventory usually includes antennas, stereo equipment, and recording / editing hardware and software—all of which require maintenance and investment. The majority of stations have moved beyond the pilot stage to a point where they can sustain investment in these technologies (such as Radio Ada and Radio Apac in Uganda). Many other stations across the continent, like Homa Bay Radio in Kenya, have not. Some of the reasons for this shortcoming may be: insufficient support for ICT inputs or linkages to other local ICT resources, ineffective computer training for staff, the short-term engagement of donors and investors (often five years or less), and a lack of adequate equipment maintenance and storage in hot, humid environments.

A critique often levelled at ICT projects by ICT for Development (ICT4D) specialists is that they end up being “forever pilot” programs or demonstrator applications. Radio is different from most other ICT projects, in that participants do not need to be computer or technology savvy for the project to be successful. All that is required is the purchase of a small battery-operated radio (to receive radio programming) and a telephone to call the station and make a comment. Mobile phones are available and accessible in the most remote areas of the continent and are now being used more often in radio programming because of their low cost and accessibility. Projects that introduce new computing devices, on the other hand, are often held up by the development community and technologists alike as offering a massive paradigm shift in how education is accomplished and in the empowerment of beneficiaries. Computer-based projects would have to be replicated 30,000 times in a country like Nigeria to reach all of the households that fall below the poverty line (Mathison, 2004: 231). Thus, projects that introduce new technologies must find the delicate balance between cost and benefit in reaching the poor.

Funding for ICT projects has been provided by numerous international, regional and national organizations, many (but not all) of which have already been mentioned in this section. In order to avoid the “forever pilot” syndrome with ICT projects, it is important to find ways to

develop communication strategies based on an integrated approach that relies on simpler media, such as radio (and even mobile phones), as an interface between new technologies and communities (Ilboudo, 2003: 2).

The “forever pilot” syndrome can be further explained by examining the project cycle and diagnosing where challenges arise. Figure 1.0 shows the three phases of a typical radio-based communication project. In phase 1 (the Proposal Phase), seed funding generally covers start-up costs for the radio station. These start-up costs are described in the conceptual framework in this report. They include the establishment of the building, the antenna, the transmitter, license fees, and other equipment purchases. During Phase 2 (the Development Phase), a sustainable radio station should be able to repay any loans incurred in Phase 1 through revenues generated and begin to cover operating costs. Phase II should also ensure that costs are covered for various types of programming. Operating costs include staff salaries or stipends, utilities, maintenance and depreciation on all assets. Under Phase 3, if a radio station is successful in collecting revenues from airtime sales, or continues to receive funds from a major donor, funds can then be used to purchase more equipment or to expand physically so that the radio station can provide better-quality programming to listeners. However, if the radio station is not sufficiently leveraged to pay back the start-up expenses, it will remain in pilot mode and the project could be closed before advancing beyond that mode. Finally, if the project does make it beyond the pilot phase, then, according to Figure 1.0, payback on all start-up expenses would be anticipated by the end of Phase 3, including debt servicing for any outstanding loans.



Source: (Mathison, (2004: 232)

Figure 1: Phases of an ICT Project Cycle

ICT projects face a number of challenges. The first is the high cost of operations. The costs of Internet connectivity, technical equipment, importing duties, utilities and other expenses can be higher in Africa than they are in developed countries (Mathison, 2004: 233). Costs associated with equipment maintenance, repair and storage are often overlooked in the start-up

phase. For ICTs to be used effectively, sufficient and reliable power supplies and a charger should also be considered in initial budgets. There is limited local revenue-generating capacity for smaller rural stations—simply put, there are few local businesses with advertising budgets large enough for radio ads. There is also a cost associated with training new volunteers. This is sometimes done outside of a broadcaster's community, incurring steep travel costs or fees for enrolment in professional development seminars (Wanyeki, 2000: 33).

BOX 2: Radio Ada: Using a hub approach for greater participation in community radio

W. Quarmyne

Radio Ada's approach to community empowerment considers active participation from surrounding communities as a major force in sustaining the station. For this to work, Radio Ada developed a unique management program that systematically integrates community members into the operations and programming of the station through a hub system. Although there is still a lot more to learn .

Radio Ada relies heavily on volunteers to perform numerous tasks. There are approximately 22 full-time volunteer staff, 12 of which are core station staff and who either receive a stipend for their work or are seconded to Radio Ada via their employer.

Radio Ada serves a distinctive linguistic-cultural community spread over a large area. To enable participation even of far-flung communities, the station set up hubs - offices from where news and programs are collected and recorded from the surrounding communities and then sent to Radio Ada for broadcast. The hubs are staffed by full-time volunteers who also receive stipends for their work. Radio Ada also has a large pool of 50 part-time volunteers both at the station and the hubs who receive money for transportation for the work they do or who offer their services for no support at all (K. Larweh, personal communication, June 2003; W. Quarmyne, personal communication, June 2005).

The hubs provide a physical space and presence in communities where Radio Ada is broadcast and allows community members to actively engage in radio programming within their community limiting the frequency of visits to the station. It also encourages communities to use the radio station for their own livelihood needs, generating a greater demand for the station. They were also meant to link with local markets and serve as an information provider for market preparation and sales in their respective communities.

Challenges & Lessons Learnt

The two main challenges faced by this system are poor telecommunications infrastructure and inadequate management capacity. The hubs were set up at a time when it was expected that telephone and internet services would be in place to allow for electronic communication to be the main mode between the station and the hubs. Unfortunately, the rural telecommunications infrastructure has not rolled out as expected. Landlines are still not readily available. Internet services are offered, but with little capacity and at high prices in the rural areas. Mobile phones have improved communication significantly, but charges can be quite high, making regular use for programming quite prohibitive. Managing the hubs require ongoing support (maintenance, staff support and training) to consistently respond to the community needs through radio programming. Working with people remotely without proper communication has become more of a challenge with increasingly costly transportation.

Nonetheless, the Radio Ada hub experience confirms that active community participation is key to vibrant community radio. Further communications support through reliable and affordable internet services, mobile phone communication and/or local transportation costs would greatly enhance the effectiveness of the hubs and contribute to the sustainability of the system.

Three Operating Models of Rural Radio

The simplest typology of radio has three categories: public, commercial and community stations. This threefold typology is dominant in many Anglophone African countries—for example, Ghana, Uganda and Malawi (Chapota, 2007; Arayo, 2007). Francophone countries tend to add a fourth type of radio—associative radio, which involves farmer associations where ownership is established by these associations.¹⁰ The discussion here will focus on a threefold typology with associative radio included as community radio. The following is a brief summary of these three types of stations found in Africa.

1. Public broadcasting (*example stations in this report: Uganda Broadcasting Corporation, Ghana Broadcasting Corporation, Malawi Broadcasting Corporation, and Radio Tanzania*)

Public broadcasting typically features country-wide availability and accessibility. These stations are usually state-funded and publicly owned, which means that independent corporations own the stations while the budget for the corporation is determined by parliament. Broadcasting policies are controlled by a public body, such as a council or legally constituted authority, with cooperation from other government departments—for example, the Ministry of Communications in Ghana or the Ministry of Information and Communication Technology in Uganda. Much of the funding for the operation of a public broadcaster comes from the license fees that listeners are charged when they buy radio receivers (Alumuku, 2006: 21; Fraser and Restrepo-Estrada, 2001: 3).

2. Commercial broadcasting (*example stations in this report: Central Broadcasting Service Ltd. (Uganda), MEGA FM (Uganda), Radio Apac* (Uganda), Habari Maalum (Tanzania), Classic FM (Ghana), Radio Banjo de Kayes (Mali)*)

Commercial broadcasting generates profit for the station's owners. Stations are typically owned and controlled by a single entrepreneur, a group of entrepreneurs, or a commercial enterprise

¹⁴ Station typology is recognized in Francophone countries. Bénin legislators of the HAAC have yet to address the question of typology in media regulation because of their suggestion that there should be regulation for each type of station. The High Authority on Media and Communication (*La Haute Autorité de l'Audiovisuel et de la Communication – HAAC*) has stipulated that private non-commercial radio stations must fall into one of the following categories: (1) Faith-based (denominational) radios, (2) Community radios, (3) Associative radios outside of the community sphere, (4) Cultural radios, or (5) Campus radios (Edah, 2002: 8; Badou, 1998; Loi Relative aux Associations, 2004).

* Radio Apac appears in both the commercial and community categories because it is a community station, yet it resembles a commercial station. One of the managers is also a shareholder in the radio station, which is indicative of private investment; highly priced spot advertising encourages commercial programming from lucrative businesses. In this instance, community radio is not prohibited from having some private funding from individuals, while the ownership share remains in the hands of the community or a responsible group of leaders who will attempt to maintain the trust of the community. In some cases, community radio stations may be forbidden to receive advertising revenue by the terms of their licensing as community radio stations.

(Arayo, 2007). Although anything other than public broadcasting may be referred to as private media, commercial stations are most often identified with private media because they are usually held by a private owner or group of owners in the private sector. Private media broadcasting is often considered to be the same as commercial broadcasting, but this is a hasty generalization. Community radio stations may also fall into the private media category, because many of them emerged at the time of media privatization and are independent of the state. Thus, commercial broadcasting is the most appropriate term to use when referring to radio under private ownership, but not to private broadcasting in general. Commercial radio typically places greater importance on popular, relatively inexpensive programming - social and human development programs do not tend to be a priority. However, in some countries commercial broadcasters are required to provide public service or development programming in exchange for the exclusive use of certain public frequencies; there are notable examples of commercial stations with a strong commitment to development programs (Zodiak FM in Malawi, Classic FM in Ghana). This is the case in Uganda with some stations (e.g., MEGA FM, which currently has a strong association with Uganda Broadcasting Corporation). In most cases broadcasting at commercial stations is under the terms of a license granted on a periodic basis by a public authority (Alumuku, 2006: 21; Fraser and Restrepo-Estrada, 2001: 3).

3. Community Broadcasting (*example stations in this report: Simli Radio (Ghana), Radio Apac* (Uganda), Dzimwe Radio (Malawi), Sibuka FM (Tanzania), Radio Jigiya (Mali), Associative Radio Fanaka (Mali)*)

Community radio is defined as broadcasting that is owned, managed and controlled by an identifiable community or group of communities. According to some definitions, it is also a not-for-profit venture, operated with support from an association, trust, or foundation (Alumuku, 2006: 22; Fraser and Restrepo-Estrada, 2001: 3). But some analysts regard this as too narrow a definition. Community radio, according to a more inclusive definition, can be either fully participatory or closely directed by a few (Sposato and Smith, 2005: 15). Community radio stations can be owned partially or entirely by a non-governmental organization with a small group of representatives that work in communities. According to some, community radio stations may be partially for profit, as long as they maintain and uphold service to an identifiable community as their purpose (Karikari, 2000: 47). Programming from community radio stations is unique because the stations are non-partisan, and in most cases adhere to a set of principles that privileges community development. The goal of community radio is to be localized near the community of service, so community members are able to access the programming in the place where they are (Abbey-Mensah, 2001; Arayo 2007). Francophone countries have a slightly different interpretation of the definition of community radio, and add the term “associative radio” to the mix.

Private radio stations with a specific social purpose, apart from commercial stations, may fall into one of several categories, including: (1) faith-based radios; (2) community radios; (3) associative radios outside of the community sphere; (4) cultural radios; and (5) campus radios (Edah, 2002: 8; Badou, 1998; Loi Relative aux Associations, 2004). All of these categories may cross boundaries with the definition of “community radio” because each station may choose to define “community” in different ways, such as a community of interests, geography or occupation.

Assessing the Economy of Rural Radio with Varying Costs and Revenue Streams

Because public, commercial and community radio have very different ways of generating revenue and different service mandates, each has its own operating model. For example, as state-sponsored broadcasters, public radio stations obtain the bulk of their revenues from their country government. In contrast, commercial radio stations obtain most of their revenues from airtime sales and private capital. Community radio stations derive their funding from a blend of airtime sales, foreign development assistance funds and direct community fundraising.

Figure 2.0 shows the different operating models of radio and the varied costs and revenue streams for each. In general, the majority of funding for radio comes from external donors. Nearly all public and community stations in Africa have had some external revenue from an international multilateral organization like UNESCO or training from nongovernmental organizations (NGOs). While commercial stations rely mostly on private capital and their own airtime sales for revenue, several of them have also had start-up capital from foreign donors.

The revenue generated can also differ between varying operating models. Public radio stations tend to rely only on airtime sales or public service announcements¹⁵ because, with government funding, they do not need to conduct additional fundraising activities. Commercial and community radio stations rely much more heavily on fundraising activities.

The large box at the bottom of the diagram indicates three cost categories that form the basis for discussion in this report: (1) start-up costs; (2) operating costs; and (3) production costs. Production costs can be considered part of a radio station's operating costs, but field production costs are differentiated from in-studio production because of costs associated with community participation and transportation. Participatory programming is reliant on field production costs and travel to locations where the community may participate. Cost categories are common to all stations, except for salaries and licensing fees, which are determined differently for each type of station (see "Station Specific Costs" in Figure 2.0). Community radio stations tend to rely on volunteer labour and pay small stipends to staff as salaries, whereas public and commercial radio stations can support a greater number of staff with full salaries. Licensing fees are also different for each station, depending on national policy. In Ghana it is reported that commercial license fees may amount to \$2,000 at start-up with similar annual fees thereafter (Ajono, 2007). Stations face administrative costs at start-up as well, such as articles of association for becoming a recognized business (if it is a commercial station) or non-profit registration fees (for community stations).

Another difference is that, for public radios, equipment costs are generally lower because the investment in transmitters and broadcasting towers and start-up costs have already been absorbed, as public stations existed just prior and immediately after Independence. However, the cost of maintaining such equipment is high, as is the cost of depreciation. For commercial and community stations, by comparison, start-up costs may include the purchase or rental of a new building, new field recording equipment, studio equipment, and business machines, such as computers and photocopiers.

