CORRELATES OF SEVERITY OF FINANCING CHALLENGES EXPERIENCED BY THE CONCESSIONAIRE: THE CASE OF A RAILWAYS CONCESSION PROJECT IN KENYA

Charles M. Rambo & Stephen Okelo
University of Nairobi, **KENYA**

ABSTRACT

The Kenya-Uganda railway system was concessioned to Rift Valley Railways (RVR) in 2006, under the build-operate-transfer financing arrangement to improve performance and contribution to economic growth. However, nearly a decade later, RVR's performance failed to meet targets, due to financing challenges, according to performance review and media business reports. This study aimed at determining factors influencing severity of financing challenges experienced by concessionaire in order to inform and enable stakeholders to prioritize interventions aimed at improving financing and performance of the project. Primary data were sourced from 348 staff of key stakeholders. Quantitative data analysis methods included cross-tabulations with Chi square tests as well as Spearman's Rank Correlation Coefficient (r_s). Findings show that, relatively, operational costs had the strongest positive correlation ($r_s = 0.546$); followed by interest rates ($r_s = 0.516$); cash flow problems ($r_s = 0.478$) and concession fees ($r_s = 0.448$). On the opposite side, concessionaire's technical capacity had the weakest correlation ($r_s = 0.197$), followed by concession period ($r_s = 0.232$). The study suggests the need for: appropriate measures to manage operational costs and cash flow; joint review forums for stakeholders to identify and address performance issues. Besides, there is need to: reinforce inflation and interest rate control policies; exempt the concessionaire from certain taxes such as fuel levy; as well as tilt financing policies in favor of equity financing, among other measures.

Keywords: Correlates, Financing Challenges, Build-Operate-Transfer, Equity Financing, Debt Financing, Operational Costs, Cash Flows.

INTRODUCTION

Construction of the Kenya-Uganda Railway started in 1895 in Mombasa and reached Kisumu, on the eastern shore of Lake Victoria, in 1901. The second stretch of the railway in Uganda started in 1901 and ended in 1903. At the time of this study, the railway network in Kenya was 2,778 kilometers long: consisting of 1,083 kilometers of mainline, 346 kilometers of principle lines, 490 kilometers of branch lines and 859 kilometers of private lines. After independence in the early 1960s, railway and port operations in Kenya, Uganda and Tanzania were administered by one agency - East African Railways and Harbors Corporation. However, when the East African Community block collapsed in 1977, each country took up management responsibilities of its railway system. In this regard, Kenya Railways Corporation (KRC) was established in 1978 through an Act of Parliament (Cap 397) to manage and coordinate railway transport system, including inland waterway transport services on Lake Victoria (Ogonda, 1992; Nairobi Chronicle, 2008; IEA-Kenya, 2014; Ministry of Transport, Kenya, 2014).

The brief historical background suggests that railway transport has contributed significantly to Kenya's economy for more than a century, providing cargo and passenger services within and between major urban centres, as well as to the neighboring Uganda. This makes its the second most popular mode in Kenya for both cargo and passenger traffic, after road transport. More

particularly, the railway system handles about one-half the volume of cargo moved by road transport (Irandu, 2000). Productivity of railway transport peaked in 1983, when the system moved about 4.3 million metric tons of cargo. However, the volume of business started declining in mid 1980s, through to early 2000 due to various factors, including the aging rolling stock and equipment, market dynamics caused by liberalization, which increased the competitiveness of road transport, particularly in terms of efficiency; as well as termination of donor funding, which KRC enjoyed since its establishment (Irandu, 2000).

Due to these factors, the volume of cargo moved by the system declined rapidly from the record of 4.3 million metric tons in 1982/83 to a low of 1.6 million metric tons during the 1996/97 financial year. However, in 2005/06, the volume of cargo moved by the railway system rose marginally to 1.9 million metric tons, then to 2.1 million metric tons in 2006/07, an achievement that was attributed to new management strategies initiated by the Government (Irandu, 2000; IEA-Kenya, 2008; Mwiti, 2013). Concomitantly, the period between 1984 and 2005 saw a significant reduction in revenues year after year, against an increasing of liability portfolio. For instance, in 1995/96 financial year, KRC recorded a net loss of US $12.7 million, which rose to US $16.5 million in 1996/97, and to US $16.8 million in the 1997/98 financial year (Irandu, 2000). There is no doubt that this situation threatened the system's very existence. The resulting inefficiency pushed away more cargo transporters and passengers to use road transport, albeit at a relatively higher cost (IEA-Kenya, 2014).

In response to declining performance, the Governments of Kenya and Uganda jointly decided to concession railway transport services in 2003. The concession idea was particularly necessitated by financial and technical capacity constraints, required to reverse the performance of a railway system that had been going down for about two decades. Besides, the joint decision to concession the railway systems was prompted by recognition of historical links between Kenya Railways and Uganda Railways, mutual dependency, as well as potential benefits that the two countries would derive from the initiative (African Development Bank, 2011). Consequently, the two Governments entered into a concession agreement with Rift Valley Railways (RVR) consortium in November 2006, under a Build-Operate-Transfer (BOT) financing framework. The consortium consisted of Sheltam Rail Corporation of South Africa, with 35% of shares; TransCentury Investments of Kenya (20%), Prime Fuels Limited of Kenya (15%), Mirambo Holdings of Tanzania (10%), Centum Investments of Kenya (10%) as well as Babcock & Brown of Australia (10%) (African Development Bank, 2011).

The concession agreement obligated RVR (the concessionaire) to provide cargo services for a period of 25 years and passenger services in Kenya for five years (IEA-Kenya, 2014). Besides, the concessionaire was tasked to rehabilitate and maintain rail networks to enhance safety of trains, as well as improve the management, operation and financial performance. The agreement further mandated the concessionaire to upgrade and modernize locomotive fleet; rehabilitate the rolling stock, purchase new locomotives and wagons; renovate buildings, workshops and machinery as well as install new information technology systems. On their part, the Governments of Kenya and Uganda retained regulatory authority and ownership of the railway infrastructure and facilities (African Development Bank, 2011; Ministry of Transport, Kenya, 2014).

Regarding finances, the agreement obligated the concessionaire to pay the two governments for the use of conceded assets a one-off entry fee of US $3 million to the Government of Kenya and US $2 million to the Government of Uganda. The concessionaire also committed to pay an annual concession fee of 11.1% of gross cargo revenues to the two governments each. As

for passenger services, the concessionaire agreed to pay the Government of Kenya a fixed annual fee of US $1 million. In addition, the concessionaire was required to invest at least US $40 million in the development of infrastructural facilities and the rolling stock over the first five years of operation (African Development Bank, 2011; Ministry of Transport, Kenya, 2014).

