

CONCESSIONAL FACTORS INFLUENCING THE FINANCING OF BUILD-OPERATE-TRANSFER PROJECTS IN DEVELOPING COUNTRIES: THE CASE OF A RAILWAY PROJECT IN KENYA

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ABSTRACT

The Government of Kenya initiated a concessional agreement with Rift Valley Railways (RVR) in 2006, under the build-operate-transfer financing framework, to improve delivery of railway transport services and spur economic growth. However, a decade later, RVR's performance failed to meet performance targets due to financing constraints, among other factors. This study examined selected concessional factors also perceived to be important predictors of the project's financing and performance. We sourced primary data from 348 staff of RVR and government authorities. We applied Relative Importance Index to determine relative importance of each factor; while Kendall's Coefficient of Concordance (W) determined the concordance of participants' perceptions regarding the influence of concessional factors on the project's financing. The study found that lack of stakeholder review forums was the most important predictor of the project's financing (0.7). Also important were concessionaire's technical capacity (0.6), concession fees (0.6), concessionaire's revenue (0.5), tariff adjustment (0.5) and concession period (0.3). The study obtained an average level of concordance in participant's perceptions, which however, was statistically significant ($W = 0.618$, $\chi^2 = 17.248$, $df = 5$ & p -value = 0.015). Periodical review and improvement of concessional factors is likely to facilitate implementation, financing and performance of concessional projects.

JEL: O16

Keywords: Concession, Financing, Build-Operate-Transfer, Railway Project, Relative Importance, Concordance.

INTRODUCTION

The Kenya-Uganda railway started at the port of Mombasa in 1896 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 (Ogonda, 1992). Consequently, railway transport has served Kenya's economy for more than one century, providing freight and passenger services within and between major urban centres. The Railway network is about 2,778 kilometers long, including 1,083 kilometers of the mainline, 346 kilometers of principle lines, 490 kilometers of branch lines and 859 kilometers of private lines (Ministry of Transport, Kenya, 2014). Kenya Railways Corporation (KRC) came into existence in 1978, through an Act of Parliament (Cap 397), to manage and coordinate an integrated system of rail and inland waterways transport services. At its peak in 1983, the railway system moved some 4.3 million tons of freight, before declining to 1.9 million tons by end of 2005 (Mwiti, 2013). However, the volume of business started reducing in the mid 1980s through to early 2000, which significantly reduced net returns and threatened system's very survival (IEA-Kenya, 2014). As the system became more and more inefficient, cargo transporters and passengers turned to road transport services, albeit at a higher cost.

In view of this situation, the Government of Kenya and Government of Uganda made a strategic decision in 2003 to jointly concession railway transport services. Historical links, mutual dependency of the two railway systems and potential benefits were the factors that formed the basis of joint concession decision (African Development Bank, 2011). Thus, the two Governments entered into a concessional agreement with Rift Valley Railways (RVR) under a build-operate-transfer (BOT) financing framework in November 2006. The purpose was to inject new capital and technical skills; thereby improve efficiency in the delivery of freight and passenger services (Ministry of Transport, Kenya, 2014).

The concession period was 25 years for freight services and 5 years for passenger services (IEA-Kenya, 2014). The concession agreement obligated RVR to rehabilitate and maintain rail networks, as well as improve the management, operation and financial performance. RVR further agreed to upgrade and modernize the 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 remained owners of the railway infrastructure and facilities (African Development Bank, 2011).

Furthermore, the concession agreement obligated RVR 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 for the use of conceded assets. In addition, RVR committed to pay an annual concession fee of 11.1% of gross freight revenues to the governments. Regarding passenger services in Kenya, the concessionaire agreed to pay the government a fixed annual fee of US \$1 million. A third requirement was to invest up at least US \$40 million in the development of infrastructure during the first five years.

A review anecdotal media and government reports reveals that ten years down the line, RVR failed to meet performance and investment targets; neither did it fulfill its concessional obligations, due to what government officers perceived as underperformance. Available data on annual freight and passenger volumes also suggest that the concessionaire was way below performance targets (IEA-Kenya, 2014). Figure 1, which presents data from the 2014 Economic Survey, shows that both freight and passenger volumes dropped by about one-third between 2007/08 and 2011/12 financial years (Kenya National Bureau of Statistics, 2014).

Figure 1: Passenger and Freight Volumes Moved by RVR (2007-2011)

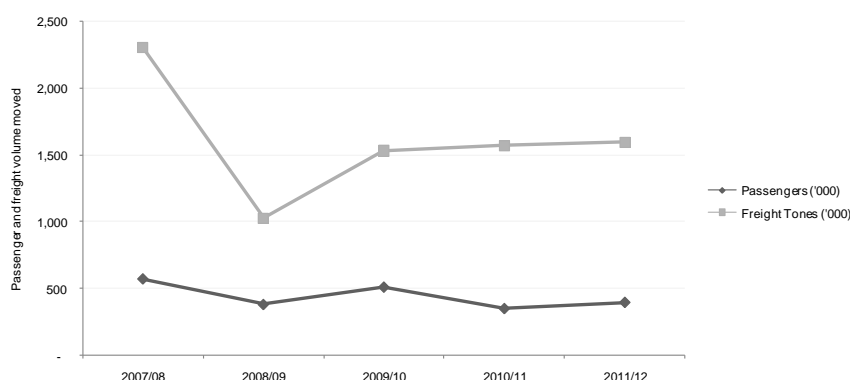


Figure 1 shows the annual passenger and freight volumes moved by Rift Valley Railway between 2007/08 and 2011/12 financial years. In each case, the results show that performance of the railway system dropped by about one-third. The Figure further that the concession has a higher potential for freight services than passenger services.