¹⁵ The cost of airtime on public stations also tends to be quite high compared to commercial and community stations. As indicated by The National Agricultural Advisory Services (NAADS), the cost of airing public service announcements on Uganda Broadcasting Corporation Radios was listed at \$285 US for half an hour of airtime (Nakagwa, 2006). Revenues from airtime are discussed in the subsequent analysis.

Field production costs tend to be unique to the production department of public radio stations, and many public broadcasters (such as Malawi Broadcasting Corporation and Uganda Broadcasting Corporation) have their own development communication divisions. These costs typically include transportation and field recording equipment for reporting teams, and in some cases also for community members who have offered a service to the station. They may also include honorariums for local experts and special interviewees.

Public radio stations tend to have wide broadcasting ranges with significant transmitting power, but some listeners may be excluded, depending on their level of proficiency in the language used for broadcast on public radio. The opposite is true of community stations. These have varying broadcasting ranges, but many are small, and are more likely to carry programming in languages spoken by smaller language groups (such as Radio Ada in Ghana, with a range serving 800,000 Dangme speakers). Commercial stations may offer a mix of languages, but they typically use the more common dialects and carry information with higher entertainment value because it attracts more listeners (Hambly Odame, 2005: 366).

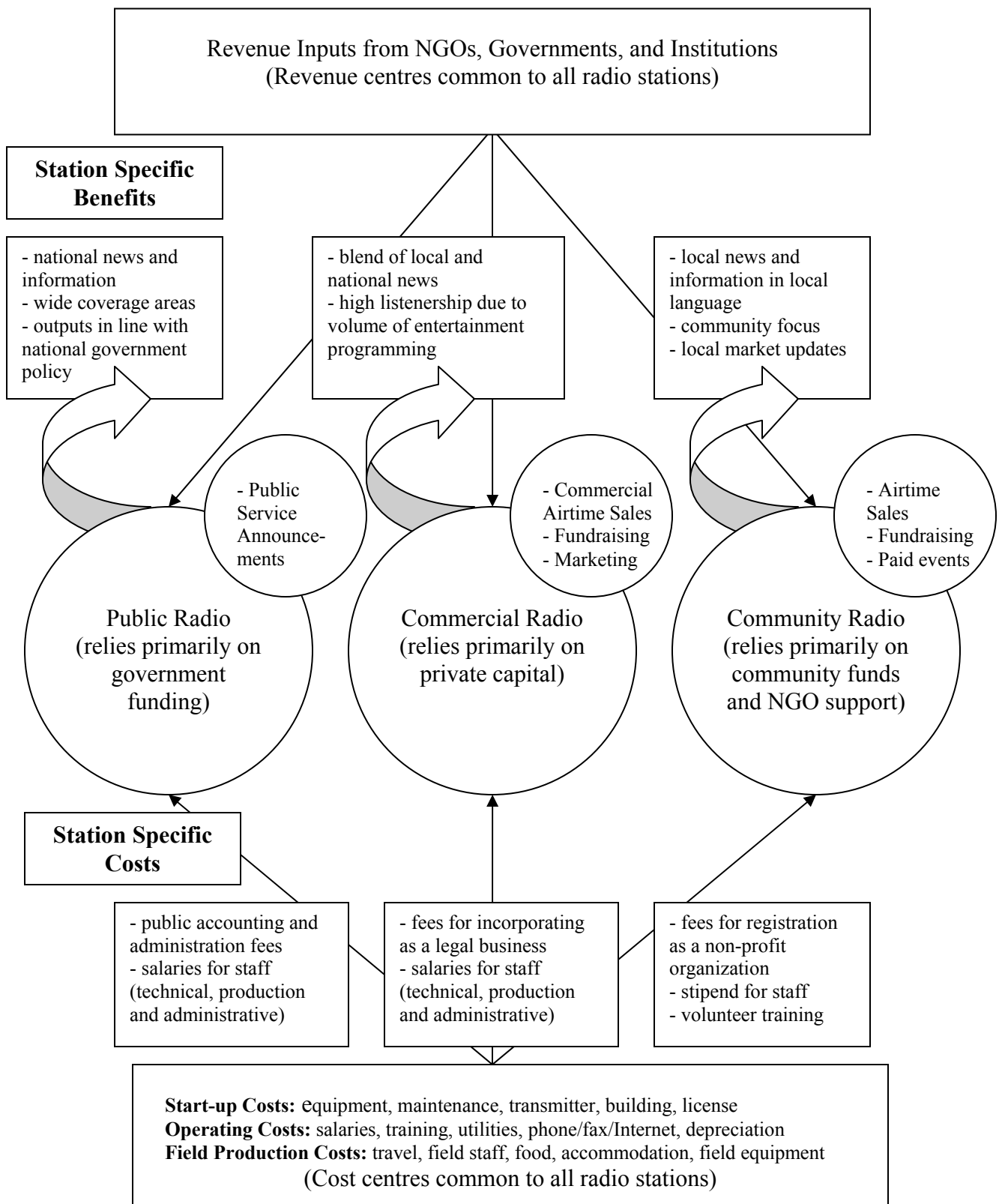


Figure 2: Conceptual Framework for Rural Radio Economics Operating Models

IV. RURAL RADIO ECONOMIC RADIO STATION SURVEY

Methods

A desktop study on the economics of rural radio revealed that there was very limited information and knowledge available on the costs of producing and sustaining programming for farmers in different types of stations. To complement the desktop study, a survey was developed in order to learn more about the differing costs and revenues in various stations in five countries in Africa. A total of 15 in-depth surveys were completed by 15 different stations in five African countries – Uganda, Tanzania, Malawi, Ghana and Mali. A variety of commercial, public and community stations were considered as part of a random selection process (See Annex A for survey). Stations were selected according to a desired representation of one public, one commercial and one community station per country. All stations were members of the Farm Radio Network and many are participating in the African Farm Radio Research Initiative.

All completed survey forms were sent back to the researcher directly by e-mail, fax or letter mail. Additional information was also requested, including audited financial statements, a radio program schedule and a brief summary statement about where they would choose to allocate funds in the future. The response rate was quite high, with 15 out of 20 surveys completed, but only a few respondents completed the entire survey and just one provided all of the information requested.

The survey was completed by station managers, departmental directors, marketing managers or founders in each radio station. This was to ensure that a person with the appropriate level of expertise or information would answer the questions. In the case of public stations, efforts were made to select respondents from rural broadcasting departments so that the messages and budgets quoted would be specific to that department.

Survey Results

The research findings include both qualitative and quantitative data. The qualitative data gathered from the in-depth interviews with station managers is integrated into this report in the form of quotations from individuals who were contacted during the field study in Uganda from September 12–19, 2007. The quantitative data is found in a series of charts and tables that reflect the information gathered by the survey. The numbered sections of this analysis correspond to sections of the survey design.

i. Background of Radio Station Personnel

All respondents regarded their work at radio stations as a full-time job. Most were managers of the radio station where they worked, and a few were also the founders of the station or led a particular department (either the rural development or marketing department) (see Table 4). Each station had a unique combination of employees and volunteers, and each respondent had a different background in terms of the nature of his or her training. Table 5 shows that public radio stations had the largest number of paid staff, followed by commercial radio stations and community radio stations. Some smaller commercial stations (such as Radio Banjo) had fewer full-time staff than the larger community stations (such as Sibuka FM or Radio Apac). Likewise, some small public stations (such as Volta Star) had fewer staff than the larger commercial

stations (CBS), but this was the exception rather than the norm.¹² The number of paid staff at each type of radio station is strongly indicative of the difference in funding between public media versus commercial and community media.

Table 4: Description of the 15 Respondent Stations

Location and Country	Name of Station, Job Title: Name of Respondent	AFRRI Program participant	Typological Description
Apac Town, Uganda	Radio Apac 92.9 FM Founder: Mr. Jimmy Okello	NO	Mostly Community / Commercial
Gulu, Uganda	Mega FM 102.1 and 103.1 Manager: Mr. David Okidi	√ Yes	Commercial / Public
Kampala, Uganda	Uganda Broadcasting Corporation (UBC) Radio Manager: Madame Doreen Ndeezi	√ Yes	Public
Bulange Mengo, Kampala, Uganda	Central Broadcasting Service (CBS) 88.8, 89.2 FM Marketing Executive: Mr. Stephen Muhangi	√ Yes	Commercial / Buganda Kingdom
Ngaramtoni, Arusha, Tanzania	Radio Habari Maalum Radio Manager: Lazarus Laiser	NO	Commercial
Nyalikungu, Shinyanga, Tanzania	Sibuka FM Radio Manager: K. Mambo Baruthi-Ali	√ Yes	Community
Dar es Salaam, Tanzania	Radio Tanzania Chief Program Producer: Benedict Komba	√ Yes	Public
Techiman, Ghana	Classic FM Radio Manager: Kwabena Agyei	√ Yes	Commercial
Ho, Ghana	Volta Star Radio, Ho Radio Manager: Wisdom Tsey	√ Yes	Public / Regional
Dalum-Tamale, Ghana	Simli Radio Radio Manager: Lydia Ajono	√ Yes	Community

¹² This would only have been the case for the regional broadcasting center of Volta Star in Ho; the Ghana Broadcasting Corporation (GBC) staff—when taken to include the Accra staff—may be assumed to outnumber the broadcasting staff at CBS. Indeed, Volta Star Radio is only a regional subsidiary of GBC and therefore operates on a much smaller scale.

Lilongwe, Malawi	Malawi Broadcasting Corporation (MBC) Assistant Controller of Research and Projects: Madam Everess Kayanula	√ Yes	Public – Research Department Dedicated to Development Communication
Monkey Bay, Malawi	Dzimwe 93.1 FM Radio Manager: Miss Hilda Jambo	√ Yes	Community
Kayes, Mali	Radio Banjo 103.9 Founder: Bruno Podet	√ Yes	Commercial
Fanaka, Koulikoro, Mali	Radio Fanaka Fana Radio Manager: Lamine Togola	√ Yes	Cooperative (Associative)
Zegoua Sikasso, Mali	Radio Jigiya Radio Manager: Seydou Diakité	√ Yes	Community

Table 5: Employment Patterns of the 15 Respondent Stations

Name of Station	Number of Paid Staff		Number of Volunteers	Typological Description
	Part Time	Full Time		
Malawi Broadcasting Corporation Lilongwe, Malawi		700	0	Public
Radio Tanzania Dar es Salaam, Tanzania		415	0	Public
Uganda Broadcasting Corporation Kampala, Uganda	50	25	35	Public
Volta Star Radio Ho, Ghana		48	18	Public / Regional
CBS 88.8, 89.2 FM Kampala, Uganda	24	66	0	Commercial / Buganda Kingdom
Mega FM 102.1 and 103.1 Gulu, Uganda		40	1	Commercial / Public
Classic FM Techiman, Ghana	5	30	40	Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania		8	0	Commercial
Radio Banjo 103.9 Kayes, Mali		7	15	Commercial

Sibuka FM Nyalikungu, Shinyanga, Tanzania		10	4	Community
Radio Apac 92.9 FM Apac Town, Uganda		8	11	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali		7	15	Community
Simli Radio Dalun / Tamale, Ghana		6	21	Community
Radio Fanaka Fana Fana, Koulikoro, Mali		4	10	Cooperative (Associative)
Dzimwe 93.1 FM Monkey Bay, Malawi		0	9	Community

A review of the nature of training provided by each radio station is useful in order to identify trends related to the type of training in which each type of station (public, commercial and community) is most likely to participate (see Table 6). Three categories of training emerged from the survey: management training, media or communications training and accounting training. Respondents indicated whether or not they had received each type of training and which organizations were active in supporting that training.

Table 6: Station Managers Training Background at the 15 Respondent Stations

Name of Station	Categories of Training Listed	Trainer	Typological Description
Malawi Broadcasting Corporation Lilongwe, Malawi	Management	UNFPA, RNTC (Radio Netherlands Training Centre)	Public
Radio Tanzania Dar es Salaam, Tanzania	Management	Not specified	Public
Uganda Broadcasting Corporation Kampala, Uganda	Management and media	Makere University, Professional training courses	Public
Volta Star Radio Ho, Ghana	Management	CIMAC, Accra Chartered Institute of Administration and Management Consultants	Public / Regional
CBS 88.8, 89.2 FM Kampala, Uganda	Management and media	Makere University	Commercial / Buganda Kingdom
Mega FM 102.1 and 103.1 Gulu, Uganda	Management and media	Farm Radio International, University, Professional	Commercial / Public

Classic FM Techiman, Ghana	Management and media	Farm Radio International, BBC Voice of Africa	Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania	Management and media	IBRA Sweden, Daystar University, Media Producers Training, Arusha	Commercial
Radio Banjo 103.9 Kayes, Mali	Management, media and accounting	Farm Radio International, ARCOM (Community radios alliance of Mali), URTEL (Union of Free Radio and TV Broadcasters), Cultural Center of French Embassy	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	Management	SNV Netherlands Development Organization	Community
Radio Apac 92.9 FM Apac Town, Uganda	Management, media and accounting	Not specified	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali	Management and media	Farm Radio International, USAID, UNDP, ARCOM, UNICEF, Ministry of Health, Ministry of Education	Community
Simli Radio Dalun / Tamale, Ghana	Management, media and accounting training	Ghana Institute of Journalism, Pentecost University	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	Management, media and accounting	Farm Radio International, USAID, UNDP, ARCOM, UNICEF, Deutsche Welle, CMDT (textile fibres company), Kilabo (civil society), CCI (Crossroads International), CAD Mali Coalition of Alternatives for Debt and Development in Africa	Cooperative (Associative)
Dzimwe 93.1 FM Monkey Bay, Malawi	Management	UNESCO Malawi	Community

At public radio stations, most respondents were department directors, had a less direct role in production and account keeping, and had likely only been given management training

and, in some cases, media training. Their education and background usually involved university study or professional courses that supported their role in management, with less training in radio production. Public radio stations tended to have partnerships or connections with major public broadcasting corporations, such as Radio Netherlands, Radio Netherlands Training Centre or the BBC World Service Trust.