The concession initiative brought regenerated optimism that railway transport would once again contribute significantly to national economic growth. However, nearly a decade into the concession agreement, regulators' periodical performance review reports and media business reports revealed that the concessionaire failed to achieve performance and investment targets as well as meet concessional obligations, due to what stakeholders perceived as financing challenges and inadequate technical capacity (KRC, 2012; IEA-Kenya, 2014; Mwiti, 2013). Again, data sourced by the 2013/14 National Economic Survey shows that both cargo and passenger volumes dropped further by 30.7% between 2007/08 and 2011/12 financial years; which suggests that the concessionaire failed to meet performance targets (Kenya National Bureau of Statistics, 2014).

More particularly, performance review report compiled by KRC in 2012 confirmed that cargo volumes dropped from 2.4 million metric tons in 2007/08 to 1.5 million metric tons in the 2011/12 financial years (KRC, 2012). The report also indicated that the number of functional wagons dropped from 3,200 at the concession's onset in 2007/08 to less than 1,000 in 2011/12 financial years. Similarly, passenger services registered poor performance, as the number of travelers fell by 30% from about 600,000 in 2007/08 to about 400,000 in 2011/12 financial years. This situation resulted to a further drop in revenue from cargo and passenger services; which in turn, affected sustenance of operations as well as level of investment in the development of infrastructural facilities, as required by the concession agreement (KRC, 2012; Mwiti, 2013; IEA-Kenya, 2014).

Even though performance review and media business reports linked the concessionaire's underperformance to financing challenges and inadequate technical capacity, none of the reports provided a detailed analysis of factors influencing the severity of financing challenges experienced by the concessionaire. Consequently, this study identified factors exacerbating financing challenges for the concessionaire from the perspectives of senior operational, managerial, technical, advisory as well as monitoring and evaluation (M&E) staff of key stakeholders. The study then applied Spearman's Rank Correlation Coefficient to determine the strength of correlation between severity of financing challenges and each factor. The purpose was to inform and enable stakeholders to prioritize interventions based on the strength of correlation between severity of financing challenges and each of the factors.

Public-Private Partnership Models: Understanding Build-Operate-Transfer Concessions

Public-Private Partnership (PPP) describes a contractual aggrement between a public sector authority and a private partner, in which the latter develops infrastructural facilities, delivers public services and assumes substantial financial, technical and operational risks to enhance efficiency (Asian Development Bank, 2010; Ministry of Transport, Kenya, 2014). The involvement of private sector operators in the provision of public services has been growing over the past two decades, particularly due to inherent benefits such as commercial skills, experience, financial resources and technology (Edwards, Rosensweig & Salt, 1993). Whereas, public partners include government entities, such as ministries, departments, municipalities, or

state-owned enterprises; private partners include local or international businesses with financial capacity and relevant technical expertise (Asian Development Bank, 2010).

Public authorities are motivated by various factors to engage in PPP initiatives, viz. inadequate capital to undertake heavy investments in infrastructural projects; low tariffs relative to operating costs leading to frequent subsidies and poor cost recovery. PPPs are also necesitated by inefficient use of available of resources in project delivery, operation and management; as well as lack of advanced technological innovation (Asian Development Bank, 2010; Ministry of Transport, Kenya, 2014). According to Philippe and Izaguirre (2006), governments prefer PPP initiatives because they promise better project design, choice of technology, construction, operation and service delivery; while Farlam (2005) notes that complementary advantages of the public and private sectors provide the basis and need for PPPs.

Existing literature reveal that PPP models range from the one where government retains full responsibility for operations, maintenance, capital, financing and commercial risk; to one in which the private partners bear much of the responsibility (World Bank, 1997). Based on this premise, PPP models include service contracts, management contracts, leases, concessions and divestitures. In concessions, governments define and grant specific rights to a private operator (concessionaire) to build and operate a facility in accordance with specified performance standards and deliver essential services, such as energy, transport, as well as water and sanitation, among others, for a fixed period (United Nations, 2011). Concessions often assume two sub-models, namely, Build-Operate-Transfer (BOT) or Build-Operate-Own (BOO) (Walker, 1993). Typical BOT concession periods range between 25 and 30 years, which provide sufficient time for concessionaires to recoup capital investments (Walker, 1993; United Nations, 2011). Under BOT agreements, concessionaires command a wide range of powers over the management, operation and financing of projects; while public authorities retain ownership of facilities and assume regulatory powers (World Bank, 1997).

Build-Operate-Transfer concessions are founded on contracts, which set out performance targets, including service coverage, quality, standards, arrangements for capital investment, mechanisms for adjusting tariffs, as well as arbitration over disputes, among other elements of regulation. Besides, BOT concession contracts make concessionaires responsible for full delivery of services, including construction, operation, maintenance, collection, management, as well as rehabilitation of project facilities. Quite important is that concessionaires assume full responsibility for all capital investments required to build, upgrade, or expand facilities, and for financing investments using own resources. In addition, concessionaires are responsible for working capital. In rare cases, do public authorities provide financing support to enable concessionaires fund their capital expenditures (World Bank, 1997; Asian Development Bank, 2010).

As part of regulation, public authorities establish performance benchmarks for concessionaires. At the end of the contract period, public authorities assume ownership of project facilities and can opt to either operate the facilities, renew concessionaire's contract, or award a new contract to a new concessionaire. Concessionaires collect tariffs directly from service users. BOT concession contracts often establish the level of tariffs, including provisions for adjustments in response to social, political or macro-economic changes (World Bank, 1997; Asian Development Bank, 2010). Payment can take place either way: concessionaires paying public authorities for concession rights or public authorities paying concessionaires for delivering services and meeting performance targets (Asian Development Bank, 2010).

Build-Operate-Transfer concessions permit a high level of private investments; with a high potential for efficiency gains in all phases of project development. In this regard, they provide incentives for concessionaires to achieve improved levels of efficiency, which translate into increased revenues (United Nations, 2011). More still, BOT concessions provide an effective way to attract private finance required to fund new project facilities or rehabilitate existing ones (Asian Development Bank, 2010). In addition, the transfer of operating and financing responsibilities enables concessionaires to prioritize and innovate, with a view to increasing revenues on investments (Farlam, 2005), while Philippe and Izaguirre (2006) observe that public authorities prefer BOT concessions over other PPP models because they promise better project design, choice of technology, construction, operation, and service delivery.