In 2012, a performance update report by KRC confirmed that RVR handled an average of 1.5 million tons of goods annually, down from 2.4 million tons in 2007/08 financial year (KRC, 2012). The report further indicates that the number of functional wagons dropped from 3,200 in 2006 to less than 1,000 in 2012. Besides, passenger traffic fell by 30% from about 600,000 in 2007/08 to about 400,000 in 2011/2012. This resulted to a drop in revenue, which in turn, triggered a myriad of challenges, including backlogs of unpaid concession fees and under-investment in the development of infrastructure, as per the concession agreement (KRC, 2012; Mwiti, 2013).

Anecdotal reports further indicate that Government and KRC officers linked RVR's underperformance to lack of financial capacity and technical expertise on the part of the lead investor – Sheltam Railways of South Africa (Mwiti, 2013). Notably though, no academic process had ever examined and provided a comprehensive picture of factors influencing the project's financing, and subsequently, underperformance. This study examined various factors influencing the project's financing, including macro-economic, concessional, financial, legal and environmental; however, this article focuses on the influence of concessional factors within the Kenyan context.

LITERATURE REVIEW

In many developing countries, governments face the challenge of meeting the growing demand for essential services, including transport, communication and energy, among others, due to financial and capacity constraints. Public-Private Partnership (PPP) initiatives are financing mechanisms that bring together public and private sector operators to develop infrastructural facilities and deliver such services (Asian Development Bank, 2010).

Edwards, Rosensweig and Salt (1993) note that 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. Railway transport is one of the services in which governments have involved private sector operators to deliver, through PPP initiatives. A strong PPP system allocates tasks, obligations and risks among public and private partners in an optimal way. Whereas, public partners include government entities, such as ministries, departments, municipalities, or state-owned enterprises, private partners include local or international businesses with technical as well as financial expertise relevant to particular project priorities (Asian Development Bank, 2010).

According to Asian Development Bank (2010), three factors motivate PPP initiatives: attract private capital to improve service delivery, increase efficiency in the use of available resources in project delivery, operation and management; as well as access advanced technological innovation. Similarly, Philippe and Izaguirre (2006) point out that 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 effective PPPs. In this regard, a government's contribution to a PPP initiative may be in the form of capital, transfer of assets, or in-kind contributions. Governments may also mobilize political support as well as provide social responsibility, environmental awareness and knowledge (Farlam, 2005). On its part, the private sector injects its expertise in commerce, management, operations, and innovation in running joint business efficiently. Depending on

the PPP model adopted, the private sector operator may also contribute investment capital (United Nations, 2011).

A review of literature reveals that PPP options vary from one where government retains full responsibility for operations, maintenance, capital, financing and commercial risk; to one in which the private sector takes on much of this responsibility (World Bank, 1997). Based on this premise, PPP options 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 for a fixed period (United Nations, 2011). Concessions often assume two models, viz. Build-Operate-Transfer (BOT) or Build-Operate-Own (BOO) (Walker, 1993). Although the public authority owns facilities, the private operator has wide-ranging powers over the operation and finances of the system. The success of concessions depends on the concessionaire's financial and technical competency. Concession contracts set out performance targets, including service coverage, quality, standards, arrangements for capital investment, mechanisms for adjusting tariffs, as well as arbitration over disputes (World Bank, 1997). In addition, concessions make private operators responsible for full delivery of services in a specified area, including operation, maintenance, collection, management, as well as construction and rehabilitation of facilities. Quite important is that the concessionaire assumes full responsibility for all capital investments required to build, upgrade, or expand facilities. Besides, the concessionaire is responsible for working capital (Asian Development Bank, 2010).

The public authority establishes performance standards and ensures compliance. At the end of the contract period, the authority assumes ownership of project facilities and can choose to assume operating responsibility too, renew the operator's contract, or award a new contract (Asian Development Bank, 2010). The concessionaire collects tariffs directly from service users. Concession contracts often establish tariffs, including provisions for adjustments when need arises.

Payments can take place both ways: concessionaire paying the authority for concession rights or the authority paying the concessionaire, based on target achievements (Asian Development Bank, 2010). Payments by the government may be necessary to make projects commercially viable and/or reduce the level of commercial risk taken by the concessionaire (United Nations, 2011). Typical concession periods range between 25 to 30 years, which provide sufficient time for the concessionaire to recover the capital invested and earn sufficient profits.

The model permits a high level of private investments and has a high potential for efficiency gains in all phases of project development (United Nations, 2011). In this regard, the model provides incentives for the concessionaire to achieve improved levels of efficiency and returns. The transfer of the full package of operating and financing responsibilities enables concessionaires to prioritize and innovate, with a view to increasing returns (Farlam, 2005).