At commercial stations, many of the directors had both management and extensive media training. The organizations that supported commercial radio often included international NGOs, and in some cases large public broadcasting partners, such as the BBC World Service Trust.

Community radio stations reported having a wide range of funders and supporters that offered training. These included UNESCO, NGOs, specific government ministries, the BBC World Service Trust and Deutsche Welle.

ii. Inventory of Equipment and Resource Providers

Many of the same organizations that conducted the training for each radio station appear to have donated equipment. In some cases, a single donor supported comprehensive programs that included both training and equipment. This was true for two of the station respondents - IBRN Sweden for Habari Maalum, and UNESCO Malawi in the case of Dzimwe Radio. Table 7 shows the source of equipment donation for each station.

The public stations differed substantially from commercial and community stations in their funding sources. The bulk of their funding came from their national government, whereas commercial and community stations had more diverse funding sources. Two stations had no form of external funding whatsoever, and raised all of their funds for equipment purchases internally. These were Classic FM in Ghana (a commercial station), and Sibuka FM in Tanzania (a community station).

Table 7: Equipment Donated by Major Funding Groups

Name of Station	Equipment/Articles Listed	Resource Provider	Typological Description
Malawi Broadcasting Corporation Lilongwe, Malawi		National Government	Public
Radio Tanzania Dar es Salaam, Tanzania	Mixers, minidisk recorders, CD players and DAT machines	Japan International Cooperation Agency (JICA)	Public
Uganda Broadcasting Corporation Kampala, Uganda		National Government	Public
Volta Star Radio Ho, Ghana		National Government	Public / Regional
CBS 88.8, 89.2 FM Kampala, Uganda	Station purchased most major equipment except: 1. WorldSpace decoder and 2. Satellite dish and receivers	1. CBC (Canadian Broadcasting Corporation) 2. Deutsche Welle	Commercial / Buganda Kingdom

Mega FM 102.1 and 103.1 Gulu, Uganda	Some equipment donated	DFID	Commercial / Public
Classic FM Techiman, Ghana	Station purchased all major equipment without donor support		Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania	1. CD players, 4 minidisk recorders, studio recording equipment 2. Three cars and two tractors	1. IBRA Sweden 2. Swedish churches	Commercial
Radio Banjo 103.9 Kayes, Mali	WorldSpace decoders and satellite receiver	Radio France International (RFI)	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	Station purchased all major equipment without donor support		Community
Radio Apac 92.9 FM Apac Town, Uganda	Some equipment donated	UNESCO and Commonwealth of Learning (COL)	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali	Station purchased all major equipment without donor support		Community
Simli Radio Dalun / Tamale, Ghana	1. Outdoor broadcasting equipment 2. Antenna and all major assets	1. UNICEF 2. DANIDA	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	1. Major equipment donations 2. WorldSpace decoders and satellite receiver	1. Farm Radio International, Canadian Crossroads International (CCI) 2. Radio France International (RFI)	Cooperative (Associative)
Dzimwe 93.1 FM Monkey Bay, Malawi	1. Computer, vehicle, air conditioner 2. Transmitter, two CD players, two tape decks, monitor speakers, mixer, power generator and two microphones 3. Production studio computer	1. UNESCO Malawi 2. AMARC South Africa through UNESCO Malawi 3. Private donor	Community

iii. Common Technologies at Radio Stations: The Cost of ICT Usage

Respondents were asked about the use of technology at their radio station, and were requested to provide information on their technology budgets. This provided a general overview of which technologies were most in use (based on the amount spent on each technology).

According to the results, a relatively small community station, Dzimwe Radio in Malawi, had communications expenses of \$79.00/month for cell phone use and telephone communications (see Table 8). This is indicative of the high cost of communications in Africa, and of the high subscription fees for various services. Classic FM was the station with the overall highest cost of communication, which is curious given that the overall budget for Classic FM was much smaller than those of larger commercial stations, such as CBS.

The amounts spent on each type of technology are given in Table 9 with pie charts that indicate the percentage of expenses for each communication technology: Field production costs, classified as “other,” form a category that is distinct from the “start-up” and “operating costs” mentioned in the conceptual framework. Respondents from Radio Banjo indicated that it was impossible to connect with communities via Internet, and the only way to communicate about certain subjects was in person. Thus, in this instance, substitution for “ICT use” through field visits had a bigger impact on the station’s costs than the ICTs themselves.

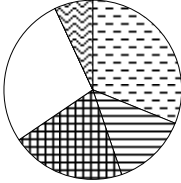
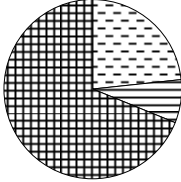
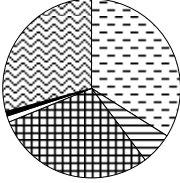
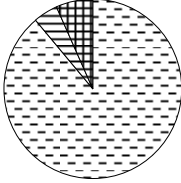
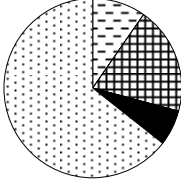
Most stations’ technology costs were found to be related to Internet subscription and cell phone use, indicating that these are the two most crucial communication technologies in use by staff at radio stations. SMS messages as an attribute of cell phone technology were also quite important because they were used by nearly all stations to relay messages between journalists and correspondents, and were among the least costly technologies. This is because SMS messaging is often bundled with the purchase of a pre-paid cell phone card, or may even be free with some subscriptions.

Table 8: Monthly Expenditure on ICTs by Radio Station

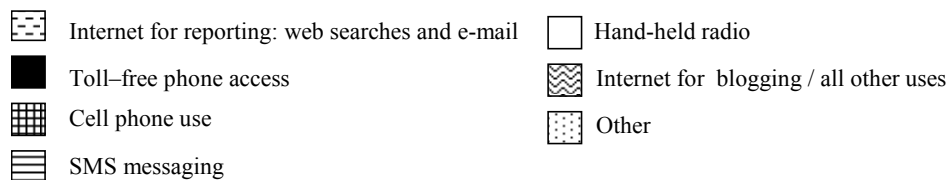
Name of Station	Total ICT Budget	Typological Description
Radio Tanzania Dar es Salaam, Tanzania	\$1,350.00	Public
Uganda Broadcasting Corporation Kampala, Uganda	\$1,723.00	Public
CBS 88.8, 89.2 FM Kampala, Uganda	\$1,500.00	Commercial / Buganda Kingdom
Mega FM 102.1 and 103.1 Gulu, Uganda	\$1,291.00	Commercial / Public
Classic FM Techiman, Ghana	\$2,061.00	Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania	\$391.00	Commercial
Radio Banjo 103.9 Kayes, Mali	\$346.00	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	\$756.00	Community

Radio Apac 92.9 FM Apac Town, Uganda	\$400.00	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali	\$349.00	Community
Simli Radio Dalun / Tamale, Ghana	\$145.00	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	\$349.00	Cooperative (Associative)
Dzimwe 93.1 FM Monkey Bay, Malawi	\$79.00	Community

Table 9: Monthly ICT Budget Allocation for Each Radio Station

Name of Station	Total ICT Budget	Typological Description
Uganda Broadcasting Corporation Kampala, Uganda		Public
Mega FM 102.1 and 103.1 Gulu, Uganda		Commercial / Public
Classic FM Techiman, Ghana		Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania		Commercial
Radio Banjo 103.9 Kayes, Mali		Commercial

Sibuka FM Nyalikungu, Shinyanga, Tanzania		Community
Radio Apac 92.9 FM Apac Town, Uganda		Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali		Community
Simli Radio Dalun / Tamale, Ghana		Community
Radio Fanaka Fana Fana, Koulikoro, Mali		Cooperative (Associative)
Dzimwe 93.1 FM Monkey Bay, Malawi		Community



iv. Start-up Costs of Radio Stations

Table 10 summarizes the totals for each radio station's start-up equipment costs. As discussed earlier, a station's main start-up costs may include antennas, transmitters, mixing boards,

microphones, computers, software, portable recorders, stereo equipment, handheld call radios (HAM or CB) for communication with field staff, photocopiers and other business machines,

Table 10: Start-up Costs for All Radio Stations (equipment assets)

Name of Station	Total Purchase Cost (USD)	Book Value (USD)	Purchase Cost Less Book Value (Estimated Depreciation)	Typological Description
Radio Tanzania Dar es Salaam, Tanzania	8,165,735.84	5,840,730.84	2,325,004.47	Public
Uganda Broadcasting Corporation Kampala, Uganda	28,217.14	28,217.14	-	Public
CBS 88.8, 89.2 FM Kampala, Uganda	331,275.97	331,275.97	-	Commercial
Mega FM 102.1 and 103.1 Gulu, Uganda	54,122.84	54,122.84	-	Commercial / Public
Classic FM Techiman, Ghana	52,041.60	41,984.80	10,056.80	Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania	25,600.00	25,600.00	-	Commercial
Radio Banjo 103.9 Kayes, Mali	7,423.57	4,690.55	2,733.02	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	153,900.00	105,840.00	48,060.00	Community
Radio Apac 92.9 FM Apac Town, Uganda	102,250.00	85,960.00	16,290.00	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali	12,335.38	11,832.58	502.80	Community
Simli Radio Dalun / Tamale, Ghana	202,280.00	193,960.00	8,320.00	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	29,598.20	23,044.84	6,553.36	Cooperative (Associative)

VSAT links for Internet, and satellite phones (in the case of stations located in remote areas that could afford the technology).¹³ Respondents included only these equipment expenses in their list of start-up expenses, but left out such start-up costs as license fees, building and land purchases, transportation and custom fees for equipment purchased out-of-country, and other costs related

¹³ The total number of responses to this section did not include Malawi Broadcasting Corporation or Volta Star radio, since the financial data were not available (and Dzimwe's submission was lost due to a transmission error). Thus the response rate for this portion of the survey was only 12 out of 15.

to starting up a business. This is partially due to the fact that most radio stations were paying only a rental amount, and had not incurred a high one-time cost associated with the purchase of a facility.

The complete breakdown of equipment expenses for each station appears in Annex B. The stations with the lowest capital investment in equipment (and the lowest start-up costs) were in Mali, where the total equipment cost (before depreciation) ranged from \$7,423.57 for Radio Banjo to \$29,598 for Radio Fanaka. Even with these modest figures for the purchase of start-up equipment, it is apparent that the start-up figures for the Malian community stations exceeded those quoted in the UNESCO study for erecting a micro radio station with a computer. This is because several start-up costs were not captured in the UNESCO study (Worsoe and DaniCom, 2004). The UNESCO study had not calculated the cost of an antenna mast, software, portable recorders and amplifiers that would be needed for a radio station's basic operations. Furthermore, a transmitter of a significantly better quality would be needed to reach a broadcast area of 50 kilometres (wider than a single village and its environs).

The \$8 million worth of fixed assets at Radio Tanzania (soon to be Tanzanian Radio Corporation) dwarfs all other start-up cost budgets. The depreciation of these assets was noted to be significant for Radio Tanzania, with their current book value found to be more than \$2 million less than the initial investment.

Uganda Broadcasting Corporation, by comparison, declared a total asset value of \$28,217.14, which is curious because it is only a small fraction of the asset value declared by Radio Tanzania (now Tanzania Broadcasting Corporation), a station with similar services and coverage areas. Although it may be expected that Tanzania has a larger public radio funding pool, it is more likely that some equipment assets were not declared in the Uganda survey, such as transmitters and antennas.

It is notable that there was no significant difference between the start-up costs for certain community and commercial radio stations. Some community stations had assets that far exceeded those of commercial stations, and vice versa. The largest commercial radio station in terms of asset base (start-up costs incurred) was CBS Uganda, followed by Simli Ghana, Sibuka FM Tanzania and Radio Apac Uganda.

Many of the community stations recorded very low values of depreciation of their start-up equipment (see Table 11). This could be due to the differences in reporting standards for depreciation between countries, or due to a lack of awareness on how depreciation is calculated (straight line depreciation or declining balance depreciation).

v. Operating Costs of Radio Stations

Radio stations' operating costs consist of salaries, training, utilities, communications (including ICTs used by each station) and maintenance. Direct program and field production costs are also included in this section of the report because production costs are a type of operating cost incurred by radio stations.

The full list of items on a typical statement of operating expenses includes: (a) salaries, allowances, and staff social security; (b) training costs, including visitor hosting expenses, leave travel, accommodations, taxi fees, conference costs, foreign seminars, local seminars, education, further staff training, books and stationery, and food for special events; (c) utilities, meaning water, electricity, and fuel for generators and vehicles; (d) communications and ICT use, including newspapers, telephone, Internet and post (already covered under Section 3 of the analysis, but included here as a line item); (e) maintenance and repairs to broadcast equipment,

generators, office furniture and vehicles, as well as office cleaning; (f) miscellaneous office expenses, such as emergency medical supplies, Value Added Tax receipt books, banking fees and office furniture; (g) miscellaneous production expenses, such as music purchases, bicycles or vehicles purchased for field staff, consumables for staff in the field or per diems, and other transportation costs (minivan taxi and local transit). See Annex C for a complete break-down of operating costs by station and to see how each station allocates their expenses in these categories.

The figures reported in Table 11 are a breakdown of the total operational expenses by station. Expenses range from \$2,000 up to \$1 million, which is most likely related to initial start-up funding and ongoing support available. Again, the radio stations in Mali reported the lowest operational expenses. Radio Habari Maalum also had very low operating expenses as a commercial station, but this is largely because the station is still in the start-up phase and has not begun reporting all operational expenses.