Despite the outstanding merits, BOT concessions may be complex to implement and administer, particularly in developing PPP markets, while negotiation and contractual processes often delay due to the cumbersome processes of predicting risks that may occur beyond 20 years. As part of prerequisites for adoption, BOT concessions require public authorities to upgrade their regulatory systems and tools in relation to performance monitoring. Public authorities also need capacity to balance between tariffs, demand, purchasing power, and revenues. Besides, due to long-term contractual periods, BOT concessions are vulnerable to political influence, particularly in developing countries (Farlam, 2005).

Build-Operate-Transfer concessions have been applied to deliver public services such as railway transport, electricity generation, water and sewerage management in various countries, including Australia, Malaysia, Mexico, Chile, New Zealand and South Africa (World Bank, 1997). In Kenya, a BOT concession agreement was initiated in 2006 to improve the management and efficiency of railway transport system. Nearly a decade later, performance review and media business reports revealed that the initiative had not achieved performance and investment targets due to financing and technical capacity challenges. This study identified and examined correlates of the severity of financing challenges.

DATA AND METHODOLOGY

The study applied the causal-comparative design, with both quantitative and qualitative methods, to guide the data sourcing, processing, analysis and interpretation. Target respondents included senior operational, managerial, technical, monitoring and evaluation, as well as advisory staff, affiliated to key stakeholders, including Kenya Railways Corporation (KRC), Rift Valley Railways (RVR), Ministry of Finance (MOF) and Ministry of Transport (MOT). Sampling frames for each group of respondents were prepared using staff inventories and the process identified 402 eligible respondents, who were all included in the sample to minimize the risk of sampling error.

Self-administered questionnaires were issued to eligible respondents. The tool provided flexibility, which enabled respondents to provide requisite data at their convenience. One module of the questionnaire was applied across board to permit comparison of perspectives from different stakeholders. The instrument, which had both closed-ended and open-ended questions, captured information on financial, macro-economic and concessional factors perceived to be influencing the severity of financing challenges experienced by the concessionaire.

Secondary data, which were sourced from project archives, supplemented primary data, which were collected in May 2015. Questionnaires were delivered to targeted respondents and follow-

ups were made through e-mails and telephone calls. Of the 402 targeted respondents, 348 (86.6%) successfully completed and returned the questionnaires. Table 1 shows the questionnaire return rates for each group.

Table 1: Questionnaire Return Rates

STAKEHOLDER	TARGETED	ACTUAL	RETURN RATES (%)
Kenya Railways Corporation	164	134	81.7
Rift Valley Railways	195	179	91.8
Ministry of Finance	27	23	85.2
Ministry of Transport	16	12	75.0
Total	**402**	**348**	**86.6**

Data processing involved listing, coding, digitalizing and cleaning for logical inconsistencies and misplaced codes. Quantitative data analysis methods included cross-tabulations with Chi square tests as well as Spearman's Rank Correlation Coefficient. The latter is a non-parametric measure of strength and direction of correlation between two variables measured at ordinal scales. It is denoted by the symbol r_s or the Greek letter ρ, pronounced 'rho'. The test can also be applied with continuous data that fails to meet assumptions of Pearson's Product-Moment Correlation (Wayne, 1990; Corder & Foreman, 2014). All quantitative analyses were performed using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. In addition, qualitative analysis involved organizing data under themes, followed by description and thematic analysis to identify emerging sub-themes and patterns.

RESULTS AND DISCUSSIONS

The results have been organized into three sub-sections, including respondents' background profile, correlates of financing challenges as well as ranking and prioritization. Focusing on the period 2007 when the concession project was initiated and 2014, participants were requested to indicate their perceptions, on a five-point Likert scale, regarding severity of financing challenges experienced by the concessionaire. The results show that of the 348 respondents, 35 (10.1%) indicated that financing challenges were 'very severe', while 123 (35.5%) described such challenges as 'severe'. Contrastingly, 53 (15.2%) respondents described the challenges as 'mild', while 10 (2.9%) indicated 'very mild'. These results were cross-tabulated with respondents' background profile and correlated with various underlying factors. Details are presented in the following sub-sections.

Respondents' background profile

The results in Table 2 show that of the 348 respondents, 134 (38.5%) were employees of Kenya Railways Corporation (KRC); 179 (51.4%) worked for Rift Valley Railways (RVR); 12 (3.4%) were officers of the Ministry of Finance (MOF); while 23 (6.6%) served at the Ministry of Transport (MOT). The results show that among those who felt that financing challenges experienced by the concessionaire were 'very severe', 27 (77.1%) worked for KRC, while 7 (20.0%) served at RVR. However, 5 (50.0%) of those who indicated that the financing challenges were 'very mild' were employees of RVR, while 3 (30.0%) worked for MOF. Based on this, the analysis obtained a significant relationship between severity of financing challenges experienced by the concessionaire and respondent's institutional affiliation ($\chi^2 = 71.216$, df = 12 & ρ-value = 0.000). The results suggest up to 99% chance that perceptions about severity

of financing challenges encountered by the concessionaire varied significantly across the four institutions.

The results in Table 2 further show that 109 (31.3%) respondents were based in operations departments, while 39 (11.2%) were in managerial departments. Those in technical departments were 174 (50.0%); 12 (3.4%) stated monitoring and evaluation (M&E) departments; while 14 (4.0%) served as policy advisory staff in the ministries. In relation to severity of financing challenges experienced by the concessionaire, among those who indicated that the challenges were 'very severe', 18 (51.4%) worked in technical departments, while 10 (28.6%) were based in operations department. Among those who indicated that the challenges were 'severe', up to 60 (48.8%) were in technical departments, while 41 (33.3%) were based in operations. Contrastingly, among those who felt that financing challenges were 'very mild', 4 (40.0%) were in technical departments, while 3 (30.0%) served in operations. Based on this, the analysis obtained a significant association between perceptions regarding severity of financing challenges experienced by the concessionaire and respondents departmental affiliation ($\chi^2 = 24.366$, df = 16 & ρ-value = 0.032). These results suggest up to 95% chance that perceptions regarding challenges experienced by the concessionaire varied across the departments.

Regarding length of professional experience, the results in Table 2 show that 138 (39.7%) respondents stated 10 to 19 years; 118 (33.9%) indicated 20 to 29 years, while 74 (21.3%) had served for less than 10 years. Among those who indicated that the concessionaire experienced 'very severe' financing challenges, 12 (34.3%) reported professional experiences of between 20 and 29 years, while another 12 (34.3%) stated experiences ranging from 10 to 19 years. Among the respondents who felt that financing challenges were 'very mild', 4 (40.0%) reported professional experiences of between 10 and 19 years, while 3 (30.0%) indicated experiences of less than 10 years. In addition, the group that described financing challenges as 'mild', included 24 (45.3%) respondents who had 10 to 19 years of professional experience, while 15 (28.3%) indicated experiences ranging from 20 to 29 years. The analysis revealed a significant association between perceptions regarding severity of financing challenges experienced by the concessionaire and respondents' length of professional experience ($\chi^2 = 14.856$, df = 12 & ρ-value = 0.063). The results show up to 90% chance that perceptions regarding severity of financing challenges varied significantly with the length of professional experience.