Nevertheless, the model may be highly complex to implement and administer, particularly in developing PPP markets, while negotiation and contractual processes often delay due to prediction of risks that may occur beyond 20 years. As part of prerequisites for adoption, the model requires governments to upgrade their regulatory capacity in relation to tariffs and performance monitoring. Public authorities require the capacity to balance between tariffs, demand, purchasing power and returns. A difficulty usually arises where the demand and community purchasing power are over-estimated. In addition, due to long-term contractual

periods, concessional arrangements may be vulnerable to political influence, particularly in developing countries (Farlam, 2005).

DATA AND METHODOLOGY

The study adopted a causal-comparative design, which permitted the application of quantitative approaches in data collection, processing and analysis. The study targeted senior operational, managerial, technical, monitoring and evaluation, as well as advisory staff, affiliated to all key stakeholders, including KRC, RVR, Ministry of Finance (MOF) and Ministry of Transport (MOT). We prepared sampling frames for each category of participants using staff inventories of each stakeholder. The process identified 402 eligible participants, who were all included in the sample.

We issued self-administered questionnaires to participants. Self-administered questionnaires were most appropriate, particularly because they provided flexibility that targeted participants would require, considering their busy daily schedules. The approach enabled participants to provide requisite data at their convenience. The instrument, which had both closed-ended and open-ended questions, captured information on concessional factors perceived to be influencing the concession project's financing.

We collected primary data in May 2015 after obtaining necessary approval from University of Nairobi, National Council of Science and Technology, as well as KRC. We delivered questionnaires to targeted participants and made follow-ups through e-mails and telephone calls. Of the 402 targeted participants, 348 (86.6%) successfully completed and returned the questionnaires. Table 1 shows the questionnaire return rates for each category of participants.

Table 1: Questionnaire Return Rates

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

Table 1 shows that the study targeted 402 participants from the key stakeholders, including Kenya Railways Corporation, Rift Valley Railways, Ministry of Finance and Ministry of Transport. The second column shows the number of participants that we targeted, while the third column shows the number that successfully completed and returned questionnaires. The fourth column indicates the return rates for each stakeholder and the average for the entire sample.

The analysis involved listing coding, digitalizing and cleaning data for logical inconsistencies and misplaced codes. The methods that we used included descriptive, Chi square tests, one-way analysis of variance (ANOVA) as well as Relative Importance Index (RII) analyses. One may compute RII using the formula.

$$RII = \frac{\sum W}{A * N}$$

Where W is the weighting of each response on a scale of 1 to 5 corresponding with lowest to highest, A is the highest weight, and N is the total number of participants. RII yields values in the range of $0 < x \leq 1$; the higher the value of RII the more important the factor (Kometa, Oloimolaiye & Harris, 1994). RII is a non-probabilistic rank statistic derived from ordinal data; hence, its accuracy is non-dependent on sample size or the population. Furthermore, we applied Kendall's Coefficient of Concordance to determine the degree of agreement among the four categories of participants with respect to their ranking. The Coefficient states that W gives the degree of agreement on a 0 to 1 scale, such that:

$$W = \frac{12U - 3m^2n(n-1)^2}{m^2n(n-1)} ; \text{ Where } U = \sum_{j=1 \dots n} (\Sigma R)^2$$

Where n is the number of factors; m is the number of groups; j represent the factors 1, 2, 3 ... n . Kendall's Coefficient of Concordance is strong on both probabilistic and non-probabilistic distributions because it is not sensitive to sampling error (Frimpong, Olowoye & Crawford, 2003). We performed all quantitative analyses using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. In addition, qualitative analysis involved organizing data under thematic areas, followed by description and thematic analysis to identify emerging themes and patterns.

RESULTS AND DISCUSSIONS

The results show that of the 348 participants, 134 (38.5%) were staff of KRC; 179 (51.4%) were staff of RVR; 12 (3.4%) were officers of MOF, while 23 (6.6%) served at MOT. By cadre, Table 2 shows that 109 (31.3%) participants were operational staff, while 39 (11.2%) were managerial staff. Besides, technical staff were 174 (50.0%), monitoring and evaluation staff were 12 (3.4%) while 14 (4.0%) participants served as policy advisory staff at the ministries. The analysis revealed up to 99% chance that the institutions varied significantly in terms of the cadre of staff who participated in the study ($\chi^2 = 251.091$, $df = 12$ and $p\text{-value} = 0.000$).