Table 11: Total Annual Operating Costs for All Radio Stations

Name of Station	Total Costs (USD)	Typological Description
Radio Tanzania Dar es Salaam, Tanzania	541,226.13	Public
Uganda Broadcasting Corporation Kampala, Uganda	412,683.06	Public
Volta Star Radio Ho, Ghana	20,329.76	Public
CBS 88.8, 89.2 FM Kampala, Uganda	930,764.79	Commercial
Mega FM 102.1 and 103.1 Gulu, Uganda	199,178.54	Commercial / Public
Classic FM Techiman, Ghana	122,235.36	Commercial
Radio Habari Maalum Ngaramtoni, Arusha, Tanzania	12,721.00	Commercial
Radio Banjo 103.9 Kayes, Mali	2,067.07	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	10,440.00	Community
Radio Apac 92.9 FM Apac Town, Uganda	17,740.35	Community / Commercial
Radio Jigiya Zegoua Sikasso, Mali	2,470.43	Community
*Simli Radio Dalun / Tamale, Ghana	285,916.80	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	2,470.43	Cooperative (Associative)

Dzimwe Radio Monkey Bay, Malawi	31,221.14	Community
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Radio Sibuka and Dzimwe Radio had low operational expenses, likely due to their weak purchasing power as small-scale community broadcasters. Simli Radio reported the highest operational expenses as a community station, but this is because the station had recently purchased a large amount of equipment that was included in their operations expenses as a line item. Without this purchase to augment the reported value of operations expenses, the total value of operations would have been approximately US\$160,000.¹⁴ Radio Apac is an example of a community station that is run like a business. Its main founder, Jimmy Okello, has a keen interest in community programming in Northern Uganda but does not strictly rely on donor funding to support the station.

As in the case for start-up costs, Radio Tanzania again had the highest reported budget among the public broadcasters, with Uganda Broadcasting Corporation a close second. The Malawi Broadcasting Corporation (MBC) has a significantly larger staff than either Radio Tanzania or Radio Uganda, so it is estimated that MBC would have an even greater operating budget; but recent tension among administrators caused by cutbacks in government funding for MBC meant that the station could not disclose any financial information whatsoever. Volta Star Radio was the only public station that operated completely outside of the capital city and on a separate budget under the Ghana Broadcasting Corporation. Because Volta Star had no record of start-up expenses (all equipment was initially provided by the Ghana Broadcasting Corporation before the broadcasting service was decentralized), this is the only record of expenses that is available for the station. The small budget for the public station is indicative of the scale of operations in the town of Ho for Volta Star Radio.

Central Broadcasting Service (CBS), a commercial radio station in Uganda, topped Radio Tanzania and all of the public stations in terms of operating expenses. The mouthpiece of the Buganda Kingdom, CBS is one of the most lucrative ventures in commercial radio in Africa, in terms of straight profits, because of its links with the historically powerful monarchy. MEGA FM, a commercial station that operates hand-in-hand with the public broadcaster in Uganda, also has a very large operating budget. Its success is at least partly due to good airtime sales and support from the UK Department for International Development.

Classic FM in Ghana also had a sizeable operating budget, which was largely covered by airtime sales and advertisements. Because Classic FM charged a high fee for spot airtime, they were able to cover their operating costs and generate profits for shareholders. Community radio stations generally had smaller operating budgets, a situation that is related to smaller private capital injections from owners and lesser emphasis on airtime sales. The scale of operations that is achievable on a community radio budget is different from that of commercial stations, and usually affects the number of paid staff that the station can support. Community radio stations often compensate for this by having a number of volunteers working for the station—but this labour also has a cost that does not appear in operating budgets. It is not clear how to value such volunteer labour in an economy where the average monthly stipends are as low as \$300 per month.

¹⁴ Simli Radio was funded by Danish Development Corporation until 2007, and the figures including equipment purchases are reflected in the high figure. The station budget for 2008 will be significantly lower, but could not be verified at the time of publication.

vi. Production Costs by Program Including Participatory Programming

As identified in the conceptual framework, the costs of producing broadcasts in the field include field staff, per diems for these staff members to cover accommodations and food, transportation to rural communities, and the cost of rural production equipment (such as field recording equipment or rural broadcasting equipment to involve listeners).

Table 12: The Costs of Rural Production (USD per program)

Name of Station	Phone-in Show	Talk Show with Local Expert	Reporter in the Field	Shows With Listening Groups	Shows Involving Listeners in Production	Village Debate	Typological Description
Uganda Broadcasting Corporation Kampala, Uganda	119	89	59	N/A	N/A	N/A	Public
CBS 88.8, 89.2 FM Kampala, Uganda	178	297	297	297	297	N/A	Commercial
Mega FM 102.1 and 103.1 Gulu, Uganda	178	119	119	48	N/A	300	Commercial / Public
Classic FM Techiman, Ghana	100	120	120	100	100	N/A	Commercial
Radio Banjo 103.9 Kayes, Mali	89	67	67	56	45	N/A	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	43	52	43	N/A	N/A	N/A	Community
Dzimwe Radio Monkey Bay, Malawi	20	107	107	107	107	N/A	Community
Average	104	125	110	110	140	300	

Table 12 shows the responses regarding various production costs for stations. Only a few stations submitted sufficient information to make an assessment about the costs of rural production. The highest cost for a single program identified in the survey was for “village debate” programs, at \$300. In fact, this type of program was identified only by MEGA FM, and

overlooked by other radio stations.¹⁵ Such a program would involve several staff going to the field together and asking the permission of village leaders to assemble the community from their daily agricultural activities. This would take time on the part of the field staff, and would likely require more than one person to organize the field visit and travel to the field.

The type of programming that ranked the highest in terms of cost across all stations was the “radio talk show” that involved a local expert. This type of program can be expensive because it often involves compensating the expert for travel and for his or her time to come to the station to dialogue with the reporter. For the reporter, it takes time to become familiar with the material before an interview. Every station that responded in this section stated that they operated this type of program.

Programs with a single reporter in the field ranked as less costly, followed by phone-in programs. It is unclear whether the value of the phone-in equipment would be counted as part of the cost of production.¹⁶

The field production costs for stations did not correspond to a radio station’s size. Smaller community stations reported field expenses that were much larger in relation to their total operating costs than commercial stations. This is true of both Dzimwe Radio and Radio Banjo, which ranked at the bottom of the list in terms of their turnover for start-up and operating expenses. This suggests, based on a small sampling from this survey, that community stations tend to spend more resources on field reporting than other stations, regardless of the overall operating expenses.

vii. Important Revenue Streams for Radio Stations

Tabulation of the results from the tests on a Likert scale was accomplished by dividing the responses into “high” and “low” categories. All responses that were marked “important” (4) or “very important” (5) were clustered into the “high” category, while all responses marked “very unimportant” (1) or “unimportant” (2) were grouped into the “low” category. “High” and “low” categories were chosen because non-normal, right-skewed data did not allow for comparison of the mean responses.

UBC and Volta Star consistently ranked nearly all types of funding as unimportant, or “low,” which reinforces the data in Table 7 that relate to how the public stations (UBC and Volta Star) do not rely on major grants or fundraising at all because their funding came directly from government allocations.

The two least-important funding sources for all radio stations were either “funds coming from a cooperative” or “pooled funds from other radio stations”. The data is grouped by funding source, and these sources were least often ranked as “important” or “very important”—a statistically significant difference at the 0.5% confidence level for the comparison of ‘funds coming from a cooperative’ and all other data (Table 10).

Mali is the only country where funding from cooperatives or pooled funds among radio stations is common. However, none of the stations that ranked these funding sources as important were Malian. This implies that, among all of the funding sources, funding that came directly from cooperatives or agricultural associations was neither significant nor preferred.

¹⁵ Because there was no specific category for this information in the survey, it is possible that other stations would place a similarly high value on this type of programming.

¹⁶ It is notable that radio phone-in equipment was not listed among the start-up costs of equipment for a radio station in section 5 of the analysis here. A Gentner machine that transfers a phone signal to a patch cord for radio broadcast may run in the neighbourhood of \$500–1,000 depending on quality, so this is not a small investment.

The most important categories of funding for all respondents were “loans and grants for radio station start-up” and “airtime sales,” - 11 out of 15 respondents indicated that these were preferred funding sources. Meanwhile, “fundraising” was ranked in the middle, with 7 out of 15 respondents indicating that it was important. While this is not descriptive of the type of funding that stations actually receive, it appears to be a good indicator of the type of funding that appeals to most stations.

Table 14: Importance of funding source as ranked on a 5-point scale
1 = (very unimportant) and 5 = (very important)

Funding Source	Start-up Grant or Loan	Other Grant or Loan	Air-time	Program Sponsor-ship	Ad in News-paper	Co-op	Partner Station	Fund-raising
Radio Tanzania Dar es Salaam	5	5	5	5	5	5	5	5
UBC Kampala, Uganda	1	1	1	1	1	3	3	3
CBS 88.8, 89.2 FM Kampala, Uganda	4	4	5	5	5	3	3	2
Mega FM 102.1 and 103.1 Gulu, Uganda	5	1	4	4	4	1	1	1
Classic FM Techiman, Ghana	4	5	5	5	5	5	5	3
Radio Habari Maalum Arusha, Tanzania	5	5	5	5	5	3	5	5
Radio Banjo 103.9 Kayes, Mali	5	1	4	2	4	4	1	5
Sibuka FM Shinyanga, Tanzania	5	5	5	5	5	5	5	5
Radio Apac 92.9 Apac Town, Uganda	5	5	5	5	5	1	3	4
Radio Jigiya Zegoua Sikasso, Mali	1	2	2	2	2	3	1	3
Simli Radio Dalun / Tamale, Ghana	5	5	4	5	3	5	4	5
Radio Fanaka Fana Fana, Koulikoro, Mali	5	4	2	2	3	3	1	3
Dzimwe 93.1 Monkey Bay, Malawi	2	5	4	5	4	2	3	4

viii. Funding Sources and the Revenues from each Source

Few stations disclosed how much revenue they earned, resulting in missing values and a disconnect between each station's stated income and expenses. This may have resulted from the survey design, or the sensitive nature of revenue data.

National government funding for public stations may cover as much as 100 per cent of the station's expenses. Interviews with station managers at rural broadcasting stations or rural development departments at national broadcasting corporations indicated that few knew the source of government funding, since funding decisions were made in a different department. A second round of interviews would be required to find out exactly how much funding comes from the national government and under which program it originates (Figure 3.0).

Table 14: Value of Annual Revenues by Funding Source for Selected Stations (USD)

Funding Source	NGO/IGO Grant or Loan	Direct Government Funding	Private Capital	Music Request	PSA (Public Service Ads)	Ads	Fund - raising	Subscrip - tion fees
UBC Uganda Broadcasting	4,158,315	148,511			4,752	4,158		
Mega FM	1,782,135				59,405			
Classic FM					6,796	4,325		
Habari Maalum				288				90
Sibuka FM	45,000		45,000	360	6,210	3,240	180	243
Simli Radio	12,480							
Dzimwe FM	4,596				17	7	107	37

Among stations that did report their revenues, there is variation in revenue amounts and sources. Table 14 shows that the largest sources of revenue by far were grants or loans given by international organizations (NGOs or IGOs). The second largest funding group was direct government funding; UBC was the only public station that responded to this part of the survey. It may be inferred that other public stations would follow suit and have something on the order of \$100,000 worth of funding coming in from their national governments. This question had a very poor response from smaller radio stations and community stations, but those that did respond had revenues that were derived more or less equally from public service announcements, advertising, fundraising and subscription fees.

ix. Revenues from Airtime Sales

Airtime sales are an important way to cover the costs of operations for all types of radio stations, even when additional funding sources exist. The first type of airtime sales data that may be

evaluated is the value of airtime for 30 minutes of programming. The two programs in question here are talk shows and special advertising, which tend to be higher-value programming since they are more labour-intensive to produce than music or entertainment programming.

As one might expect, the largest stations tended to experience steady demand for a limited supply of airtime—so the price of airtime was highest at those stations. Broadcasters with the highest operating budgets tended to have the highest value of airtime. The data in Table 15 show that airtime rates were higher at larger commercial and public stations, with Classic FM charging the most for airtime followed by Uganda Broadcasting Corporation, MEGA FM, and Simli Radio. Volta Star reportedly charged less than other public radio stations for airtime. This could be due to the fact that the station is regional, and demand for airtime lower, and prices need to reflect the demand. Since public stations such as Volta Star are supported by government funding, reliance on airtime sales is less. Radio Apac charged higher fees than most other rural community stations. Apac charged the same fees for airtime as did MEGA FM, a much larger station. This is unexpected given that MEGA FM had a much larger operating budget.

Table 15: Fees Charged by Radio Stations for 30 Minutes of Airtime

Name of Station	Fee for Talk Show (USD)	Fee for Advertising (USD)	Typological Description
Uganda Broadcasting Corporation Kampala, Uganda	356	594	Public
Volta Star Radio Ho, Ghana	60	60	Public
CBS 88.8, 89.2 FM Kampala, Uganda	446	446	Commercial
Mega FM 102.1 and 103.1 Gulu, Uganda	178	100	Commercial / Public
Classic FM Techiman, Ghana	120	150	Commercial
Radio Banjo 103.9 Kayes, Mali	67	5	Commercial
Radio Apac 92.9 FM Apac Town, Uganda	178	61	Community / Commercial
Simli Radio Dalun / Tamale, Ghana	228	231	Community
Dzimwe Radio Monkey Bay, Malawi	57	36	Community

For the stations listed in Table 14, it did not appear that there was a major difference in the fee for a 30-minute space used for a talk show versus a 30-minute space used for advertising, except that public stations typically had higher fees for advertising while commercial and community stations tended to have higher fees for talk shows.?

The cost of spot advertisements showed a similar pattern to the data on the cost of 30-minute programs. The other important observation is that weekend time was usually sold at a higher price, which would be indicative of a higher demand (see tables 16 and 17). Again, the usual trend is observable with Radio CBS having the highest fee for airtime, followed by the

public stations and the smaller commercial and community stations. Dzimwe and Radio Banjo reported the lowest fees for airtime.

