MACRO-ECONOMIC FACTORS INFLUENCING THE FINANCING OF BUILD-OPERATE-TRANSFER PROJECTS: EVIDENCE FROM A RAILWAY PROJECT IN KENYA
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ABSTRACT

The Government of Kenya entered into a concessional agreement with Rift Valley Railways (RVR) in 2006, under the build-operate-transfer financing arrangement, to boost economic growth. However, 10 years later, RVR’s performance failed to meet performance targets, due to financing and technical capacity constraints, as per anecdotal reports. This article examined the influence selected macro-economic factors on the project’s financing. We sourced primary data from 348 staff of key stakeholders. We applied Relative Importance Index to rank the factors based on their importance; besides, we applied Kendall’s Coefficient of Concordance (W) to determine the degree of agreement among participants. Findings show that inflation rates ranked highest, scoring an index of 0.8; followed by interest rates (0.7), debt ratio (0.6) and taxation burden (0.6). The study obtained a strong level of concordance in perceptions regarding influence of macro-economic factors on the project’s financing, which was also statistically significant at 0.01 error margin ($W = 0.833, \chi^2 = 41.8223, df = 3 & \rho-value = 0.000$). Besides financial and technical capacity, stakeholders should consider macro-economic environments, when evaluating RVR’s performance. The study suggests the need for appropriate adjustments of the monetary, fiscal, taxation and domestic borrowing policies, among other interventions.

JEL: O16

KEYWORDS: Macro-economic, Financing, Build-Operates-Transfer, Railways Project

INTRODUCTION

Kenya’s economy has relied on railways transport for more than a century, providing freight and passenger services within and between major urban centres, as well as to the neighboring Uganda. Railways transport is the second most important provider of transport services after roads. Currently, the railways network consists of 2,778 kilometers, 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, 2014). Established in 1978 through an Act of Parliament (Cap 397), Kenya Railways Corporation (KRC) is the authority mandated to manage and coordinate an integrated system within Kenya of rail and inland waterways transport services. At its peak in 1983, the railways system moved some 4.3 million tons of freight, before a precipitous decline to 1.9 million tons by the end of 2005 (Mwiti, 2013). Reduction in business volume started in the mid 1980s, through to early 2000. The period saw a significant reduction in net returns and financial stability, which threatened system’s very survival (Institute of Economic Affairs, 2014). The resulting inefficiency pushed away cargo transporters and passengers to use road transport services, albeit at a higher cost.

In response to declining performance, the Government of Kenya (GoK) and Government of Uganda (GoU) made a strategic decision in 2003 to jointly concession railways transport services. The decision arose from
the recognition of historical links between Kenya Railways and Uganda Railways, mutual dependency of
the two systems, as well as the potential benefits that the two countries would derive from a joint concession
(African Development Bank, 2011). In November 2006, the two Governments entered into a concessional
agreement with Rift Valley Railways (RVR) under a build-operate-transfer (BOT) financing framework.
The purpose of the concession was to inject new capital, and technical skills, as well as improve
management of the railways systems; thereby, enhance efficiency in the delivery of commuter, passenger
and freight services (Ministry of Transport, 2014). Consequently, RVR (the concessionaire) committed to
provide freight services for a period of twenty five (25) years and passenger services in Kenya for five (5)
years (Institute of Economic Affairs, 2014). Under the agreement, RVR bore the obligation of rehabilitating
and maintaining rail networks to enhance safety of trains, 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 GoK and GoU remained owners of
the railways infrastructure and facilities (African Development Bank, 2011). The concession agreement
obligated RVR to pay the two governments for use of conceded assets a one-off entry fee of US $3 million
to the GoK and US $2 million to the GoU. In addition, RVR committed to pay an annual concession fee
of 11.1% of gross freight revenues to the two governments. Regarding passenger business in Kenya, the
concessionaire agreed to pay GoK a flat annual fee of US $1 million. A third requirement was to invest up
at least US $40 million in the infrastructure development and rolling stock over the first five years.

However, nearly ten years after concession’s onset, RVR was unable to meet performance and investment
targets as well as concessional obligations, due to what stakeholders perceived as underperformance.
Available data on annual freight and passenger volumes suggested that the concessionaire was
underperforming (Institute of Economic Affairs, 2014). Figure 1, which presents data from the 2014
Economic Survey, shows that both freight and passenger volumes dropped by 30.7% between 2007/08 and

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

![Figure 1: Passenger and Freight Volumes Moved by RVR (2007-2011)](image)

*The Figure shows the annual passenger and freight volumes moved by Rift Valley Railways 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.*