Table 2: Respondents' background attributes and severity of financing challenges

Attributes	Very severe		Severe		Moderate		Mild		Very Mild		Total	
	Freq	Pct	Freq	Pct	Freq	Pct	Freq	Pct	Freq	Pct	Freq	Pct
Institution												
KRC	27	77.1	59	48.0	32	25.2	15	28.3	1	10.0	134	38.5
RVR	7	20.0	60	48.8	78	61.4	29	54.7	5	50.0	179	51.4
MOF	0	0.0	2	1.6	6	4.7	1	1.9	3	30.0	12	3.4
MOT	1	2.9	2	1.6	11	8.7	8	15.1	1	10.0	23	6.7
Total	**35**	**100.0**	**123**	**100.0**	**127**	**100.0**	**53**	**100.0**	**10**	**100.0**	**348**	**100.0**
Department												
Operations	10	28.6	41	33.3	41	32.2	14	26.4	3	30.0	109	31.3
Management	6	17.1	17	13.8	11	8.7	5	9.4	0	0.0	39	11.2
Technical	18	51.4	60	48.8	64	50.4	28	52.8	4	40.0	174	50.0
M&E	1	2.9	5	4.1	2	1.6	3	5.7	1	10.0	12	3.5
Advisory	0	0.0	0	0.0	9	7.1	3	5.7	2	20.0	14	4.0
Total	**35**	**100.0**	**123**	**100.0**	**127**	**100.0**	**53**	**100.0**	**10**	**100.0**	**348**	**100.0**
Experience												
<10 years	9	25.7	24	19.5	25	19.7	13	24.5	3	30.0	74	21.3
10-19 years	12	34.3	50	40.7	48	37.8	24	45.3	4	40.0	138	39.6
20-29 years	12	34.3	42	34.1	46	36.2	15	28.3	3	30.0	118	33.9
30 years+	2	5.7	7	5.7	8	6.3	1	1.9	0	0.0	18	5.2

Total	**35**	**100.0**	**123**	**100.0**	**127**	**100.0**	**53**	**100.0**	**10**	**100.0**	**348**	**100.0**
Gender												
Male	26	74.3	79	64.2	83	65.4	34	64.2	8	80.0	230	66.1
Female	9	25.7	44	35.8	44	34.6	19	35.8	2	20.0	118	33.9
Total	**35**	**100.0**	**123**	**100.0**	**127**	**100.0**	**53**	**100.0**	**10**	**100.0**	**348**	**100.0**
Age												
20-29 years	7	20.0	18	14.6	18	14.2	8	15.1	2	20.0	53	15.2
30-39 years	12	34.3	38	30.9	42	33.1	22	41.5	5	50.0	119	34.2
40-49 years	14	40.0	61	49.6	59	46.4	21	39.6	3	30.0	158	45.4
50 years+	2	5.7	6	4.9	8	6.3	2	3.8	0	0.0	18	5.2
Total	**35**	**100.0**	**123**	**100.0**	**127**	**100.0**	**53**	**100.0**	**10**	**100.0**	**348**	**100.0**

The results further show that respondents included 230 (66.1%) men and 118 (33.9%) women. Those who indicated that the concessionaire experienced 'very severe' financing challenges, included 26 (74.3%) men and 9 (25.7%) women. Again, the majority of those who described the challenges as 'severe', 79 (64.2%), were men. The group that felt that financing challenges were 'very mild', consisted of 8 (80.0%) men and 2 (20.0%) women. However, the analysis found no significant association between perceptions regarding severity of financing challenges experienced by the concessionaire and respondents' gender.

The respondents were aged between 22 and 54 years. More specifically, Table 2 shows that 158 (45.4%) reported 40 to 49 years; 119 (34.2%) were in the 30 to 39 years bracket; while 53 (15.2%) were aged between 20 and 29 years. In relation to perceptions regarding severity of financing challenges experienced by the concessionaire, 14 (40.0%) respondents who described the challenges as 'very sever' were aged 40 to 49 years, while 12 (34.3%) indicated 30 to 39 years. Among those who felt that the challenges were 'very mild', 5 (50.0%) were aged between 30 and 39 years, while 3 (30.0%) indicated 40 to 49 years. Besides, the group that described the challenges to be 'mild' consisted of 22 (41.5%) respondents aged 30 to 39 years and 21 (39.6%) who were aged 40 to 49 years. Again, the analysis revealed no significant relationship between severity of financing challenges and respondents' age.

Correlates of financing challenges experienced by the concessionaire

Respondents were requested to identify factors, which they thought influenced severity of financing challenges experienced by the concessionaire, focusing on the period between 2007 and 2014. They were then requested to rate the perceived degree of influence of such factors on a five-point Likert scale as 'very strong' 'strong', 'moderate', 'weak' or 'very weak'. Using spearman's rank correlation, the identified factors were correlated with severity of financing challenges, in order to determine the strength of correlation and to prioritize the factors for appropriate action by stakeholders. Table 3 provides a summary of spearman's rank correlation analysis.

The results show a positive correlation between severity of financing challenges and cash flow problems. In this regard, the analysis obtained a correlation coefficient of 0.478, which was significant at ρ=0.000 (2-tailed), suggesting a moderate strength of correlation between the two variables. Respondents acknowledged that the concessionaire experienced cash flow problems during the reference period due to various factors, including declining business volume, high operational costs as well as payment of concessional fees. On the other hand, cash flow problems triggered challenges such as late payment of suppliers and utility services, as well as delay of salaries and wages, albeit with far-reaching consequences. For instance, delayed payment of wages resulted to labour unrests, which further contributed to loss of revenues. Late payments also affected the concessionaire's credit rating and ability to secure financing from financial institutions (Kamau, 2014).

Cash flow is a crucial indicator of financial stability in a business enterprise, regardless of the level of capitation. In this regard, a business venture is considered financially stable when cash inflows exceed cash outflows (Sherman, 2010). On the contrary, cash flow problems are inevitable where cash outflows exceed cash inflows, which in turn, may push even profitable enterprises into bankruptcy and subsequent closedown. Therefore, effective management of cash flow is important for various reasons, which include securing additional financing opportunities; stimulating new growth opportunities; as well as reducing operational costs.