Table 16: Fees Charged by Radio Stations for 30-Second Spot Advertisements

Name of Station	Morning	Mid-day	Afternoon	Evening	Typological Description
	Weekday Weekend (USD)	Weekday Weekend (USD)	Weekday Weekend (USD)	Weekday Weekend (USD)	
Malawi Broadcasting Corporation Lilongwe, Malawi	36	36	21	36	Public
	36	36	21	36	
Uganda Broadcasting Corporation Kampala, Uganda	18	18	18	18	Public
	30	30	30	30	
Volta Star Radio Ho, Ghana	30	30	30	30	Public
	N/A	N/A	N/A	N/A	
CBS 88.8, 89.2 FM Kampala, Uganda	42	21	24	42	Commercial
	42	21	24	42	
Mega FM 102.1 and 103.1 Gulu, Uganda	12	11	9	12	Commercial / Public
	12	11	9	12	
Classic FM Techiman, Ghana	10	10	6	10	Commercial
	10	10	10	6	
Radio Banjo 103.9 Kayes, Mali	2	2	2	2	Commercial
	3	3	3	3	
Radio Apac 92.9 FM Apac Town, Uganda	9	6	9	5	Community / Commercial
	9	6	9	5	
Simli Radio Dalun / Tamale, Ghana	10	10	10	10	Community
	30	30	30	30	
Dzimwe Radio Monkey Bay, Malawi	3	3	4	4	Community
	3	3	3	3	

Most stations, with the exception of Volta Star Radio, offered a sliding scale, charging lower rates to a community associations or organizations for airtime. The lower rate could apply to an interest group with a message related to health and agriculture, or to an emergency broadcast message (for which the radio station would not charge any fee). This is indicative of

radio's value in Africa as a substitute for television and telephone technologies for relaying emergency broadcast messages.

x. Preferred Funding Sources

Respondents were asked about the revenue sources that they hope to integrate into their future budgets. Since this was an open-ended question, the responses are copied here as accurately as possible to represent each station's dream of new or existing funding sources (see Table 18). Responses varied, but in general, commercial stations focused on airtime sales, public radio focused on a series of funders, and community radio focused on the interface between radio messages and local businesses.

Table 18: Preferred Sources of Income for Radio Stations in the Future

Name of Station	Response	Typological Description
Uganda Broadcasting Corporation Kampala, Uganda	Program and airtime sales Government intervention & donations to support public service Partnerships with international organizations	Public
CBS 88.8, 89.2 FM Kampala, Uganda	Sale of radio spots (airtime), customized programs and PSAs Revenue sharing partnerships with telecom networks Internet advertising revenue	Commercial
Mega FM 102.1 and 103.1 Gulu, Uganda	Income based on airtime sales and sponsored advertising	Commercial / Public
Classic FM Techiman, Ghana	Grants from NGOs or government agencies	Commercial
Radio Banjo 103.9 Kayes, Mali	International partners: Radio France International, Farm Radio International	Commercial
Sibuka FM Nyalikungu, Shinyanga, Tanzania	A converged approach to incorporate direct communication (phone-ins) with listeners through in-house, GSM or CDMA technologies, thus improving revenues by lowering network terminal charges	Community
Radio Jigiya Zegoua Sikasso, Mali	International partners: Radio France International, Farm Radio International	Community
Radio Fanaka Fana Fana, Koulikoro, Mali	International partners: Radio France International, Farm Radio International	Cooperative (Associative)
Dzimwe Radio Monkey Bay, Malawi	Use available surplus money wisely by investing in local businesses, e.g. houses for rent, maize mill, video camera, the music production studio, etc. Returns from the businesses will be reinvested in the radio station	Community

As noted earlier, public stations tended to prefer government intervention and partnerships with international organizations. Community stations, particularly those in Mali, desired funding from NGOs and international partnerships. The most open ended response came from Dzimwe Radio—a community radio station—where the manager proposed to use any income to reinvest in the station. This model of investing in local businesses or partnerships and developing an asset base for the radio station moves away from reliance on external resources and suggests a strategic direction towards a more sustainable operating model.

Sibuka FM proposed using Global System for Mobile communications (GSM) technologies along with Code Division Multiple Access (CDMA) (Muller, 2002) cell phone protocols for phone-in shows. This technology, which allows for multiple channels or signals to come into the radio simultaneously, is one of the properties of CDMA technology. The basic idea would be that a number of callers could phone in and be on the radio at the same time, similar to a conference call feature. This would require an in-house capability to patch these signals onto the radio for the system to function. Currently CDMA technology is not widely available to the African technology market.

CBS suggested Internet advertising as a potential source of funding. While Internet advertising would not be relevant to community radio stations because of the limited or even no access to Internet in some areas, it might be effective for CBS, as a large commercial station. Revenue-sharing partnerships with telecommunications networks, which presumably would include companies like Vodafone or NTN, was also suggested by CBS. This is already happening in some ???. This strategy could succeed if telecommunication companies donated equipment or service in exchange for advertising, but would be less appropriate for community radio stations, which often strive to encourage the advertising of local goods and services rather than support large corporations. While there are likely to be a number of challenges to the establishment of joint venture partnerships with telecommunications companies, it is an idea worth investigating for commercial stations like CBS. Radio Afia FM, situated in a suburb of Dakar, has already begun partnering with their network provider. For each incoming call, they receive a certain percentage of the charges. Afia FM staff say that their revenues can be as high as USD 1000/month (Van Den Boogerd, 2008).

Radio Maria in Tanzania uses an ‘auction’ format to solicit donations and membership fees from its listeners. On a specific day, donated items are auctioned off in a particular area in the community. The funds generated from the auction are then used to keep community offices afloat.

Sponsored events are also a way for radio stations to partner with telecommunications companies. For example, a banner for NTN or Vodafone could appear at a radio station’s fundraising party in exchange for a cash donation. Straight donations would likely be easier to handle than joint venture or revenue-sharing partnerships.

Summary of Survey Findings

The analysis provided descriptive statistics about each radio station, including the number of paid, part-time and full-time staff at the station and sources of funding for each station. It was found that public stations had more paid staff than any other type, while community stations made strong use of volunteers. The majority of funding for public stations came from national governments and external government partners, along with other large public broadcasting corporations in Western Europe. Commercial radio relied on private capital for start-up;

however, this was replaced by airtime sales once the station had established operations. Community radios, in comparison, were obligated to search for funds from diverse sources such as NGOs and governments, and there were few cases in which airtime became a sustaining source of revenue.

The analysis inventoried the equipment used by each radio station. Public radio stations tended to be better equipped than other types, with the capacity to run national broadcasts with a series of repeaters and large transmitters. However, several million dollars of depreciation in the value of equipment can be expected at public stations because of the scale on which they operate. For example, depreciation was a key issue identified by Radio Tanzania. Small community and commercial stations are cheaper to maintain, but their initial capital expenses and license fees can be daunting without the assistance of an external donor.

The study also outlined the monthly costs for a series of common communication technologies in use at each radio station. It was found that the simpler technologies, such as SMS and cell phones, could serve to better link reporters in the field and carry information and news stories back to the radio stations in a timely fashion. When a small community radio station can move beyond merely translating national news stories into the common language, and acquire the resources to support field reporting, this can greatly enhance the quality of programming.

Next, the analysis measured perceptions about each station's revenue sources. Respondents were asked to rank how important each funding source was to their station on a five-point scale from "very unimportant" to "very important." It was found that loans and grants from NGOs and international organizations were by far the preferred source of funding for all stations; however, airtime sales were a close second at commercial stations.

The report found that community radio stations had the lowest start-up costs, but also the tightest budgets, with the least amount of equipment purchased. It also found that none of the radio stations reported license fees among their start-up costs, listing them instead among their operating budgets since they were a recurring expense. It is perhaps noteworthy that radio stations also generally reported lower-than-expected depreciation. It is likely that more training in accounting techniques is necessary for rural radio managers to better understand how to plan ahead to replace depreciating equipment. However, in stations where the bulk of equipment comes from donations (as in the case of community radio stations), one must recognize the limitations experienced by the station owners in planning replacements, since their ability to do so depends greatly on their resources as well as on the relationships they have with donors.

Public stations overall had the largest operating costs, while many commercial stations had high budgets when compared to community stations. Further, while community stations like Radio Apac reported high equipment investments in the start-up phase, they incurred fewer operating and staff expenses. Instead, they incurred higher expenses related to rural production (or production that involved participation from rural communities). This suggests that, while short agricultural messages and programs may air on commercial stations, community radio stations are set apart by their greater focus on agricultural and development programming involving farmers.

The analysis linked funding sources to the budget allocations of each radio station, and found that international donors tended to cover a greater portion of start-up expenses, while other revenue sources, such as airtime sales, advertising and fundraising, tended to cover operating expenses at most stations. The analysis also broke down airtime sales and the various fees charged by stations. It was found that weekend time sometimes had a higher price tag, likely due to the fact that there are more listeners on weekends than during the week. It was also found that

30-minute talk shows and advertisements had varying costs depending on the station, but that advertising was at a premium on public stations (if it existed at all), while talk shows were at a premium on community stations.

Next, the analysis focused on rural production costs for programming with varying levels of participation. This was to compare field costs associated with, for example, a phone-in show to those associated with a show with radio listening groups, or production involving communities directly. It was found that radio listening groups were on the wane as a venue for radio participation, as more radio stations are being established in remote areas (Ilboudo, 2003). “Rural village debate” was the most expensive type of program to produce, as it involved a greater degree of participation from more field staff in communities, and would take more time to produce. Radio talk shows involving local experts were the next most expensive to produce because of the level of investigation and preparation necessary prior to the interview, and also possibly because of accommodation and food expenses for the expert visitor(s). The most significant finding in this section, however, was that community radio stations had a larger portion of total expenses devoted to rural production than commercial stations, which indicates that community radio stations are specialized to deliver messages of interest to community development.

The survey found that most public and community radio stations preferred international donors as their primary source of funds, but that commercial stations also had a strong preference for airtime sales, because such sales provided them with a stable and predictable source of revenue.

V. CONCLUSION

Generally speaking, the economics of rural broadcast radio in Africa is a topic that has not received much academic attention. Few researchers have investigated the costs and benefits of radio in developing countries, or the funding mechanisms for radio operations under public, private and community radio models. Yet radio plays the most significant role of any communication technology in the transfer of information in African countries, since spoken word on broadcast radio is the principal means of information transfer where literacy rates are low (CTA, 2006). In fact, according to International Telecommunications Union data, of all communication technologies, radio has enjoyed the highest density (or usage rate) throughout sub-Saharan Africa historically.

The purpose of this study, then, was to address this information gap by surveying the costs and revenues of a sample of radio stations from many different countries, using a comparative approach that would identify the stations as public, commercial or community stations. To accomplish this, the study had three main objectives: to identify the costs incurred at radio stations; to identify and analyze the revenue streams available to radio stations; and to understand the basic technological, human and financial investments needed to sustain radio stations according to their size and typology (public, private and commercial).

To glean this information, the study relied on in-depth interviews followed by surveys. The stations selected for involvement represented countries in Western, Eastern and Southern Africa, including both Francophone and Anglophone countries. Within this subset, stations were

selected according to a desired representation of one public, one commercial and one community station per country.¹⁷

The analysis provided descriptive statistics about each radio station, inventoried the equipment used by each radio station, and outlined the monthly costs for a series of common communication technologies in use at each radio station. It measured perceptions about each station's revenue sources, looked at start-up and operating costs, and linked funding sources to the budget allocations of each radio station. The analysis also focused on rural production costs for programming with varying levels of participation.

Overall, the analysis led to a series of conclusions about the economics of farm radio that may enhance the general understanding of where funding comes from, how it is spent, and what is needed. The major findings are:

For all stations, loans and grants from NGOs and international organizations are by far the preferred source of funding; at most, international donors tended to cover a greater portion of start-up expenses while other revenue sources, such as airtime sales, advertising and fundraising, tended to cover operating expenses. Radio stations of all types generally reported lower-than-expected depreciation; it is likely that more training in accounting techniques is necessary for rural radio managers to better understand how to plan ahead to replace depreciating equipment.

Public radio stations have the largest operating budgets and more paid staff than any other type of station. The majority of their funding is derived from national governments, external government partners and other large public broadcasting corporations in Western Europe. They tend to be better equipped than other types, with the capacity to run national broadcasts with a series of repeaters and large transmitters. However, because of the scale on which they operate, they are particularly susceptible to expensive depreciation in the value of their equipment.

Commercial radio stations tend to rely on private capital for start-up, replacing this source of funding with revenues from airtime sales once the station establishes operations. They make strong use of volunteers and are cheaper to maintain, although for smaller stations, initial capital expenses and license fees can be daunting in the absence of a donor. Like public stations, they have relatively high budgets when compared to community stations.

Community radio stations must seek funding from diverse sources, such as NGOs and governments; airtime is rarely a sustaining source of revenue. Community stations have the lowest start-up costs and the tightest budgets. Like commercial stations, they can be cheaper than public stations to maintain, but they may find their initial capital expenses and license fees difficult to fund without assistance.

While community radios report high equipment investments in the start-up phase, they incur fewer operating and staff expenses. Instead, their major expenses relate to rural production; compared to commercial stations, they devote a larger portion of their total expenses to rural production. This is a significant finding because it suggests that, while short agricultural messages and programs may air on commercial stations, community radio stations are set apart

¹ All stations were selected randomly from a sample of community stations in the AFRRRI program countries (see Table 4). This selection process was independent of the AFRRRI selection process. Of the 20 surveys sent out, 15 were completed satisfactorily, for a response rate of 75 per cent. It turned out that only two out of the 15 stations selected for the survey were different from those selected for participation in the AFRRRI program. The two non-beneficiary stations were Radio Apac in Northern Uganda and Radio Habari Maalum in Ngaramtoni village, close to Arusha, Tanzania. It was not intended that so many stations would overlap with those chosen for participation in AFRRRI, but this was inevitable because of the mandate to represent public, private and community stations in common study regions.

by their greater focus on agricultural and development programming involving farmers, and are specialized to deliver messages of interest to community development.