A recent performance update report confirms that RVR handles an average of 1.5 million tons of goods
annually, down from 2.4 million tons in 2007/08 financial year (Kenya Railways Corporation, 2012). The
report indicates that the number of functional wagons dropped from 3,200 at the concession’s onset to less
than 1,000 in 2012. Besides, passenger services registered poor performance. In this regard, the total
kilometers that RVR covered dropped from 389 million in 2009 to 365 million kilometers in 2012. Passenger traffic also fell by 30% from about 600,000 in 2007/08 to about 400,000 in 2011/2012. This resulted to a drop in revenue from passenger services; thereby, leading to backlogs of unpaid concession fees and under-investment in the development of infrastructural facilities, as articulated in the concession agreement contributed (Kenya Railways Corporation, 2012; Mwiti, 2013). Anecdotal reports show that stakeholders linked RVR’s underperformance to lack of financial capacity and technical expertise on the part of the lead investor – Sheltam Rail of South Africa (Mwiti, 2013), which may not be the only factors at play. Notably though, no academic process had ever examined and provided a comprehensive picture of factors influencing the project’s financing and underperformance. Even though the study examined various factors influencing the project’s financing, including macro-economic, concessional, financial, legal and environmental, in Kenya; this article focuses on the influence of macro-economic factors. It comprises of four sections, including literature review, data and methodology, results as well as discussions and conclusions.

LITERATURE REVIEW

Public-Private Partnership (PPP) initiatives describe a range of possible relationships between public and private sector entities to develop infrastructural facilities and deliver essential services, such as energy, communication, transport, as well as water and sanitation, among others (Asian Development Bank, 2010). In many developing countries, governments face the challenge of meeting the growing demand for essential services, including transport and energy, among others. However, due to limited financial resources and institutional capacity gaps, governments have found that partnership with the private sector is an attractive alternative route to increase and improve the supply of such essential services. Consequently, governments worldwide are increasingly turning to the private sector to provide infrastructural services, which traditionally, fall within the public sectors’ domain (United Nations, 2011).

Similarly, 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. Railways transport is one of the services in which many governments have involved private sector operators in delivery, through PPP initiatives. A strong PPP system should allocate 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). However, PPPs may also include nongovernmental organizations (NGOs) and/or community-based organizations (CBOs), as representatives of stakeholders directly affected by the project (Asian Development Bank, 2010).

Furthermore, three factors motivate that establishment of PPP initiatives: attract private capital investments to improve service delivery; increase efficiency and effectiveness in the use of available resources in project delivery, operation, and management; access advanced technological innovation; as well as accomplish sectoral reforms through reallocation of roles, incentives, and accountability (Asian Development Bank, 2010). According to Philippe and Izaguirre (2006), governments prefer PPP initiatives because they promise better project design, choice of technology, construction, operation, and service delivery. Resource limitation has been the main factor driving governments to consider PPP options for project delivery (United Nations, 2011). However, Quiggin (2004) notes that cost factors, such as the cost of borrowing, as well as administrative and transaction costs motivate government decisions favoring PPPs. In most cases, PPP options for project delivery become sensible when efficiency gains can outweigh such cost factors, including borrowing, transactional, and administrative costs (Philippe & Izaguirre 2006).
As noted by Farlam (2005), 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 for investment, 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. Again, 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 range along a spectrum - at one end are those in which the government retains full responsibility for operations, maintenance, capital investment, financing, and commercial risk; while at the other, are those in which the private sector takes on much of this responsibility (World Bank, 1997). Based on this premise, PPP options fall under five broad categories, namely, service contracts, management contracts, leases, concessions and divestitures. In concessions, governments define and grant specific rights to a private operator (concessionaire) to build and operates a facility for a fixed period (United Nations, 2011). Concessions can assume two models, viz. Build-Operates-Transfer (BOT) of Build-Operates-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 concession bids depends on the financial competency of bidders. In this regard, the bidder that proposes to operate project facilities and meets investment targets wins the contract. Concessions thrive by 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 (World Bank, 1997).

Furthermore, 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 project facilities (Asian Development Bank, 2010). Quite important is that the concessionaire assumes full responsibility for all capital investments required to build, upgrade, or expand facilities, and for financing those investments out of own resources. In addition, the concessionaire is responsible for working capital. In rare cases, do public authorities provide financing support to enable concessionaires fund their capital expenditures. The public authority is responsible for establishing performance standards and ensuring that the concessionaire meets them. At the end of the contract period, the public authority assumes ownership of project facilities and can opt to assume operating responsibility too, renew the operator’s contract, or award a new contract to a new concessionaire (Asian Development Bank, 2010). The concessionaire collects tariffs directly from service users. Concession contracts often establish tariffs, including provisions for adjustments in response to social, political or macro-economic changes.

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, particularly in a developing PPP markets (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 an appropriate return over the life of the concession. 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, which translate into increased returns. More still, concessions are an effective way to attract private finance required to fund new project facilities or rehabilitate existing ones (Asian Development Bank, 2010). The transfer of the full package of operating and financing responsibilities enables concessionaires to prioritize and innovate, with a view to increasing returns on investments (Farlam, 2005).