The results in Table 3 show a positive correlation between severity of financing challenges and level of operational costs. The analysis obtained a correlation coefficient of 0.546, which suggests a moderate strength of correlation between the two variables. Besides, the results suggest up to 99% chance that correlation between the variables was significant (ρ=0.000). In view of this, respondents identified various types of operational costs incurred by the concessionaire, including salaries and wages, insurance and security services, utility bills, fuel costs, office supplies and travel expenses, among others. Notably, labour costs was the most outstanding element of operational costs, taking up to 70% of the operational costs budget. Low remuneration was cited as one of the factors that contributed to labour unrests that were experienced during the first two years of the concession (Nairobi Chronicle, 2008).

The concessionaire was compelled to improve workers' remuneration, notwithstanding the declining business volume and low revenues, which in turn, pushed up operational costs. The study revealed that the concessionaire's operational costs increased threefold from $33 million in 2007/08 to $104.3 million in 2012/13 financial years. Concomitantly, revenues increased by 14% from $98 million in 2007/08 to $100 million in 2012/13 financial years (Kenya National Bureau of Statistics, 2014). The results suggest that operational costs increased faster than revenues, which affected the project's financing by weakening the concessionaire's financial status as well as ability to reinvest and to mobilize debt financing.

Maintaining operational costs within the scope of revenues is an important prerequisite not only for the survival of a business venture, but also for accessing debt financing. Failure to manage operational costs may lead to budget overruns, which in turn, may discourage potential equity and debt financiers. Some of the measures that may be contextualized to facilitate management of operational costs include reduction of personnel, maximizing task efficiency, reduction of business travels, automation of operations, installation of energy efficient equipment, as well as elimination of expenditure waste, among others.

Table 3: Spearman's Rank Correlation Results

DEPENDENT VARIABLE	CORRELATES	SUMMARY STATISTICS	
Severity of financing challenges	Cash flow problems	Correlation Coefficient Sig. (2-tailed) N	.478*** .000 348
Severity of financing challenges	Operational costs	Correlation Coefficient Sig. (2-tailed) N	. 546*** .000 348
Severity of financing challenges	Import costs	Correlation Coefficient Sig. (2-tailed) N	.389*** .001 348
Severity of financing challenges	Capital structure	Correlation Coefficient Sig. (2-tailed)	.392*** .001

		N	348
Severity of financing challenges	Frequency of review forums	Correlation Coefficient Sig. (2-tailed) N	.322*** .004 348
Severity of financing challenges	Concessionaire's technical capacity	Correlation Coefficient Sig. (2-tailed) N	.197** .021 348
Severity of financing challenges	Concession fee structure	Correlation Coefficient Sig. (2-tailed) N	.448** .000 348
Severity of financing challenges	Concessionaire's revenue	Correlation Coefficient Sig. (2-tailed) N	.312*** .005 348
Severity of financing challenges	Tariff adjustments	Correlation Coefficient Sig. (2-tailed) N	.368*** .002 348
Severity of financing challenges	Concession period	Correlation Coefficient Sig. (2-tailed) N	.232** .011 348
Severity of financing challenges	Inflation rates	Correlation Coefficient Sig. (2-tailed) N	.435*** .000 348
Severity of financing challenges	Interest rates	Correlation Coefficient Sig. (2-tailed) N	.516** .000 348
Severity of financing challenges	Debt ratio	Correlation Coefficient Sig. (2-tailed) N	.387*** .001 348
Severity of financing challenges	Taxation burden	Correlation Coefficient Sig. (2-tailed) N	.392*** .001 348

*,**,*** show significance at $\rho<0.1$, $\rho<0.05$ and $\rho<0.01$ error margins, respectively

The results show a positive correlation between severity of financing challenges and import costs. In this regard, the analysis obtained a correlation coefficient of 0.389, which suggests a weak but significant correlation ($\rho=0.001$). In this study, imports of interest included equipment and machinery such as locomotives, train simulators, wagons, tampering and ballast machines, as well as steel and petroleum products. Notably, variation in the cost of such equipment and machinery, as well as materials and petroleum products in the global market directly affected the concessionaire's revenues and ability to finance the project. Import costs varied from time to time depending on market forces; however, subjecting such imports to taxes, escalated the costs further; thereby, reducing revenues and reinvestments.

A positive correlation was also obtained between severity of financing challenges and capital structure. This is indicated by the correlation coefficient of 0.392, which was significant at 99% confidence level ($\rho=0.001$), but weak. In this regard, the study found that the concessionaire invested a total of US$ 287 million, of which US$ 82 million (28.6%) was equity financing, US$ 164 million (57.1%) was debt financing and US$ 41 million (14.3%) was obtained from cash flows (TransCentury, 2015). Notably, the ratio of debt to equity financing influences a business venture's credit worth. The results of this study suggest that equity financing was

lower than debt financing, which respondents believed contributed to the severity of financing challenges experienced by the concessionaire, particularly because lending institutions tend to have less confidence in business ventures where debt financing exceeds equity financing; as the latter is considered less risky compared to debt financing.

The results show that severity of financing challenges and frequency of review forums were positively correlated. In this regard, the analysis obtained a correlation coefficient of 0.322, suggesting a weak relationship, but which was significant at 99% confidence level (ρ=0.004). Respondents revealed that the concession agreement did not have a provision for joint evaluation forums, where stakeholders could periodically: review performance, identify issues arising and opportunities for learning and improvements; as well as review business strategy in response to market dynamics. Consequently, it took stakeholders too long to realize that the concessionaire was under-performing, nearly eight years after the project started. In addition, the concessionaire lacked a forum to air out concerns over macro-economic policies and emerging trends that affected the projects financing and performance. In view of the shortcomings, both partners developed a habit of airing accusations and counter-accusations through the media, regarding issues that could better be addressed during performance review forums. Notably, accusations from the regulating authorities dented the concessionaire's image, which in turn, spoilt opportunities for mobilizing additional financing for capital investments. Lack of performance review forums worsened the severity of financing challenges for the concessionaire.

Severity of financing challenges also correlated positively with the concessionaire's perceived technical capacity. Thus, the analysis yielded a correlation coefficient of 0.197, which shows a weak relationship between the two variables. However, correlation was significant at 95% confidence level (ρ=0.021). Respondents pointed out that the concessionaire did not have sufficient technical capacity to turn around a railways system, which exacerbated a decline in business volume and revenues, as well as ability to mobilize resources to finance investments. More importantly, lack of technical capacity on the part of the concessionaire raises concerns about rigorousness of the screening process before the concession contract was awarded. In this regard, respondents noted that the screening process was flawed, as the oversight committee failed to verify information packaged in bid documents. This amplifies the need for rigorous vetting processes when selecting concessionaires to ensure that successful bidders meet technical and experience thresholds.