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VIII. ANNEXES

ANNEX A: Survey Instrument

Questionnaire # _____



Please send final copy of survey to:

Consultant's Address:
Christopher Yordy
1011 Kenning Place
Elmira, ON
N3B 2Z1
Canada
chris.yordy@gmail.com

Evaluating Costs and Revenues of Rural Radio

Consent Statement:

I am involved in a study on the costs and revenues of radio. I would like to invite you to participate in a survey that will take approximately one hour. You are free to choose whether or not to participate in this study, and non-participation will have no impact on you. If you choose to take part, you can also choose to withdraw at any time, and can refuse to answer any questions about which you are unhappy. All information you provide is confidential, and will not be divulged to anyone without your consent apart from Farm Radio International personnel.

A. BACKGROUND INFORMATION

1. Name of radio station:

2. What is your job title at the radio station? (✓ tick all that apply)

- Acting director or manager of a department
- Founder
- Accounts keeper
- Board member
- Other: (Please specify) _____

3. Is this a full-time occupation for you?

- Yes
- No

4. Present location: _____

5. Today's date: _____

6. Name of respondent (your name): _____

(This will not be made public without your authorization.)

7. How many volunteers does your radio station use? _____

8. How many paid staff are at your radio station? _____

9. Have you ever received training in any of the following? (✓ tick all that apply)

- Accounting
- Leadership / management
- Communications / media
- Any other training/workshop (specify): _____

10. Who provided you with this training?

Specify individual and / or organization: _____

Year of training _____

Where training session was held _____

11. Please describe the training:

12. What new information do you feel you gained from the training?

13. Please give an inventory of all major equipment used at your radio station:

a. _____

This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

b. _____

This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

c. _____

This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

d. _____

This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

e. _____
This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

f. _____
This item was

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

g. _____

- Purchased by station
- Rented by station
- Donated

If donated specify by whom
individual/group:

14. Do you make use of any of the following alternative tools in combination with radio:

- Internet (reporting and online research)
- SMS messages
- Cell phones
- Handheld (portable) radio
- Toll-free phone numbers
- Internet (for blogging or radio website)
- Any other technology, specify: _____

15. What is the monthly cost of using these technologies in your local currency?

- _____ Internet (reporting and online research)
- _____ SMS messages
- _____ Cell phones
- _____ Handheld radio
- _____ Toll-free phone numbers
- _____ Internet (for blogging or radio website)
- _____ Any other technology, specify: _____

B. PERCEPTIONS OF REVENUE STREAMS

16. How important are each of the following sources of revenue whenever applicable to your radio station? (✓ tick one for each row)

Revenues From:	1 Very Unimportant	2 Unimportant	3 Neither Important nor Unimportant	4 Important	5 Very Important
4. loans and grants for radio start-up;					
5. grants for radio operations;					
6. advertising revenues					
7. (also music requests and special announcements for births marriage etc.);					
8. airtime sales;					
9. program sponsorship;					
10. classified ads and announcements;					
11. Cooperative model (Initial share capital from cooperative membership)					
12. caisse populaire des radios rurales/					

pool of funds of rural radios;					
10. fundraising activities (e.g. produce auction or other special event);					
Other (specify):					

C. PERCEPTIONS ABOUT COSTS OF YOUR RADIO STATION

17. What are the start-up costs of your radio station?

	Quantity	Purchase Cost in Local Currency	Year Acquired
Antenna			
Transmitter			
Mixing board			
Microphones			
Computer			
Software			
Portable recorders			
Stereo equipment			
Other (specify below & continue on reverse)			

18. Who provided the bulk of the financing for these costs?

19. What is the approximate resale value of your equipment today?

	Quantity	Cost in Your Currency	Date Purchased	Age of Equipment (yrs)
Antenna				
Transmitter				
Mixing board				
Microphones				
Computer				
Software				
Portable recorders				
Stereo equipment				
Other (specify below & continue on reverse)				

1.				
2.				
3.				
4.				
5.				
6.				
7.				

20. What are the operating costs of your radio station for one month (most recent possible statement of account)?

Example of Operational Costs for 1 Month	Quantity	Cost in Your Currency		Date Incurred
		Year	Month	
Newspapers				
Stipend for staff				
Transportation				
Direct program production				
Consumables (cassettes, mini discs)				
Books and stationery				
Medical supplies				
Building				
Equipment purchased				
Equipment maintenance				
Music purchased				
VAT receipt books				
Furniture				
Taxi services				
Bicycle				
Social Security				
Miscellaneous expenses (visitors)				
VAT returns				
Bank charges				
Property rate				
Electricity				
Generator fuel				
Telephone				
Water and other utilities				
Fuel for vehicle				
Vehicle Maintenance				
Other (specify below & continue on reverse)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

13.			
14.			
15.			
16.			

21. Kindly provide information on the main types and sources of income for your station using the table below.

- a. What have been the income sources for your radio station in all the years of operation?
- b. Where have they been put to use (allocated)?

Income Source or Donor	Describe Type of Funding (i.e. One Time or Continuous)	Total Money Amount	Use of Funds (✓ tick all that apply)	Comments/ Observations
Grant or loan from a non-governmental organization (NGO)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio Operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Direct funding from your country government Specify department: MINAG etc. _____			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Grant or loan from an international government organization IGO (e.g., UNESCO or Commonwealth of Learning)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Private donor			<input type="checkbox"/> Radio start-up	

			(fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
--	--	--	---	--

Income Source or Donor	Describe Type of Funding (i.e. One Time or Continuous)	Total Money Amount	Use of Funds (✓ tick all that apply)	Comments/ Observations
Music requests			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Sponsored public messages (or charging governments or NGOs to run public messages)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Any other paid announcements (e.g. wedding and funerals)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Advertisements			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	

Other airtime sales (specify): _____			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
---	--	--	--	--

Income Source or Donor	Describe Type of Funding (i.e. One Time or Continuous)	Total Money Amount	Use of Funds (✓ tick all that apply)	Comments/ Observations
Partnerships with other radio stations (e.g. Deutsche Welle / BBC)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Cooperative model (e.g. as in Mali – initial share capital invested by members of coop)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Caisse populaire des radios (e.g., rural radio stations band together to pool funding)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
Fundraising activities and special events			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	

Subscriber fees (part of a radio fan club)			<input type="checkbox"/> Radio start-up (fixed costs) <input type="checkbox"/> Radio operations (variable costs) <input type="checkbox"/> Radio station debt servicing <input type="checkbox"/> Other (specify): _____	
--	--	--	--	--

22. How much do you charge for one hour of airtime (e.g., a one-hour program at the following times [please provide local currency amount in space provided]):

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Mid-day							
Afternoon							
Evening							

23. Among these charges for airtime, please indicate prices for special programs:

- Per annum sponsorship; specify price: _____
- Talk shows; specify price: _____
- Special product promotion; specify price: _____
- Announcements / notices; specify price: _____
- Other; specify price: _____

24. How much do you charge for a radio spot (30-second advertisement):

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Mid-day							
Afternoon							
Evening							

25. How much do you charge for a radio spot (60-second advertisement):

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Mid-day							
Afternoon							
Evening							

26. Are there reduced rates for any specific types of messages or shows (e.g., public service, agriculture or health)?

- Yes
 No

Specify:

ANNEX B: Start-Up Costs

Start-up Costs for Classic FM, Commercial Radio Station – Techiman, Ghana

	Quantity	Total Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	2	10,400.00	6,240.00	1999	4,160.00
Transmitter(s)	2	20,800.00	17,680.00	1999	3,120.00
Mixing Board(s)	2	6,240.00	5,200.00	1999	1,040.00
Microphones	20	1,664.00	1,352.00	1999	312.00
Computer(s)	7	10,920.00	9,880.00	2000	1,040.00
Software	3	332.80	124.80	2002	208.00
Portable Recorders	6	746.80	655.20	1999	93.60
Stereo Equipment	6	936.00	852.80	1999	83.20
Total		52,041.60	41,984.80		10,056.80

Start-up Costs for Simli Radio, Community Radio Station – Tamale, Ghana

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	4	22,880.00	20,800.00	2004	2,080.00
Transmitter(s)	1	37,440.00	35,880.00	2003	1,560.00
Mixing Board(s)	3	29,120.00	26,000.00	2003	3,120.00
Microphones	4	6,240.00	6,240.00	2003	0.00
Computer(s)	3	52,000.00	52,000.00	2005	0.00
Software	2	7,800.00	7,280.00	2005	520.00
Portable Recorders	6	31,200.00	31,200.00	2003	0.00
Stereo Equipment	1	15,600.00	14,560.00	2005	1,040.00
Total		202,280.00	193,960.00		8,320.00

Start-up Costs for MEGA FM, Commercial/Public Radio Station – Gulu, Uganda

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	1	6,500.00	6,500.00	2002	Not estimated
Transmitter(s)	2	35,642.70	35,642.70	2006	-
Mixing Board(s)	2	1,400.00	1,400.00	2002	-
Microphones	6	200.00	200.00	2002	-
Computer(s)	8	1,782.14	1,782.14	2004	-
Software	1	4,398.00	4,398.00	2007	-
Portable Recorders	8	200.00	200.00	2004	-
Stereo Equipment	4	4,000.00	4,000.00	2005	-
Total		54,122.84	54,122.84		-

Start-up Costs for Radio Apac, Commercial/Community Station – Apac, Uganda

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost less Book Value (Estimated Depreciation)
Antenna(s)	4	60,000.00	50,500.00	1999	9,500.00
Transmitter(s)	1	20,000.00	15,150.00	1999	4,850.00
Mixing Board(s)	1	1,000.00	180.00	1999	820.00
Microphones		-	-		-
Computer(s)	1	1,200.00	200.00	2002	1,000.00
Software		-	-		-
Portable Recorders	2	300.00	180.00	1999	120.00
Stereo Equipment	6	6,000.00	6,000.00	1999	-
Call Radio (CB)	1	4,000.00	4,000.00	2001	-
Vsat Internet Link	1	7,500.00	7,500.00	2004	-
Sat Phone	1	250.00	250.00	2005	-
Photocopiers	2	2,000.00	2,000.00	2003	-
Total		102,250.00	85,960.00		16,290.00

Start-up Costs for CBS FM, Commercial Radio Station – Kampala, Uganda

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	3	14,441.23	14,441.23	1998	Not estimated
Transmitter(s)	2	66,651.85	66,651.85	1996	-
Mixing Board(s)	1	8,331.48	8,331.48	2007	-
Microphones		-	-		-
Computer(s)	27	36,288.55	36,288.55	1996-	-
Software		-	-		-
Outdoor Equipment	Various	33,325.92	33,325.92	1998	-
Transceiver	1	55,543.21	55,543.21	1998	-
Console Mixer	1	8,331.48	8,331.48	2007	-
Transceiver	1	99,977.77	99,977.77	2000	-
UPS Power control	1	8,384.47	8,384.47	2005	-
Total		331,275.97	331,275.97		-

Start-up Costs for Uganda Broadcasting Corporation (UBC),
National Public Radio Station – Kampala, Uganda

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)		Not given	-		Not estimated
Transmitter(s)		Not given	-		-
Mixing Board(s)		Not given	-		-
Microphones	15	4,455.34	4,455.34	2006	-
Computer(s)	5	14,851.13	14,851.13	2007	-
Software		-	-		-
Portable Recorders	10	8,910.68	8,910.68	2007	-
Stereo Equipment		-	-		-
Total		28,217.14	28,217.14		-

Start-up Costs for Habari Maalum, Commercial Radio – Ngaramtoni, Tanzania

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)		8,000.00	8,000.00	pending	Not estimated
Transmitter(s)		1,000.00	1,000.00		-
Mixing Board(s)		13,000.00	13,000.00		-
Microphones		800.00	800.00		-
Computer(s)		1,500.00	1,500.00		-
Tower Installation		1,000.00	1,000.00		-
Phone Installation		300.00	300.00		-
Total		25,600.00	25,600.00		-

Start-up Costs for Sibuka FM, Community Radio Station – Nyalikungu, Tanzania

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	2	9,000.00	6,300.00	2004	2,700.00
Transmitter(s)	2	28,800.00	20,160.00	2004	8,640.00
Mixing Board(s)	2	2,700.00	1,890.00	2004	810.00
Microphones	8	360.00	252.00	2004	108.00
Computer(s)	5	6,750.00	4,725.00	2004	2,025.00
Software	10	1,800.00	1,260.00	2004	540.00
Portable Recorders	6	540.00	378.00	2004	162.00
Stereo Equipment	1	7,200.00	5,040.00	2004	2,160.00
Feeder Cable	350 m	31,500.00	20,160.00	2004	11,340.00
Audio Cable	500 m	4,500.00	3,150.00	2004	1,350.00
Other Connectors	20 pcs	1,350.00	945.00	2004	405.00
Tower	1	54,000.00	37,800.00	2004	1,6200.00
Air Conditioning	1	5,400.00	3,780.00	2004	1,620.00
Total		153,900.00	105,840.00		48,060.00

Start-up Costs for Radio Tanzania, Public Radio Station – Dar es Salaam, Tanzania

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s) Transmitter(s) Mixing Board(s) Microphones	Not specified	7,625,938.98	5,741,162.09	2006	1,884,776.89
Computer(s) Software	Not specified	539,796.34	99,568.75	2006	440,227.58
Total		8,165,735.84	5,840,730.84		2,325,004.47

Start-up Costs for Radio Banjo, Commercial Radio Station –Kayes, Mali

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	1	715.09	429.06	2006	286.04
Transmitter(s)	1	2,905.07	1,743.04	2006	1,162.03
Mixing Board(s)	3	987.72	469.28	2006	518.44
Microphones	10	536.32	402.24	2006	134.08
Computer(s)	2	1,117.34	600.00	2007	517.34
Software	4	223.47	223.47	2007	0.00
Portable Recorders	2	134.08	89.39	2007	44.69
Stereo Equipment		-	-		-
Studio Headphones	6	335.20	300.00	2006	35.20
Printers	2	335.20	300.00	2006	35.20
Scanner	1	134.08	134.08	2006	0.00
Total		7,423.57	4,690.55		2,733.02