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 (Farlam, 2005). Furthermore, due to long-term
contractual periods, concessional arrangements may be vulnerable to political influence, particularly in
developing countries.

A review of existing literature reveals that various macro-economic factors influence the frequency and
magnitude of private sector investments, particularly in developing countries. In Kenya, for instance,
African Development Bank (2013) indicates that macro-economic volatility has been a key challenge to
private sector investment and economic growth; affecting the cost of debt and equity capital, as well as
inflation, foreign exchange and interest rates. Nyamita, Garbharran and Dorasamy (2014) points out that
inflation rate is one of the key indicators of a country’s financial stability. An increase in inflation rate
causes uncertainty in economic conditions, which in turn, discourages private sector involvement in capital-
intensive projects, such as construction of infrastructural facilities (Baltaci & Ayaydin, 2014). Rising
inflation rates causes proportionate increase in operation costs, which reduces revenues and returns on
capital, as well as diminishes the spectrum of equity and debt financing options. Hence, private sector
investors often consider macro-economic profiles of potential markets before making investment decisions
and inflation rates is one of the factors that they usually consider. Markets with perpetually high inflation
rates are less likely to attract private sector investors and foreign direct investments; but are more likely
to cause capital flight into other countries with more stable macro-economic indicators (Gungoraydinoglu &
Öztekin, 2011).

According to Baltaci and Ayaydin (2014), inflation rate can either motivate or de-motivate private sector
investment, particularly in capital-intensive projects, depending on the level. In situations where private
sector investors finance infrastructural projects using foreign debts, high inflation rates can lead to a
situation of currency risk, where investors use weakened currencies to service external debts in stronger
foreign currencies, which inevitably, may lead to low revenues and losses (Drobetz, Gounopoulos, Merikas
& Schröder, 2013). Similarly, Kapila and Hendrickson (2001) observed that high inflation rates might
cause a significant decline in exchange rates, which in turn, might affect the level of equity and debt
investment in infrastructural projects. Greater volatility in exchange rates acts as a disincentive for private
sector participation in the financing of public infrastructural facilities (Kirkpatrick, Parker and Zhang,
2006). Studies by Frank and Goyal (2009), Gungoraydinoglu and Öztekin (2011), as well as Baltaci and
Ayaydin (2014) revealed significant relationships between inflation rates and debt financing of
infrastructural projects in developing countries. This implies that as inflation increases, the benefits of debt
and equity financing decrease due to high operational costs, as well as exchange and interests rates.

Interest rate is the price that a lender charges on borrowed funds; Mishikin (2010) calls it the cost of credit.
Undoubtedly, though, debt is a critical source of financing for investments, both in the public and private
sectors; thus, prevailing interest rate is often a critical concern to private sector investors. Changes in
interest rates may have significant influence on capital accumulation, appetite for credit, investment
decisions and participation of private sector investors in PPP projects, especially where debt financing is
obtained when interest rates are low and repayments made when interests are high (Nyamita, Garbharran
&Dorasamy, 2014). The study reported a significant positive relationship between interest rates and debt
financing of infrastructural projects in developing economies. In their study, Ng’etich and Wanjau (2011)
observed that whereas low interest rates reduce the cost of doing business, increase demand for debt
financing, and stimulate private sector investments, high interest rates increase the cost of borrowing,
reduce business profits, limit the level of private sector investment and slow down economic growth. Contrastingly, Mokhova and Zinecker (2014) found a negative correlation between interest rates and debt
financing of private sector investments in European countries.
Public debt is important for all countries to achieve their economic growth and development aspirations. In view of this, a reasonable level of borrowing is necessary to spur economic growth, particularly in developing countries (King’wara, 2014). Public debt includes domestic and external debts, or both. Besides, public debt can be productive, when it finances development of infrastructural facilities or dead weight, when it finances current expenditures (Chowdhury, 2001). Public debt can have both positive and negative effects on an economy, especially in relation investment in infrastructural facilities. Whereas, debt financing is a key ingredient for higher economic growth, stronger capacity for debt repayment, and a lighter debt burden for the citizenry; public debt can easily cripple private sector investment and economic growth, particularly where a greater proportion of such debt finances recurrent expenditure or previous external debt (Osei, 2000; King’wara, 2014).