Table 2: Distribution of Participants by Cadre and Gender

ATTRIBUTES	KRC		RVR		MOF		MOT		TOTAL	
	Freq	Pct	Freq	Pct	Freq	Pct	Freq	Pct	Freq	Pct
<i>Cadre</i>										
Operational	41	30.6	68	38.0	0	0.0	0	0.0	109	31.3
Managerial	11	8.2	23	12.8	0	0.0	5	21.7	39	11.2
Technical	80	59.7	88	49.2	0	0.0	6	26.1	174	50.0
M&E	2	1.5	0	0.0	5	41.7	5	21.7	12	3.4
Advisory	0	0.0	0	0.0	7	58.3	7	30.4	14	4.0
Total	134	100.0	179	100.0	12	100.0	23	100.0	348	100.0
<i>Gender</i>										
Male	91	67.9	115	64.2	7	58.3	17	73.9	230	66.1
Female	43	32.1	64	35.8	5	41.7	6	26.1	118	33.9
Total	134	100.0	179	100.0	12	100.0	23	100.0	348	100.0

Table 2 shows the distribution of participants based on cadres and gender. The columns show the distribution across the various institutions that were involved. Cross-tabulation analysis shows that the institutions varied significantly in terms of participants' distribution based on cadre. Regarding gender, the analysis shows lack of a significant variation between

the institutions in terms participants' gender. Notably though, more than two-thirds of the participants were men.

In terms of gender, participants included 230 (66.1%) men and 118 (33.9%) women. However, the analysis revealed that the institutions did not vary significantly in terms participants' distribution based on gender ($\chi^2 = 1.420$, $df = 3$ and p -value = 0.701). The results in Table 3 show that participants were aged between 22 and 54 years. The mean age for the entire group was 38.7 (≈ 39) years. Besides, participants from RVR reported the lowest mean age (38.1 years), while those from MOF reported the highest mean age (43.5 years). Even though results suggest that RVR staff may have been the youngest, one-way analysis of variance (ANOVA) revealed that there was no significant variation among staff of various stakeholders regarding age ($F_{(3, 344)} = 1.627$ & $p = 0.183$).

Table 3: Distribution of Participants by Age

ATTRIBUTES	N	MEAN	SD	SE	95% CI FOR MEAN		MIN.	MAX.
					Lower Bound	Upper Bound		
<i>Age</i>								
KRC	134	38.47	7.928	0.685	37.12	39.82	22	54
RVR	179	38.09	6.345	1.323	35.34	40.83	26	48
MOF	12	43.50	7.167	2.069	38.95	48.05	28	54
MOT	23	38.53	7.891	0.590	37.37	39.69	22	54
Total	348	38.65	7.814	0.419	37.83	39.47	22	54

ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	296.442	3	98.814	1.627	0.183	
Within Groups	20892.788	344	60.735			
Total	21189.230	347				

Table 3 shows the distribution of participants based on reported age across the institutions. The Table also shows descriptive statistics, including sample size (N), mean score, standard deviation from the mean (SD) and standard error associated with the mean (SE). The Table also indicates the confidence interval (CI) and the range of reported data, that is, the minimum (MIN.) and maximum (MAX.). The lower panel shows ANOVA results, where the computed F statistic is not significant; thus, suggesting lack of a significant variation among the institutions regarding participants' age.

The study captured information regarding years of professional experience. In this regard, the results in Table 4 show that participants reported a mean of 16.41 (≈ 16) years of experience, with the lowest being 1 year and the highest 35 years. Whereas staff of RVR reported the lowest duration of professional experience (15.8 years), the results suggest that the staff of the MOF were the most experience (22.2 years). Based on this, the ANOVA results show lack of a significant variation among staff of various stakeholders regarding years of professional experience ($F_{(3, 344)} = 2.255$ & p -value = 0.102).

Table 4: Participants' Distribution based on Years of Experience

ATTRIBUTES	N	MEAN	SD	SE	95% CI FOR MEAN		MIN.	MAX.
					Lower Bound	Upper Bound		
<i>Years experience</i>								
KRC	134	16.07	7.869	0.680	14.73	17.42	1	33
RVR	179	15.83	6.534	1.362	13.00	18.65	4	28
MOF	12	22.17	7.371	2.128	17.48	26.85	7	32
MOT	23	16.34	8.094	0.605	15.15	17.53	2	35
Total	348	16.41	7.936	0.425	15.57	17.24	1	35

ANOVA					
	Sum Squares	df	Mean Square	F	Sig.
Between Groups	421.434	3	140.478	2.255	0.102
Within Groups	21432.437	344	62.304		
Total	21853.871	347			

Table 4 shows participants' distribution based on years of professional experience across the institutions. The Table also shows descriptive statistics, including sample size (N), mean score, standard deviation from the mean (SD) and standard error associated with the mean (SE). The Table also indicates the confidence interval (CI) and the minimum (MIN.) and maximum (MAX.) years of experience. The lower panel shows ANOVA results, where the computed F statistic is not significant; thus, suggesting lack of a significant variation among the institutions in terms of professional years of experience.

The results show that there was no significant variation between participants involved in this study in terms of gender, age and years of professional experience. Based on this, further analyses, including ranking of concessional factors, which participants perceived to be influencing the project's financing as well as determination of the coefficient of concordance, assumed that participants were homogenous in terms of background attributes. This assumption was important for offsetting the risk of invalidity in the perceptions.