The results show that severity of financing challenges correlated with concession fee structure. The analysis obtained a positive correlation coefficient of 0.448, which suggests a moderate strength, but significant correlation between the two variables (ρ=0.000). Notably, the concession agreement obligated the concessionaire to pay a one-off entry fee of US $3 million to the Government of Kenya and US $2 million to the Government of Uganda. Besides, the concessionaire was obligated to pay an annual concession fee, pegged at 11.1% of gross cargo revenues, to each Government. The contract further obligated the concessionaire to pay an annual fee of US $1 million for passenger services. Some respondents observed that the fixed fee structure for passenger services was not feasible, considering a significant drop in passengers during the first decade of the concession. Nonetheless, the concessionaire paid the amount regardless of whether or not revenue targets were met. The structure of concession fees, whether fixed or variable, depends on a combination of factors. The adoption of any structure is often based on the assumption the concessionaire will generate adequate revenues to meet the obligation as well as reach a satisfactory level of returns to finance further investments. Whereas, fixed concession fees can be feasible in advanced PPP markets, with

supportive policy environments; variable fees are suitable for developing markets (World Bank, 2015).

The choice of concession fees structure also depends on market type, whether open or monopoly. Respondents noted that in open markets where a concession project has to encounter competition to meet performance targets, variable fees structure would be more appropriate. Contrastingly, fixed concession fees would be more suitable for monopolies, where competition is limited. However, the structure of concession fees can change as markets mature and demand-related risks diminish. In view of this, respondents observed that fixed concession fees for passenger services exacerbated the severity of financing challenges, particularly considering the competition from road transport.

The analysis obtained a positive correlation between severity of financing challenges and the concessionaire's revenue. In this regard, a correlation coefficient of 0.312 was obtained, which suggests a weak but significant correlation between the two variables (ρ=0.005). Respondents reported that the concessionaire's revenue lagged below performance target for far too long due to internal capacity gaps and unfavorable business environment. The situation weakened the concessionaire's ability to meet operational costs, pay concession fees regularly, attract financing and keep business afloat in the midst of competition. Due to persistent losses and increasing liability portfolio, respondents reported that the concessionaire's lead shareholder – Sheltam Railways of South Africa opted out of the concession in 2012, transferring its shares to Citadel Holdings of Egypt. Notably, revenue is a key indicator of a business venture's viability for financing consideration. Enterprises with insufficient revenues are less likely to access financing opportunities in the market.

The results in Table 3 show that severity of financing challenges correlated positively with tariff adjustments. More specifically, the analysis obtained a correlation coefficient of 0.368, which suggests a weak correlation between the two variables. However, the correlation was significant at 99% confidence level (ρ=0.002). Notably, pricing of transport services is often a matter of comprehensive feasibility studies, which should detail potential effects of such interventions on demand for services, seasonal changes, macro-economic circumstances, as well as competencies put in place to sustain appetite for services despite changes in the cost. In view of this, respondents noted that even though the concessionaire reserved the right to adjust tariffs, the process was often a boardroom decision and never preceded by any feasibility studies. Consequently, adjustment of tariffs often impacted negatively on business volume, with far-reaching consequences on revenues, liabilities and financing of infrastructure development.

A positive correlation was also obtained between severity of financing challenges and the concession period. The analysis obtained a correlation coefficient of 0.232, suggesting a weak, but significant relationship between the two variables (ρ=0.011). Contractual agreement pegged the concession period at 25 years for cargo services and 5 years for passenger services. Some respondents observed that 5 years for passenger services was inadequate for the concessionaire to recover investments in the project. The choice of concession periods depends on various risk factors, including market type, whether open or monopolized; tariff levels in relation to per capita income of the targeted market; as well as demand dynamics, among other factors. The duration of concession projects can be either fixed or variable. The challenge with fixed concession periods is that there is no time to adjust to demand or market risks. In view of this, respondents observed that the fixed concession period for passenger services *vis-à-vis* market risk factors, was a key factor that disinterested potential equity and debt financiers.

The results show a positive correlation between severity of financing challenges and inflation rates. More specifically, the analysis yielded a correlation coefficient of 0.435, suggesting a moderate strength of correlation between the two variables, which was also significant at 99% confidence level (ρ=0.000). Notably, inflation is usually a challenge to new business ventures when its rate rises above 2%. In Kenya, inflation rates averaged 7.8% during the reference period (2007 to 2014). The economy experienced the lowest rates of 4.8% in 2007, while the highest rates (14.3%) occurred in 2012 (Kenya National Bureau of Statistics, 2015). Respondents noted that high inflation rates affected the project's financing by increasing the cost of essential supplies such as fuel, electricity and water; as well as increasing demands for higher salaries and wages. A unit increase in the cost of labour inflated the concessionaire's operational costs and depleted revenue reserves; thereby, transmitting negative signals to potential financiers.

A positive correlation was obtained between severity of financing challenges and interest rates. In this regard, the results in Table 3 show a correlation coefficient of 0.516, which was significant at 99% confidence level. The results suggest a moderate strength of correlation between the two variables. A review of Central Bank of Kenya (CBK) data reveals that commercial banks' lending interest rates averaged at 15.6% between 2007 and 2014. Besides, lending interest rates increased from a low of 13.3% in 2007 to a high of 19.6% in 2012 (CBK, 2015a). Respondents affirmed that rising interest rates affected the project's financing by eating into revenues, which constrained the concessionaire's ability to plough back sufficient resources into the project. Besides, escalating interest rates made local credit too expensive for investors focusing on the local market; thus, discouraging or delaying further borrowing to meet investment targets as per contractual agreement. In addition, respondents observed that government borrowing from the domestic market was a key factor fuelling interest rates.

The results show a positive correlation between severity of financing challenges and debt ratio. Thus, a correlation coefficient of 0.387 was obtained. The result suggests a weak but significant correlation between the two variables (ρ=0.001). During the reference period (2007 to 2014), Kenya's debt to Gross Domestic Products (GDP) ratio average at 46.2%. The debt ratio increased from a low of 42.8 in 2008 to a high of 49.5% in 2014 (CBK, 2015b). Some respondents observed that a high debt ratio indirectly influenced the severity of financing challenges, particularly by triggering domestic borrowing by the Government, thereby, heightening the risk of inflation and high interest rates. Both factors prevented the concessionaire from accessing funds from the local market. As reported by Checherita and Rother (2010), a unit increase in public debt ratio inversely causes a proportionate change in private sector capital investment; thus, stagnating economic growth. Based on this argument, rising debt ratio interrupted the financial market, making lending terms too expensive for the concessionaire.