Start-up Costs for Radio Fanaka Fana, Associative Radio Station, Koulikoro

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	1	3,352.01	2,681.60	2004	670.40
Transmitter(s)	1	6,257.08	4,469.34	2000	1,787.74
Mixing Board(s)	1	1,731.87	1,173.20	2000	558.67
Microphones	3	268.16	268.16	2000	0.00
Computer(s)	3	7,821.35	6,000.00	2004	1,821.35
Software	2	558.67	558.67	2004	0.00
Portable Recorders	3	1,787.74	893.87	2000	893.87
Stereo Equipment					0.00
Amplifier	1	7,821.35	7,000.00	2000	821.34
Total		29,598.20	23,044.84		6,553.36

Start-up Costs for Radio Jigiya, Community Radio Station – Zegoua Sikasso, Mali

	Quantity	Purchase Cost (USD)	Book Value (USD)	Date Purchased	Purchase Cost Less Book Value (Estimated Depreciation)
Antenna(s)	1	2,681.60	2,681.60	2004	0.00
Transmitter(s)	2	6,704.01	6,257.08	2000	446.93
Mixing Board(s)	2	1,787.74	1,731.87	2000	55.87
Microphones	7	268.16	268.16	2000	0.00
Computer(s)					-
Software					-
Portable Recorders	5	893.87	893.87	2000	0.00
Stereo Equipment					-
Total		12,335.38	11,832.58		502.80

ANNEX C: Operating Costs

Operating Costs for Classic FM, Commercial Radio Station – Techiman, Ghana

	GHS New Cedis/Year	USD \$/Year
Newspapers	1,440.00	1,497.60
Salaries / Allowances	42,000.00	43,680.00
Transportation	24.00	24.96
Direct Program Production	4,200.00	4,368.00
Consumables for Staff	1,176.00	1,223.04
Books and Stationery	1,512.00	1,572.48
Medical Supplies	1,200.00	1,248.00
Building	600.00	624.00
Equipment Purchased	20,000.00	20,800.00
Equipment Maintenance	7,200.00	7,488.00
Music Purchased	1,200.00	1,248.00
Value Added Tax (VAT) Receipt Books	9,000.00	9,360.00
Office Furniture	500.00	520.00
Taxi Services	480.00	499.20
Bicycles Purchased	170.00	176.80
Staff Social Security	204.00	212.16
Visitor Hosting Expenses	228.00	237.12
VAT Returns	9,000.00	9,360.00
Bank Charges	1,920.00	1,996.80
Property Rate / Insurance	1,800.00	1,872.00
Electricity	1,440.00	1,497.60
Generator Fuel	564.00	586.56
Telephone / Internet / Post	1,800.00	1,872.00
Water and All Other Utilities	1,044.00	1,085.76
Fuel for Vehicle	4,200.00	4,368.00
Vehicle Maintenance	3,300.00	3,432.00

Accident	1,332.00	1,385.28
Total	117,534.00	122,235.36

New Ghana Cedis (GHS or GH¢) were exchanged at the rate of 1.04 GHS per U.S. dollar.

Operating Costs for Simli Radio, Community Radio Station – Tamale, Ghana

	GHS New Cedis/Year	USD \$/Year
Newspapers	1,200.00	1,248.00
Salaries / Allowances	25,200.00	26,208.00
Transportation	5,500.00	5,720.00
Direct Program Production	10,200.00	10,608.00
Consumables for Staff	7,500.00	7,800.00
Books and Stationery	12,000.00	12,480.00
Medical Supplies	42,000.00	43,680.00
Building	20,000.00	20,800.00
Equipment Purchased	120,000.00	124,800.00
Equipment Maintenance	1,500.00	1,560.00
Music Purchased	750.00	780.00
Value Added Tax (VAT) Receipt Books	600.00	624.00
Office Furniture	15,000.00	15,600.00
Taxi Services	200.00	208.00
Bicycles Purchased	2,100.00	2,184.00
Staff Social Security	700.00	728.00
Visitor Hosting Expense	100.00	104.00
VAT Returns	50.00	52.00
Bank Charges	1,200.00	1,248.00
Property Rate / Insurance	600.00	624.00
Electricity	1,200.00	1,248.00
Generator Fuel	2,400.00	2,496.00
Telephone / Internet / Post	1,200.00	1,248.00
Water and All Other Utilities	720.00	748.80
Fuel for Vehicle	1,200.00	1,248.00
Vehicle Maintenance	1,800.00	1,872.00
Total	274,920.00	285,916.80

New Ghana Cedis (GHS or GH¢) were exchanged at the rate of 1.04 GHS per U.S. dollar.

Operating Costs for Volta Star Radio, Public Radio Affiliate – Ho, Ghana

	GHS New Cedis/Year	USD \$/Year
Newspapers	163.00	169.52
Salaries / Allowances	975.85	1,014.88
Transportation	179.60	186.78
Direct Program Production	0.00	0.00
Consumables For Staff	103.60	107.74
Books And Stationery	99.00	102.96
Medical Supplies	106.50	110.76
Building	11,293.00	11,744.72
Equipment Purchased		
Equipment Maintenance	351.50	365.56
Music Purchased		
Value Added Tax (VAT) Receipt Books		
Office Furniture		
Taxi Services		
Bicycles Purchased		
Staff Social Security	169.80	176.59
Visitor Hosting Expense	279.00	290.16
VAT Returns		
Bank Charges		
Property Rate / Insurance		
Electricity	1,620.00	1,684.80
Generator Fuel		
Telephone / Internet / Post	264.00	274.56
Water And All Other Utilities		
Fuel For Vehicle	700.00	728.00
Vehicle Maintenance	1,265.00	1,315.60
Guest Artist Expense	98.00	101.92
Sports Program Expense	315.00	327.60

Commission	490.00	509.60
Hotel Accommodations	1,075.00	1,118.00
Total	19,547.85	20,329.76

New Ghana Cedis (GHS or GH¢) were exchanged at the rate of 1.04 GHS per U.S. dollar.

Operating Costs for MEGA FM, Commercial/Public Radio Station – Gulu, Uganda

	UGX Shillings/Year	USD \$/Year
Newspapers	2,592,000.00	1,539.76
Salaries / Allowances	30,000,000.00	17,821.35
Transportation	36,000,000.00	21,385.62
Direct Program Production	12,000,000.00	7,128.54
Consumables For Staff	3,600,000.00	2,138.56
Books And Stationery	14,000,000.00	8,316.63
Medical Supplies	0.00	0.00
Building	10,000,000.00	5,940.45
Equipment Purchased	0.00	0.00
Equipment Maintenance	24,000,000.00	14,257.08
Music Purchased	2,400,000.00	1,425.71
Value Added Tax (VAT) Receipt Books	1,200,000.00	712.85
Office Furniture	6,000,000.00	3,564.27
Taxi Services	7,000,000.00	4,158.32
Bicycles Purchased	1,000,000.00	594.05
Staff Social Security	-	-
Visitor Hosting Expense	2,400,000.00	1,425.71
VAT Returns	-	-
Bank Charges	1,500,000.00	891.07
Property Rate / Insurance	3,000,000.00	1,782.14
Electricity	24,000,000.00	14,257.08
Generator Fuel	48,000,000.00	28,514.16
Telephone / Internet / Post	80,000,000.00	47,523.60
Water And All Other Utilities	1,600,000.00	950.47
Fuel For Vehicle	20,000,000.00	11,880.90
Vehicle Maintenance	5,000,000.00	2,970.23
Total	335,292,000.00	199,178.54

Ugandan Shillings (UGX) were exchanged at the rate of 0.000594 UGX per U.S. dollar.

Operating Costs for Apac, Commercial/Community Station – Apac Town, Uganda

	UGX Shillings/Year	USD \$/Year
Newspapers		
Salaries / Allowances	5,155,500.00	3,062.60
Transportation	567,893.00	337.35
Direct Program Production	150,000.00	89.11
Consumables For Staff		
Books And Stationery	280,000.00	166.33
Medical Supplies		
Building	1,650,000.00	980.17
Equipment Purchased	2,800,000.00	1,663.33
Equipment Maintenance		
Music Purchased		
Value Added Tax (VAT) Receipt Books		
Office Furniture		
Taxi Services		
Bicycles Purchased		
Staff Social Security	400,000.00	237.62
Visitor Hosting Expense	1,100,000.00	653.45
VAT Returns		
Bank Charges	200,000.00	118.81
Property Rate / Insurance	318,562.00	189.24
Electricity	669,672.00	397.82
Generator Fuel		
Telephone / Internet / Post	1,345,678.00	799.39
Water And All Other Utilities		
Fuel For Vehicle	12,240,000.00	7,271.11
Vehicle Maintenance	2,986,341.00	1,774.02
Total	29,863,648.00	17,740.35

Ugandan Shillings (UGX) were exchanged at the rate of 0.000594 UGX per U.S. dollar.

Operating Costs for CBS, Commercial Radio Station – Kampala, Uganda

	UGX Shillings/Year	USD \$/Year
Newspapers	1,918,400.00	1,139.62
Salaries / Allowances	609,000,000.00	361,773.41
Transportation	18,600,000.00	11,049.24
Direct Program Production	113,777,000.00	67,588.66
Consumables For Staff	4,300,000.00	2,554.39
Books And Stationery	12,300,000.00	7,306.75
Medical Supplies		
Building		
Equipment Purchased		
Equipment Maintenance	4,200,000.00	2,494.99
Music Purchased	5,900,000.00	3,504.87
Value Added Tax (VAT) Receipt Books		
Office Furniture	126,600,000.00	75,206.10
Taxi Services		
Bicycles Purchased		
Staff Social Security	39,680,000.00	23,571.71
Visitor Hosting Expense		
VAT Returns	300,000,000.00	178,213.50
Bank Charges	5,000,000.00	2,970.23
Property Rate / Insurance		
Electricity	60,500,000.00	35,939.72
Generator Fuel	160,000,000.00	95,047.20
Telephone / Internet / Post	40,550,000.00	24,088.52
Water And All Other Utilities	5,000,000.00	2,970.23
Fuel For Vehicle	45,300,000.00	26,910.24
Vehicle Maintenance	14,200,000.00	8,435.44
Total	1,566,825,400.00	930,764.79

Ugandan Shillings (UGX) were exchanged at the rate of 0.000594 UGX per U.S. dollar.

Operating Costs for Uganda Broadcasting Corporation (UBC), National Public Radio Station – Kampala, Uganda

	UGX Shillings/Year	USD \$/Year
Newspapers	2,400,000.00	1,425.71
Salaries / Allowances	192,000,000.00	114,056.64
Transportation	14,400,000.00	8,554.25
Direct Program Production		
Consumables For Staff	1,500,000.00	891.07
Books And Stationery	24,000,000.00	14,257.08
Medical Supplies	2,400,000.00	1,425.71
Building		
Equipment Purchased	80,000,000.00	47,523.60
Equipment Maintenance	66,000,000.00	39,206.97
Music Purchased	12,000,000.00	7,128.54
Value Added Tax (VAT) Receipt Books		
Office Furniture	300,000,000.00	178,213.50
Taxi Services		
Bicycles Purchased		
Staff Social Security		
Visitor Hosting Expense		
VAT Returns		
Bank Charges		
Property Rate / Insurance		
Electricity		
Generator Fuel		
Telephone / Internet / Post		
Water And All Other Utilities		
Fuel For Vehicle		
Vehicle Maintenance		
Total	694,700,000.00	412,683.06

Ugandan Shillings (UGX) were exchanged at the rate of 0.000594 UGX per U.S. dollar.

Operating Costs for Dzimwe, Community Radio Station – Monkey-Bay, Malawi

	MWK Kwacha/Year	USD \$/Year
Newspapers	43,200.00	307.83
Salaries / Allowances	456,000.00	3,249.37
Transportation	240,000.00	1,710.19
Direct Program Production	300,000.00	2,137.74
Consumables For Staff	216,000.00	1,539.17
Books And Stationery	102,360.00	729.40
Medical Supplies	120,000.00	855.10
Building	220,000.00	1,567.68
Equipment Purchased	240,000.00	1,710.19
Equipment Maintenance	240,000.00	1,710.19
Music Purchased	18,000.00	128.26
Value Added Tax (VAT) Receipt Books	18,000.00	128.26
Office Furniture	80,000.00	570.06
Taxi Services		
Bicycles Purchased	18,000.00	128.26
Staff Social Security	60,000.00	427.55
Visitor Hosting Expense	180,000.00	1,282.65
VAT Returns		
Bank Charges	24,000.00	171.02
Property Rate / Insurance	689,040.00	4,909.97
Electricity	67,200.00	478.85
Generator Fuel	288,000.00	2,052.23
Telephone / Internet / Post	275,616.00	1,963.99
Water And All Other Utilities	150,000.00	1,068.87
Fuel For Vehicle		
Vehicle Maintenance		
License Fee	336,000.00	2,394.27
Total	4,381,416.00	31,221.14

Malawian Kwacha (MWK) were exchanged at the rate of 0.007126 MWK per U.S. dollar.

Operating Costs for Habari Maalum, Commercial Radio Station – Ngaramtoni, Arusha, Tanzania

	TZS Shillings/Year	USD \$/Year
Newspapers		
Salaries / Allowances	3,840,000.00	3,456.00
Transportation	1,000,000.00	900.00
Direct Program Production	700,000.00	630.00
Consumables For Staff	1,920,000.00	1,728.00
Books And Stationery		
Medical Supplies		
Building		
Equipment Purchased		
Equipment Maintenance		
Music Purchased	300,000.00	270.00
Value Added Tax (VAT) Receipt Books		
Office Furniture		
Taxi Services		
Bicycles Purchased		
Staff Social Security		
Visitor Hosting Expense	600,000.00	540.00
VAT Returns		
Bank Charges		
Property Rate / Insurance	800,000.00	720.00
Electricity	1,752,000.00	1,577.00
Generator Fuel		
Telephone / Internet / Post	1,000,000.00	900.00
Water And All Other Utilities		
Fuel For Vehicle		
Vehicle Maintenance		
License Fee	2,222,000.00	2,000.00
Total	14,134,000.00	12 721.00

Tanzanian Shillings (TZS) were exchanged at the rate of 0.0009 TZS per U.S. dollar.