Concessional Factors Influencing Financing of the Project

The results presented in Table 5 show that of the 348 participants, 137 (39.4%) believed that lack of regular performance review forums had a 'very strong' influence on the project's financing, while 79 (22.7%) reported that the indicator's influence on the project's financing was 'strong'. On the opposite side of the scale, the results show that 49 (14.1%) participants indicated that lack of regular performance review forums had a 'very weak' influence on the project's financing, while 30 (8.6%) described the indicator's influence as 'weak'. Besides, cumulative results show that more than two-thirds of participants, 216 (62.1%), felt that lack of regular performance review meetings was above average in influencing the project's financing, while 79 (22.7%) felt that the indicator's influence was below average. Based on this, the analysis revealed a significant variation in perceptions regarding the indicator's influence on the project's financing ($\chi^2 = 10.231$, $df = 12$ & p -value = 0.083).

Regarding concessionaire's technical capacity, the results show that 90 (25.9%) participants described the indicator's influence on the project's financing as 'very strong', 76 (21.8%) felt

that the indicator had a ‘strong’ influence. Those who felt that concessionaire’s technical capacity had a ‘very weak’ influence on the project’s financing were 66 (19.0%), while those saying that the indicator’s influence was ‘weak’ were 62 (17.8%). Cumulatively, the results show that whereas 166 (47.7%) participants believed that concessionaire’s technical capacity had an-above-average influence on the project’s financing; 128 (36.8%) felt that the indicator’s influence was below average. The analysis obtained a significant variation in perceptions regarding the influence of concessionaire’s technical capacity on the project’s financing ($\chi^2 = 66.743$, $df = 12$ & p -value = 0.000).

The results further show that 70 (20.1%) participants stated that concession fees structure had a ‘very strong’ influence on the project’s financing, while 150 (43.1%) felt that the indicators’ influence was ‘strong’. However, results on the opposite side of the scale show that 21 (6.0%) participants were of the view that concession fees structure had a ‘very weak’ influence on the project’s financing, while 40 (11.5%) felt that the indicator’s influence was ‘weak’. More still, cumulative results show that more than two-thirds of participants, 220 (63.2%), believed that concession fees structure’s influence on the project’s financing was above average, while 61 (17.5%) reported that the indicator’s influence was below average. The analysis revealed a significant variation in perceptions regarding the influence of concession fees structure on the project’s financing ($\chi^2 = 23.138$, $df = 12$ & p -value = 0.027).

Table 5: Perceived Influence of Concessional Factors on the Project’s Financing

CONCESSIONAL FACTORS	KRC		RVR		MOF		MOT		TOTAL	
	Fre q	Pct	Fre q	Pct	Fre q	Pct	Fre q	Pct	Fre q	Pct
<i>Performance review forums</i>										
Very strong	67	50.0	59	33.0	4	33.3	7	30.4	13 7	39.4
Strong	18	13.4	54	30.1	2	16.7	5	21.7	79	22.7
Average	18	13.4	29	16.2	3	25.0	3	13.1	53	15.2
Weak	11	8.3	15	8.4	1	8.3	3	13.1	30	8.6
Very weak	20	14.9	22	12.3	2	16.7	5	21.7	49	14.1
Total	13 4	100. 0	17 9	100. 0	12	100. 0	23	100. 0	34 8	100. 0
<i>Concessionaire’s technical capacity</i>										
Very strong	40	29.8	46	25.7	1	8.3	3	13.0	90	25.9
Strong	45	33.6	14	7.8	6	50.0	11	47.9	76	21.8
Average	11	8.2	42	23.4	0	0.0	1	4.3	54	15.5
Weak	19	14.2	35	19.6	1	8.3	7	30.5	62	17.8
Very weak	19	14.2	42	23.5	4	33.4	1	4.3	66	19.0
Total	13 4	100. 0	17 9	100. 0	12	100. 0	23	100. 0	34 8	100. 0
<i>Concession fees structure</i>										
Very strong	31	23.1	33	18.4	3	25.0	3	13.0	70	20.1
Strong	50	37.3	87	48.7	5	41.7	8	34.9	15 0	43.1
Average	23	17.2	40	22.3	1	8.3	3	13.0	67	19.3
Weak	22	16.4	11	6.1	1	8.3	6	26.1	40	11.5
Very weak	8	6.0	8	4.5	2	16.7	3	13.0	21	6.0
Total	13 4	100. 0	17 9	100. 0	12	100. 0	23	100. 0	34 8	100. 0

	4	0	9	0	0	0	0	8	0	
<i>Concessionaire's revenue</i>										
Very strong	52	38.8	73	40.8	6	50.0	5	21.7	136	39.1
Strong	44	32.8	61	34.1	4	33.4	11	47.8	120	34.5
Average	19	14.2	23	12.8	1	8.3	5	21.7	48	13.8
Weak	7	5.2	15	8.4	0	0.0	2	8.8	24	6.9
Very weak	12	9.0	7	3.9	1	8.3	0	0.0	20	5.7
Total	134	100.	179	100.	12	100.	23	100.	348	100.
	4	0	9	0	12	0	23	0	8	0
<i>Tariff adjustment</i>										
Very strong	31	23.1	36	20.1	4	33.4	8	34.8	79	22.6
Strong	53	39.6	64	35.8	6	50.0	6	26.1	129	37.1
Average	21	15.7	41	22.9	1	8.3	4	17.4	67	19.3
Weak	20	14.9	21	11.7	1	8.3	4	17.4	46	13.2
Very weak	9	6.7	17	9.5	0	0.0	1	4.3	27	7.8
Total	134	100.	179	100.	12	100.	23	100.	348	100.
	4	0	9	0	12	0	23	0	8	0
<i>Concession period</i>										
Very strong	39	29.1	69	38.5	5	41.7	9	39.1	122	35.1
Strong	31	23.2	62	34.7	4	33.3	10	43.5	107	30.7
Average	23	17.2	17	9.5	2	16.7	4	17.4	46	13.2
Weak	27	20.1	15	8.4	1	8.3	0	0.0	43	12.4
Very weak	14	10.4	16	8.9	0	0.0	0	0.0	30	8.6
Total	134	100.	179	100.	12	100.	23	100.	348	100.
	4	0	9	0	12	0	23	0	8	0