The analysis revealed a positive correlation between severity of financing challenges taxation burden. A correlation coefficient of 0.392 was obtained, suggesting a weak but significant correlation between the two variables (ρ=0.001). Respondents noted that taxation burden negatively influenced the project's financing by increasing operational costs as well as reducing revenues and the concessionaire's ability to meet investment targets. More specifically, respondents cited fuel levy tax, which the concessionaire paid through the purchase of diesel. The proceeds of fuel levy which were used to maintain roads, advantage of competitors - road transporters, while preventing the concessionaire from meeting revenue and investment targets. In addition, import taxes affected the project's financing by increasing

taxation burden, motivating adjustment of tariffs, as well as reducing business volume and revenues.

Ranking and prioritization of correlates

Spearman's rank correlation analysis in the preceding sub-section reveals that the severity of financing challenges positively correlated with all the factors identified by respondents. This implies that the stronger the influence of each correlate, the greater the severity of financing challenges. However, there seems to be variations regarding the strength of correlations linked to each factor. In this regard, Table 4 shows the ranking of correlates based on their strength of correlation with severity of financing challenges experienced by the concessionaire.

Table 4: Ranking and prioritization of correlates

CORRELATE	r_s	SIG. (2-TAILED)
Operational costs	0.546	0.000***
Interest rates	0.516	0.000***
Cash flow problems	0.478	0.000***
Concession fees	0.448	0.000***
Inflation rates	0.435	0.000***
Capital structure	0.392	0.001***
Taxation burden	0.392	0.001***
Import costs	0.389	0.001***
Debt ratio	0.387	0.001***
Tariff adjustment	0.368	0.002***
Frequency of review forums	0.322	0.004***
Concessionaire's revenues	0.312	0.005***
Concession period	0.232	0.011**
Concessionaire's technical capacity	0.197	0.021**

*, **, *** show significance at $\rho<0.1$, $\rho<0.05$ and $\rho<0.01$ error margins, respectively

The results show that none of the factors had a strong correlation with the dependent variable - severity of financing challenges experienced by the concessionaire. Nonetheless, relatively, operational costs had the strongest positive and significant correlation ($r_s = 0.546$); followed by interest rates ($r_s = 0.516$); cash flow problems ($r_s = 0.478$) and concession fees ($r_s = 0.448$). On the opposite side ascending, concessionaire's technical capacity had the weakest correlation ($r_s = 0.197$), followed by concession period ($r_s = 0.232$). These results are important for stakeholders to prioritize interventions aimed at improving financing and performance of the concession project.

CONCLUSIONS

This study aimed at determining factors influencing severity of financing challenges experienced by concessionaire of the railway project in Kenya. The purpose was to inform and enable stakeholders prioritize interventions based on the strength of correlation associated with each factor. The correlates identified by the study can broadly be categorized into three groups, including financial, concessional and macro-economic.

Financial factors included operational costs ($r_s = 0.546$), cash flow problems ($r_s = 0.478$), capital structure ($r_s = 0.392$) and import costs ($r_s = 0.389$). Even though business ventures incur operational costs by virtue of their existence, the level of such costs is an important variable for financing considerations. The higher it is the greater the severity of financing challenges and *vice versa*. Managing operational costs is crucial for reducing the severity of financing challenges. This may be achieved through appropriate cost-cutting and cost reduction measures such as reduction of personnel, maximizing task efficiency, reduction of business travels,

automation of operations, installation of energy efficient equipment, as well as elimination of expenditure waste, among others. Business ventures require sufficient cash flow to meet operational costs and to finance growth; thus, its ideal for cash inflows to exceed cash outflows. However, when cash outflows exceed cash inflows, severity of financing challenges increases proportionately. Consequently, effective management of cash flow is indispensable for securing financing opportunities and stimulating new growth opportunities. Capital is an important factor of production. Ideally, financial institutions prefer businesses in which equity financing exceeds debt financing. In view of this, tilting financing policies in favor of equity financing is a crucial precedent for attracting financing opportunities, improving financial stability and reducing the severity of financing challenges. Young business ventures such as the railways concession project remain vulnerable to the effects of high import costs. Without appropriate measures, import costs are likely increase severity of financing challenges by eating into revenues, making services too costly, as well as constraining cash flows and reinvestment. This amplifies the need for supportive and facilitative policy measures such subsidization of essential supplies such as electricity, fuel, and water as well as exception from payment of certain import taxes.

Concessional factors included review forums ($r_s = 0.322$), concessionaire's technical capacity ($r_s = 0.197$), concession fees ($r_s = 0.448$), concessionaire's revenues ($r_s = 0.312$), tariff adjustment ($r_s = 0.368$), and concession period ($r_s = 0.232$). Lack of performance review forums led partners to address sensitive aspects such as financing challenges through the media, which in turn, increased the severity of financing challenges by creating negative impressions about the concessionaire, among potential financiers. Creating joint review forums remains crucial for sensitive issues to be discussed confidentially, thereby, reducing severity of financing challenges. Where a concessionaire lacks appropriate technical capacity, it may take too long to improve and maintain business volume, which in turn, may exacerbate severity of financing challenges through insufficient revenues. Besides, inadequate technical capacity may be a manifestation of irregularities in the screening process, which necessitates appropriate administrative and legal measures to improve credibility of vetting processes.

Having a fixed concession fee structure for passenger services intensified severity of financing challenges, particularly due to low revenues and dwindling business volume. In view of this, the choice of a fee structure should be weighed against factors such as market types, market maturity level and demand related risks. Failure to meet revenue targets also increased the severity of financing challenges by weakening the concessionaire's ability to meet financial obligations and attract financing. Initiating appropriate strategies to meet revenue targets is crucial for creating a stable financial track record, which is a prerequisite for financing considerations. Adjusting tariffs for transport services is a sensitive process that is likely to intensify severity of financing challenges by reducing demand and revenues. Consequently, adjustment such tariffs require comprehensive information about parameters such as potential effects on demand and macro-economic circumstances, among other factors.