Operating Costs for Sibuka, Community Radio Station – Nyalikungu,
Shinyanga, Tanzania

	TZS Shillings/Year	USD \$/Year
Newspapers	150,000.00	135.00
Salaries / Allowances	3 000,000.00	2,700.00
Transportation	450,000.00	405.00
Direct Program Production	1,200,000.00	1,080.00
Consumables For Staff	400,000.00	360.00
Books And Stationery	120,000.00	108.00
Medical Supplies	100,000.00	90.00
Building	300,000.00	270.00
Equipment Purchased	200,000.00	180.00
Equipment Maintenance	200,000.00	180.00
Music Purchased	60,000.00	54.00
Value Added Tax (VAT) Receipt Books	10,000.00	9.00
Office Furniture	100,000.00	90.00
Taxi Services	150,000.00	135.00
Bicycles Purchased	110,000.00	99.00
Staff Social Security	300,000.00	270.00
Visitor Hosting Expense	100,000.00	90.00
VAT Returns	2,000,000.00	1,800.00
Bank Charges	100,000.00	90.00
Property Rate / Insurance	300,000.00	270.00
Electricity	300,000.00	270.00
Generator Fuel	500,000.00	450.00
Telephone / Internet / Post	150,000.00	135.00
Water And All Other Utilities	150,000.00	135.00
Fuel For Vehicle	450,000.00	405.00
Vehicle Maintenance	100,000.00	90.00
Landscaping	150,000.00	135.00

Awards And Competitions	200,000.00	180.00
Community / Social Service Events	100,000.00	90.00
Servicing The Mast / Tower	150,000.00	135.00
Total	11,600,000.00	10,440.00

Tanzanian Shillings (TZS) were exchanged at the rate of 0.0009 TZS per U.S. dollar.

Operating Costs for Radio Tanzania, Public Station – Dar es Salaam, Tanzania

	TZS Shillings/Year	USD \$/Year
Newspapers	1,544,192.00	1,389.77
Salaries / Allowances	182,553,091.00	164,297.78
Transportation	40,341,750.00	36,307.58
Direct Program Production	31,178,262.00	28,060.44
Consumables For Staff	3,291,862.00	2,962.68
Books And Stationery	1,706,005.00	1,535.40
Medical Supplies	3,277,320.00	2,949.59
Building	Valuation in progress	
Equipment Purchased	19,281,939.00	17,353.75
Equipment Maintenance	5,936,157.00	5,342.54
Music Purchased	Included in production	
Value Added Tax (VAT) Receipt Books	39,858,899.00	35,873.01
Office Furniture	4,596,671.00	4,137.00
Taxi Services	Included in transport	
Bicycles Purchased	0.00	0.00
Staff Social Security	15,767,500.00	14,190.75
Visitor Hosting Expense	1,983,931.00	1,785.54
VAT Returns	32,536,536.00	29,282.88
Bank Charges	1,799,583.00	1,619.62
Property Rate / Insurance	1,220,489.00	1,098.44

Electricity	68,191,322.00	61,372.19
Generator Fuel	Included with vehicle	
Telephone / Internet / Post	35,758,703.00	32,182.83
Water And All Other Utilities	1,117,103.00	1,005.39
Fuel For Vehicle	40,476,071.00	36,428.46
Vehicle Maintenance	14,650,325.00	13,185.29
Sports / Cultural Reporting Expenses	17,821,014.00	16,038.91
Leave Travel	3,765,682.00	3,389.11
Board Expenses	2,882,467.00	2,594.22
Office Cleaning	1,656,028.00	1,490.43
Fumigation	1,341,353.00	1,207.22
Clearing And Forwarding	1,839,933.00	1,655.94
Computer Accessories	3,513,703.00	3,162.33
Generator Service And Repair	2,620,070.00	2,358.06
Staff Training	6,939,733.00	6,245.76
Local Seminars	2,794,921.00	2,515.43
Foreign Seminars	3,595,045.00	3,235.54
Education	2,342,088.00	2,107.88
Office Food / Special Event	1,036,121.00	932.51
Conference	2,146,500.00	1,931.85
Total	601,362,369.00	541,226.13

Tanzanian Shillings (TZS) were exchanged at the rate of 0.0009 TZS per U.S. dollar.

Operating Costs for Banjo, Commercial Radio Station – Kayes, Mali

	XOF CFA/Year	USD \$/Year
Newspapers	10,000.00	22.35
Salaries / Allowances	210,000.00	469.28
Transportation	30,000.00	67.04
Direct Program Production	50,000.00	111.73
Consumables For Staff	20,000.00	44.69
Books And Stationery	10,000.00	22.35
Medical Supplies	20,000.00	44.69
Building	10,000.00	22.35
Equipment Purchased	20,000.00	44.69
Equipment Maintenance	60,000.00	134.08
Music Purchased	360,000.00	804.48
Value Added Tax (VAT) Receipt Books	25,000.00	55.87
Office Furniture	10,000.00	22.35
Bicycles Purchased		
Staff Social Security		
Visitor Hosting Expense	30,000.00	67.04
VAT Returns		
Bank Charges		
Property Rate / Insurance		
Electricity	35,000.00	78.21
Telephone / Internet / Post	40,000.00	89.39
Water And All Other Utilities	15,000.00	33.52
Total	925,000.00	2,067.07

CFA Francs were exchanged at the rate of 0.002235 XOF per U.S. dollar.

The West African CFA currency symbol XOF stands for Communauté financière d'Afrique / Financial Community of Africa. This is to be distinguished from the Central African CFA, which cannot be traded in West African countries, although it holds the same value.

Operating Costs for Fanaka Fana, Associative Radio Station – Koulikoro, Mali

	XOF CFA/Year	USD \$/Year
Newspapers	22,500.00	50.28
Salaries / Allowances	210,000.00	469.28
Transportation	80,000.00	178.77
Direct Program Production	114,500.00	255.87
Consumables For Staff	82,000.00	183.24
Books And Stationery	63,000.00	140.78
Medical Supplies	46,000.00	102.79
Building	25,000.00	55.87
Equipment Purchased		
Equipment Maintenance	61,000.00	136.31
Music Purchased	72,000.00	160.90
Value Added Tax (Vat) Receipt Books		
Office Furniture	48,500.00	108.38
Taxi Services		
Bicycles Purchased		
Staff Social Security	38,000.00	84.92
Visitor Hosting Expense	30,000.00	67.04
Vat Returns		
Bank Charges		
Property Rate / Insurance		
Electricity	41,500.00	92.74
Generator Fuel	10,000.00	22.35
Telephone / Internet / Post	66,000.00	147.49
Water And All Other Utilities	3,000.00	6.70
Fuel For Vehicle	32,500.00	72.63
Vehicle Maintenance	60,000.00	134.08
License Fee		
Total	1,105,500.00	2,470.43

CFA Francs were exchanged at the rate of 0.002235 XOF per U.S. dollar.

Operating Costs for Radio Jigiya, Community Station – Zegoua Sikasso, Mali

	XOF CFA/Year	USD \$/Year
Newspapers	22,500.00	50.28
Salaries / Allowances	210,000.00	469.28
Transportation	80,000.00	178.77
Direct Program Production	114,500.00	255.87
Consumables For Staff	82,000.00	183.24
Books And Stationery	63,000.00	140.78
Medical Supplies	46,000.00	102.79
Building	25,000.00	55.87
Equipment Purchased		
Equipment Maintenance	61,000.00	136.31
Music Purchased	72,000.00	160.90
Value Added Tax (VAT) Receipt Books		
Office Furniture	48,500.00	108.38
Taxi Services		
Bicycles Purchased		
Staff Social Security	38,000.00	84.92
Visitor Hosting Expense	30,000.00	67.04
VAT Returns		
Bank Charges		
Property Rate / Insurance		
Electricity	41,500.00	92.74
Generator Fuel	10,000.00	22.35
Telephone / Internet / Post	66,000.00	147.49
Water And All Other Utilities	3,000.00	6.70
Fuel For Vehicle	32,500.00	72.63
Vehicle Maintenance	60,000.00	134.08
License Fee		

Total	1,105,500.00	2,470.43
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CFA Francs were exchanged at the rate of 0.002235 XOF per U.S. dollar

ANNEX D: A Brief History of Community Radio in Africa (C.Yordy)

This information may augment the short literature review and offer some context for the discussion of the typology of radio stations in Africa. It is of utmost importance to note that the media environment in Africa is changing rapidly. The rise of community radio, a new addition to the traditional typologies, is a significant development. The birth of community radio in Africa has not been a homogenous change; indeed, it is necessary to consider this change in the context of the different sub-regions and broadcasting cultures across Africa.

Part of the reason for the differences in the definitions of radio typologies, and for the differences in media pluralism between Francophone and Anglophone countries, is that liberalization of the airwaves began at different times in different places. Community radio and media pluralism began much earlier in African countries where French was the official language. This is true of Burkina Faso, for example, where the first community stations were set up in 1987 along with the program *Entrez et Parlez* (“Come in and talk”), which was the first program to go on the air that was not under the control of the Ministry of Information (Myers, 1997: 96).

Unlike state radio stations, which have historically been very well funded, community stations have not received financial support from their own country governments (Sposato and Smith, 2005: 15; Balima and Frère, 2003: 89). Radio Voix des Lacs (Radio Voice of the Lakes), a community radio station in Burkina Faso that had its beginnings in 1987, was off the air most of the time in the early stages because of a lack of generator fuel. The local government service agency that was responsible for health, social services and agriculture was unable to provide the agreed-upon fuel because the agency did not have enough fuel to run its own vehicles (Myers, 1997: 104). Under-funding and the inability to provide consistent communication are problems that affect community radio stations more than they do public ones.

Although many community radio stations have been able to procure more equipment and financial support—and grow at a faster rate—in countries where English is the official language, they are more apt to face hindrances on the legal front, as well as steep licensing fees. This can inhibit the start-up phase of new radio stations. One example is Radio Simli, where equipment was confiscated and the station shut down because of an inability to pay the steep costs of licensing fees. License fees currently break down as follows: a US\$100 application fee, a US\$2,000 frequency fee, and a US\$800 annual fee (Kafewo, 2006: 63; Whaites, 2005: 62).

Furthermore, in English-speaking West Africa, the traditional and dominant state-owned or -controlled media were well known for their inadequacies in meeting the needs of marginalized sectors (Karikari, 2000: 51). Church and community were the only means of support until recently, when donor and NGO assistance flows to community stations began to increase substantially. This development has been largely free from the influence of governments, major donors and international development banks (Sposato and Smith, 2005: 15).¹⁸

¹⁸ This is with the one small exception of World Bank’s Civic Engagement, Empowerment and Respect for Diversity (CEERD) initiative, which has focused on legal services for the poor and on strengthening voice and accountability through community radio development and public interest broadcasting (World Bank, 2003). One of the major criticisms of the World Bank’s approach to information, knowledge and society, and ICT4D, in general, is that it has been heavily biased towards treating communications technology and information as primarily exogenous variables that will drive the development or democratization agenda. In this scenario, preference for private sector-led regimes, with heavy collaboration and support from national governments by way of subsidies and preferential

Regional progress towards establishing community radios may best be evaluated by examining a few countries in each subregion, using the five subregions classified under the United Nations Statistics Division. While it is not possible to paint a detailed picture of each subregion here, it is worth noting that existing literature affords a good overview of community radio in each subregion. UNESCO's Promoting Media in Africa, for example, offers a breakdown of community radio activities by subregion (Boafo, 2000). Of interest in Boafo's publication is the formation of regional categories for understanding radio. This includes not only classification by geography (i.e. Western Africa and Eastern Africa), but by language as well (i.e. Francophone West Africa and Anglophone West Africa), because there are significant generalizations that we can make about the state of community media liberalization in these areas (Karikari, 2000). In Southern Africa, which includes South Africa, Botswana, Namibia, Lesotho and Swaziland, the most progressive developments appear to be in South Africa, where "Soul City" radio has promoted health education through a mix of radio and TV drama as well as print¹⁹ (Adam and Harford, 2001).

Tanzania has also recently come on board with a number of community radio stations—but like much of Africa, it has a history of urban-based and urban-biased broadcasting. In order to address such concentration and measure the impact of information on rural populations, projects such as COMMEDIA have taken steps to bring together secondary agencies, such as the Tanzania School for Journalism, with rural radios for training purposes (Moshiro, 1991: 23; Sposato and Smith, 2005: 14).

Finally, some countries in West Africa—like Nigeria, The Gambia and Liberia—have had a notable absence of community radios, or at least have shown a much slower community media uptake to this day (Karikari, 2000: 48). Until now, only one community radio station has been erected in Nigeria, and it does not appear that more are on the horizon. Of the 28 new radio station licenses granted in Nigeria as of February 8, 2007 by the National Broadcasting Corporation (NBC), six were granted to educational institutions and the remaining 22 went to commercial organizations (Dada, 2007). In Nigeria there have also been several studies of the impact of radio on agriculture, but none have focused specifically on community radio (Yehaya and Badiru, 2002; Onemolease and Adisa, 2007). Thus, impact assessments and evaluations of the connections between radio and agricultural messages have been explored by Nigerian researchers in the absence of community radio.

grants, has been the norm. There is evidence that when the government is the largest actor in primary sector markets, conflicts of interest can arise if local entrepreneurs are more focused on protecting their subsidies than on creating new wealth or providing new services through truly enterprising media (Ogundimu, 1997: 10).

¹⁹ After Soul City was broadcast, just 6 per cent of non-listeners indicated that they always used condoms, while 31 per cent of listeners indicated that they did so.