Table 5 presents participants' perceptions regarding the extent to which various concessional factors influenced financing of the concession project. Participants rated their perceptions on a five-point Likert scale, ranging from 'very strong' to 'very weak'. Under each institution, the Table shows frequency distributions (Freq) and accompanying percentages (Pct).

Table 5 further shows that 136 (39.1%) participants were of the view that the influence of concessionaire's revenue on the project's financing was 'very strong', while 120 (34.5%) felt that the indicator's influence was 'strong'. Those who perceived that the concessionaire's influence on the project's financing was 'very weak' were 20 (5.7%), while those saying the indicator's influence was 'weak' were 24 (6.9%). Cumulatively, the results show that whereas 256 (73.6%) participants perceived the influence of concessionaire's revenue on the project's financing was 'above average', only 44 (12.6%) were of the view that the indicator's influence was 'below average'. However, the analysis revealed that there was no significant variation in perceptions regarding the influence of concessionaire's revenue on the project's financing ($\chi^2 = 11.981$, $df = 12$ & p -value = 0.447).

The results further show that 79 (22.6%) participants reported that adjustment of tariffs had a 'very strong' influence on the project's financing as 'very strong', while 129 (37.1%) stated that the indicator's influence was 'strong'. Results on the opposite side of the scale showed

that 27 (7.8%) participants perceived that adjustment of tariffs had a 'very weak' influence on the project's financing, while 46 (13.2%) believed that the indicator had a 'weak' influence on the project's financing. Besides, cumulative results show that 208 (59.7%) participants perceived the influence of tariff adjustment as 'above average', while 73 (21.0%) were of the view that the indicator's influence was 'below average'. The analysis further revealed lack of a significant variation in perceptions regarding the influence of tariff adjustment on the project's financing ($\chi^2 = 10.405$, $df = 12$ & p -value = 0.581).

In addition, 122 (35.1%) participants described the influence of concession period on the project's financing as 'very strong', while 107 (30.7%) perceived that the indicator had a 'strong' influence. However, 30 (8.6%) participants were of the view that the influence of concession period on the project's financing was 'very weak', while 43 (12.4%) said that the indicator's influence was 'weak'. Cumulatively, whereas 229 (65.8%) participants perceived the influence of concession period on the project's financing was 'above average', those who felt that the indicator's influence was 'below average' were 73 (21.0%). Based on this, the analysis revealed a significant variation in perceptions regarding the influence of concession period on financing of the concession project ($\chi^2 = 26.177$, $df = 12$ & p -value = 0.010).

Relative Importance of Concessional Factors Influencing the Project's Financing

The Relative Importance Index (RII) results presented in Table 6 show that lack of performance review forums was the most important concessional factor influencing the project's financing. The indicator scored a relative importance index of 0.7, which suggests that it was a strong predictor of the project's financing. Participants reported that the concession agreement did not have a provision for joint evaluation forums for partners to review performance and address issues arising. Regular joint evaluation forums would provide opportunity for partners to understand better, not only how well concessional policies are performing, but also factors underlying the concessionaire's performance.

As noted by Lima (2013) joint evaluations enable concession partners to: assess whether each perform their responsibilities as required; learn from each other's experiences; identify mistakes and opportunities for learning and improvements. Joint evaluation of concessions further provides opportunity for partners to review business strategy in response to market dynamics; as well as a robust basis for mobilizing finances (Lima, 2013). Joint evaluation also builds commitment among partners to ensure that each executes their responsibilities in supporting implementation of concession project.

Due to lack of review forums, participants noted that it took too long for the Government start raising alarm about the concessionaire's underperformance, about ten years after the project started. Similarly, the concessionaire had no forum to air out concerns over macro-economic policies and trends affecting the project's performance. Notably, both partners developed a habit of airing their accusations and counter-accusations through the media, regarding issues that they could better address during performance review forums.

Nonetheless, participants pointed out that nearly a decade of declining business negatively affected revenues, payment of concession fees and capital investments to modernize the infrastructure. Regular joint evaluation of concessional projects can greatly improve the management of internal and external risk factors preventing such projects from achieving performance targets; thereby, improve chances and ability to mobilize additional financing for capital investments.