Macro-economic factors, including inflation rates ($r_s = 0.435$), interest rates ($r_s = 0.516$), debt ratio ($r_s = 0.387$) and taxation policies ($r_s = 0.392$) are significant correlates of severity of financing challenges. For this reason, stakeholders need to recognize that they have a crucial role of regulating the macro-economic environment to create a supportive and facilitative play ground for the concessionaire. It is unfair for regulators to continue judging the concessionaire by focusing on internal weaknesses related to financial and technical capacity, while ignoring the macro-economic environment in which the concessionaire operates. There is no doubt that the concession can meet contractual expectations when the Government plays its supportive

role by formulating appropriate and/or adjusting existing monetary, fiscal, taxation, and domestic borrowing policies, not only for the concession project, but also for other private-sector enterprises.

In addition, the Government should consider appropriate measures to cushion the concessionaire against inflation rates by subsidizing essential supplies such as electricity, fuel, and water to enable the concessionaire achieve revenue targets; as well as exemption from paying fuel levy, which advantages road transporters. Doing so will enable the concessionaire to come up with more competitive tariffs; meet revenue targets and reduce the severity of financing challenges.

ACKNOWLEDGEMENT

This article has been extracted from the PhD Thesis of my former student and colleague at the University of Nairobi, Stephen Okelo Lucas. I thank him for allowing me to publish the article. I acknowledge the support of my academic colleague, Prof. Joyce Kanini Mbwesa, with whom I supervised and guided Stephen. I'm also grateful to all the respondents who volunteered their time to provide the information. Finally, I thank another academic colleague, Tom Odhiambo for reviewing the draft article and providing insightful comments.

BIOGRAPHY

Charles M. Rambo is an Associate Professor and Chairman at the Department of Extra Mural Studies, University of Nairobi, Kenya. His academic interests include financial management, Small and Medium Enterprises, small-scale farming and education financing. His previous work appears in journals such as Journal of Continuing, Open and Distance Education, International Journal of Disaster Management and Risk Reduction and the Fountain: Journal of Education Research, African Journal of Business and Management, African Journal of Business and Economics. He is reachable at the University of Nairobi through Telephone Number, +254 020 318 262; Mobile numbers +254 0721 276 663 or + 254 0733 711 255; email addresses: rambocharls@gmail.com or crambo@uonbi.ac.ke.

REFERENCES

African Development Bank (2011). *Rift Valley Railways Project: Environmental and Social Assessment*. Addis Ababa: ADB Group

Asian Development Bank (2010). *Public Private Partnership Handbook*. Manila: AsDB.

Central Bank of Kenya (2015a). *Commercial Banks' Weighted Average Interest Rates 1991-2015*. Nairobi: CBK.

Central Bank of Kenya (2015b). *Kenya Government Debt to GDP 1998-2015*. Nairobi: CBK.

Checherita, C. and Rother, P., (2010). *The Impact Of High and Growing Government Debt on Economic Growth: An Empirical Investigation for the Euro Area*. Working Paper Series, No. 1237, August 2010.

Corder, G.W. & Foreman, D.I. (2014). *Nonparametric Statistics: A Step-by-Step Approach*. New York: Wiley.

Edwards, D.B., Rosensweig, F. and Salt, E. (1993). W*ASH Technical Report No. 89: Designing and Implementing Decentralization Programs in the Water and Sanitation Sector*. Office of Health, Bureau for Research and Development, USAID, under WASH Task No. 256.

Farlam, P. (2005). *Assessing Public–Private Partnerships in Africa:NEPAD Policy Focus*

Series. Durban: The South African Institute of International Affairs.

Frimpong, Y., Olowoye, J. and Crawford, L. (2003). "Causes of Delay and Cost Overruns in Construction of Ground Water Projects in Developing Countries: Ghana as a Case Study," *International Journal of Management*, Vol. 21 (1), p. 321-326.

Institutre of Economic Affairs, Kenya (2008). *Infrastructure - Road and Rail Sector: Budget Performance 2003-08 and Emerging Policy Issues*. Nairobi: Budget Information Program, IEA-Kenya.

Institute of Economic Affairs, Kenya (2014). *Railway Transportation Policy in Kenya: State of Play and Policy Challenges. Public Forum on Kenya's Railways Transportation Policy 2014*. Nairobi: IEA-Kenya.

Kamau, M. (2014). "Egyptian Firm Raises Stake in Rift Valley Railways Buy-Out Deal". The Standard, Tuesday, February 18, 2014. Available at http://www.standardmedia.co.ke/business/article/2000104918/egyptian-firm-raises-stake-in-rift-valley-railways-buy-out-deal

Kenya National Bureau of Statistics (2014). *Economic Survey 2014*. Nairobi: KNBS.

Kenya National Bureau of Statistics (2015). *Economic Survey 2015*. Nairobi: KNBS.

Kenya Railways Corporation (2012). *Annual Review Report*. Nairobi: KRC.

Ministry of Transport, Kenya (2014). "Standard Gauge Railway: Forging New Frontier in Railway Development In Kenya And The Region," *Uchukuzi*, Issue 1, June 2014.

Mwiti, L. (2013). *RVR Fights to Keep Concession on Track amid Rising Criticism, Business daily Africa*. Wednesday, July 31, 2013.

Nairobi Chronicle (2008). Kenya-Uganda Railway: A Short History. Available at https://nairobichronicle.wordpress.com/2008/08/09/near-collapse-for-100-year-old-railway/

Ogonda, R.T. (1992). "Transport and Communications in the Colonial Economy". In Ochieng', W.R.; Maxon, R.M. *An Economic History of Kenya*. Nairobi: East African Educational Publishers.

Philippe, M. and Izaguirre, A.K. (2006). "Private Participation in Water Toward a New Generation of projects," *Gridlines Note* No. 14. September. Washington, DC: PPIAF. Available at http://info.worldbank.org/etools/docs/library/24 0096.pdf

Sherman, J.D. (2010). *Cash Management Tool Kit for Small and Medium Businesses*. Toronto: The Canadian Institute of Chartered Accounts.

TransCentury (2015). Company profile. www.transcentury.co.ke

United Nations (2011). *A Guidebook on Public-Private Partnership in Infrastructure*. Bangkok: UNESCAP.

Walker, J. (1993). *Preparing for Private Sector Participation in the Provision of Water Supply and Sanitation Services*: WASH Technical Report No. 84. Office of Health, Bureau for Research and Development, USAID.

Wayne, W.D. (1990). *Applied Nonparametric Statistics, 2nd ed*. Boston: PWS-Kent.

World Bank (1997). *Selecting an Option for Private Sector Participation*. Washington DC: The International Bank for Reconstruction and Development/ the World Bank.

World Bank (2015). *Concessions, Build-Operate-Transfer and Design-Build-Operate Projects*. New York: World Bank.