Concessionaire's technical capacity scored a relative importance index of 0.6; which suggests that the indicator was an average predictor of the project's financing. Participants hinted that the concessionaire did not have sufficient technical capacity to turn around a railways system whose performance had been declining for close to a decade. More specifically, the lead partner, who assumed operational responsibilities, did not have sufficient experience of turning around railways transport systems. In this regard, some participants believed that the concessionaire's lack of technical capacity exacerbated a decline in volumes of freight and passenger services, which affected the level of net returns, investment targets and the project's creditworthiness. Prolonged underperformance undermined the concessionaire's ability to attract funding from international financial institutions.

More still, lack of technical capacity and experience to manage the concession project, raises questions regarding rigorousness of the selection process before the Government awarded the concession. In this regard, participants pointed out that the selection committee did not do thorough background check of the successful bidder to verify information packaged in bid documents. Failure of concessional projects may have significant financial implications to private operators, as well as negative economic implications to developing economies, particularly from loss of job opportunities. This amplifies the need for rigorous vetting processes when selecting concessionaires to ensure that successful bidders meet technical and experience thresholds.

Table 6: Relative Importance Index of Concessional Factors

INTER-ITEM CORRELATION MATRIX							RELATIVE IMPORTANCE		
Concessional factors	Review forums	Technical capacity	Concession fees	Concessionaire's Revenue	Tariff adjustment	Concession period	β	General dominance weights	Relative weights
Review forums	1.000	0.381	0.323	0.019	0.071	0.016	0.319	0.702	0.702
Technical capacity	0.381	1.000	0.090	0.018	0.007	0.091	0.283	0.633	0.633
Concession fees	0.323	0.090	1.000	0.034	0.608	0.048	0.226	0.587	0.587
Revenue	0.019	0.018	0.034	1.000	0.004	0.446	0.179	0.538	0.538
Tariff adjustment	0.071	0.007	0.608	0.004	1.000	0.055	0.186	0.504	0.504
Concession period	0.016	0.091	0.048	0.446	0.055	1.000	0.127	0.316	0.316

Table 6 presents Relative Importance Indices associated with each concessional factor perceived to be influencing financing of the concession project. The first five columns show the correlation matrix results of the factors, while the last three columns show the relative importance of each macro-economic factor, in terms of partial regression co-efficients (β), dominance weights and relative weights.

Having scored a relative importance index of 0.6, concession fees had an average influence on the project's financing and performance. Participants reported that the concession agreement obligated RVR to pay a one-off entry fee of US \$3 million, plus an annual concession fee, which is 11.1% of gross freight revenues, to the Government of Kenya.

Besides, the contract obligated RVR to pay an additional annual fee of US \$1 million for passenger services. Participants noted that the fixed fee for passenger services was not feasible, considering a significant drop in passenger volumes during the first decade of the concession. Nonetheless, RVR paid the amount regardless of whether or not it met revenue targets. The structure of concession fees, whether fixed or variable, depends on a combination of internal and external 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 (World Bank, 2015).

Whereas, fixed concession fees can be feasible in advanced PPP markets, where governments have initiated appropriate measures to create supportive environments; variable fees are suitable for developing markets. The choice of concession fees structure also depends on market type, whether open or monopoly. Participants 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 the case of RVR, participants pointed out that fixed concession fees for passenger services was not a good option considering the level of competition exerted by road transport. This amplifies the need for PPP partners to base their choice of concession fee structure on market dynamics to enable concessionaires generate sufficient revenues for project financing.

Concessionaire's revenue scored a relative importance index of 0.5; thus, suggesting that the indicator was an average predictor of the project's financing. Revenue is a key indicator of any business venture's viability for financing consideration. Enterprises with consistent and sufficient revenues are more likely to access credit services from local and international financing institutions. Private operators engage in PPP initiatives to improve revenues and make profits; however, this depends on internal technical capacity as well as appropriateness of the business environment.

In this study, participants reported that RVR's revenue stayed 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 overhead costs, pay concession fees regularly, attract financing and keep business afloat in the midst of competition. Due to persistent losses and increasing liability portfolio, RVR's lead shareholder – Sheltam Railways of South Africa opted out of the concession in 2012, transferring its shares to Citadel Holdings of Egypt (Mwiti, 2013).

Tariff adjustment scored a relative importance index of 0.5; again, suggesting that the indicator was an average predictor of the project's financing. Pricing of transport services is often a matter of in-depth economic analysis. In other words, comprehensive feasibility studies should precede pricing processes. Such studies should provide detailed analysis of potential effects on demand for services as well as competencies put in place to sustain appetite for services despite changes in the cost. The process should also consider the effect of such adjustments on the demand for services provided by competing modes of transport, among other considerations.

Pricing transport services varies significantly depending on the mode of transport, seasonal changes, as well as macro-economic circumstances in which an enterprise operates

(Balcombe, 2004). In this study, participants reported that RVR reserved the right to adjust tariffs when necessary; however, tariff adjustments were, in most cases, boardroom decisions. Consequently, adjustment of tariffs often resulted to a drop in business volume, with far-reaching consequences on revenues, liability portfolio and financing of infrastructure development. In view of this, pricing of services and adjustments thereof, should be based on a clear strategy and supported by strategic measures to enable consumers understand the need for such changes as well as feel the value of additional costs.

Concession period scored a relative importance index of 0.3, suggesting that it was a weak predictor of the project's financing. Notably, the concession period was 25 years for freight services and 5 years for passenger services (IEA-Kenya, 2014). Some participants indicated that 5 years for passenger services was not adequate for the concessionaire to recover its investment, as well as operating and maintenance expenses. The duration of concession projects can be either fixed or variable; the choice of which depends on various risk factors such as: completion time, product prices and market demand (Bagui & Gosh, 2013). The challenge with fixed concession periods is that there is no time to adjust to internal and external factors that may heighten non-completion and/or demand-related risks.

Contrastingly, concession partners may extend variable periods where specified risk factors are worse than expected or shorten it where such factors are better than expected (Bagui & Gosh, 2013). Participants noted that concessions of fixed periods are suitable for mature PPP markets where governments have better mechanisms to regulate macro-economic environments; but not suitable for markets that are vulnerable to economic shocks. In this regard, the length of concession period should hook around the concessionaire's recovery of investments. According to Smith (1995), the general principle of determining the concession-period length is that the concession period should be long enough to allow the concessionaire to recoup investment costs and earn reasonable profits within that period. Concession periods vis-à-vis market risk factors, is a key element that usually inform financiers' investment decisions.

Concordance of Perceptions regarding Influence of Concessional Factors on the Project's Financing

The analysis of concordance between perceptions yielded the results presented in Table 7, which shows mean ranking of the concessional factors. Notably, lack of regular performance review forums ranked first with a mean score of 3.72. The second ranking factor was concessionaire's technical capacity with a mean rank of 3.65; followed by concession fees (3.58), concessionaire's revenue (3.41), tariff adjustment (3.35) and concession period (3.09). In addition, the analysis obtained an average level of concordance in the ranking of concessional factors influencing the project's financing. The results suggest up to 95% chance that the level of concordance was statistically significant ($W = 0.618$, $\chi^2 = 17.248$, $df = 3$ & p -value = 0.015).

Table 7: Concordance of Perceptions regarding the Influence of Concessional Factors

RANKS		TEST STATISTICS	
Factors	Mean Rank		
Performance review forums	3.72	N	348
Concessionaire's technical capacity	3.65	Kendall's W	0.618

Concession fees	3.58	Chi-Square	17.248
Concessionaire's revenue	3.41	df	5
Tariff adjustment	3.35	Asymp. Sig.	0.015
Concession period	3.09		

Table 7 shows the ranking of concessional factors, based on the strength of perceived influence on financing of the concession project. The results show that lack of performance review forums ranked first, with a mean rank of 3.72; concessionaire's technical capacity scored a mean rank of 3.65, followed concession fees with 3.58, concessionaire's revenue with 3.41, tariff adjustment with 3.35 and concession period with 3.09. The last two columns show Kendall's test statistics for the concordance of perceptions, where the results show an average concordance, but which was statistically significant.

The results show that participants' perceptions regarding the influence of concessional factors on the project's financing were concordant and the level of concordance was statistically significant. The results suggest that concessional factors are important to the success of concession projects; thus, partners should not ignore them. Consequently, partners should consider reviewing concessional terms in view of the highlighted internal challenges and market challenges, to ensure that the project achieves its objectives.

CONCLUSIONS

The purpose of this study was to determine factors influencing financing of the railway concession project in Kenya. More specifically, the study determined the relative importance of selected concessional factors, based on perceived extent to which each of them influenced the project's financing. Secondly, the study established the level of concordance in participants' perceptions regarding the influence of concessional factors on the project's financing. The study reveals that lack of regular performance review forums, with a relative importance index of 0.7, was the most important factor influencing the project's financing. Ranking second in the order of importance were concessionaire's technical capacity (0.6) and concession fees (0.6). Next in the order of importance was concessionaire's revenue (0.5%), which tied with tariff adjustment (0.5), ahead of concession period (0.3). In addition, the study revealed an average level of concordance in participants' perceptions regarding the influence of concessional factors on the project's financing, which was also statistically significant at 95% confidence level.

In view of the findings, it's worth reiterating that the purpose of PPP initiatives is to improve the delivery of essential services to citizens, in line with national development goals. The success of PPP initiatives is important to all stakeholders, including citizens, public authorities and private sector operators. This study reveals that concessional factors are important predictors of the success of concessional projects. Regarding the railway project in Kenya, the findings suggest that concessional factors might have contributed to under-financing and underperformance that characterized the project's first decade. As the railway project gets into its second decade of concession, failure to address emerging concessional challenges is likely to continue preventing the project from reaching its full productivity potential. Concessions run for 25 to 30 years, which makes it necessary for partners to create regular interludes for joint review of concessional contracts, in view of issues arising from internal and external environments. Notably, 30 years is a long time and many changes may occur during implementation, which may prevent concessional projects from achieving set objectives. Consequently, it is important for concessional contracts to have provisions for

periodical revisions to facilitate implementation processes as well as improve financing and attainment of performance targets.

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