In this regard, King’wara (2014) reported that a high level of domestic borrowing negatively affected private sector investments in Kenya. In this regard, debt servicing costs ‘crowded out’ investment expenditure; thereby, reducing total investment. However, ‘debt overhang’ seemed to be having a relatively greater effect on financing of private sector investments and slowing down of economic growth, particularly in developing countries (Karagol, 2002). Metwally and Tamaschke (1994) revealed similar findings in a study that assessed foreign debt problems in North African countries. The study found a negative relationship between debt service and economic growth through its adverse effect on investment and export multiplier in all the targeted countries. In their study, Checherita and Rother (2010) found that changes in the level of government debt negatively affected economic growth by affecting private savings, private investment as well as total factor productivity, while Osei (2000) noted that servicing debt consumed a considerable proportion of national budgets in developing countries, which constrained domestic investments. The main source of revenue for governments is taxation; however, high levels of taxation can stifle private sector investments rather than spur growth to enable governments generate the much-needed revenue for economic development (Njuru, Ombuki, Wawire & Okeri, 2013). As noted by (Norgah, 1998), heavy taxes negatively affects the cost of production, profit margins and resources which investors can plough back, which is a disincentive for private sector investments. Hence, a heavy taxation burden on the private sector can easily trigger mass capital flight to countries having relatively fewer and lighter taxes. It is imperative for governments to formulate taxation policies that allow optimal revenues, while attracting and enabling private sector to grow. In relation to this, Njuru, Ombuki, Wawire and Okeri (2013) asserted that appropriate taxation policies such as periodical tax holidays, tax exemptions and remissions, can promote private sector investments in particular sectors or regions.

Furthermore, heavy taxation is one of the factors influencing the growth of private sector in Kenya, including investment in capital-intensive projects (African Development Bank, 2013). In their study, Djankov, Ganser and Ramalho (2009) found that effective corporate tax rates had a large and significant adverse effect on corporate investment as well as on entrepreneurship. More particularly, an increase in corporate income tax significantly associated with lower investment in manufacturing, and greater reliance on debt rather than equity financing. In another study, Karumba (2009) examined the extent to which institutional factors affected private sector investment. The findings showed that tax administration was the most important institutional factor influencing investment decisions among private sector operators. Panagiota (2009) reported similar findings, in a study that assessed effects of taxation incentives on investment. More specifically, the study indicated that availability of taxation incentives significantly associated with the amount of capital invested by private investors in development projects (Panagiota, 2009). The study conducted by Kirkpatrick, Parker and Zhang (2006) also reported a significant relationship between perceived level of taxation burden and intention to invest in infrastructural facilities among equity investors.
DATA AND METHODOLOGY

The study adopted a causal-comparative design, which permitted the application of quantitative approaches in data collection, processing and analysis. Causal-comparative designs employ natural selection principles, rather than manipulation of independent variables to predict relationships (Oso & Onen, 2005). We issued self-administered questionnaires to staff of the stakeholders, including KRC, RVR, Ministry of Finance (MOF) and Ministry of Transport (MOT). The questionnaires sourced data on macro-economic factors influencing financing of the concession, including interest rates, inflation rates, taxation burden and debt ratio. Secondary data sourced from the project archives supplemented primary data. The study targeted senior operational, managerial, technical, monitoring and evaluation, as well as advisory staff, affiliated to all key stakeholders, including KRC, RVR, MOF and 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 to avoid the risk of sampling error. 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. We applied one module of the instrument across the board to permit comparison of perspectives from different stakeholders. The instrument, which had both closed-ended and open-ended questions, captured information on macro-economic factors perceived to be influencing the financing and performance of the railway. 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

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Targeted</th>
<th>Actual</th>
<th>Return Rates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya Railways Corporation</td>
<td>164</td>
<td>134</td>
<td>81.7</td>
</tr>
<tr>
<td>Rift Valley Railways</td>
<td>195</td>
<td>179</td>
<td>91.8</td>
</tr>
<tr>
<td>Ministry of Finance</td>
<td>27</td>
<td>23</td>
<td>85.2</td>
</tr>
<tr>
<td>Ministry of Transport</td>
<td>16</td>
<td>12</td>
<td>75.0</td>
</tr>
<tr>
<td>Total</td>
<td>402</td>
<td>348</td>
<td>86.6</td>
</tr>
</tbody>
</table>

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 return 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 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.

\[
\text{RII} = \frac{\sum W}{A+N} \tag{1}
\]

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:

\[
W = \frac{12U-3m^2n(n-1)^2}{m^2n(n-1)} ; \text{ Where } U = \Sigma_{j=1}^{n} (\Sigma R)^2 \tag{2}
\]
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

The study sourced primary data from 348 participants, of whom 134 (38.5%) were staff of Kenya Railways Corporation (KRC); 179 (51.4%) were staff of Rift Valley Railways (RVR); 12 (3.4%) were officers of the Ministry of Finance (MOF) and 23 (6.6%) served at the Ministry of Transport (MOT). By cadre, Table 2 shows that 109 (31.3%) were operational staff, while 39 (11.2%) were managerial staff. Besides, 174 (50.0%) were technical staff, 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 \( \rho \)-value = 0.000).

Table 2: Distribution of Participants by Cadre and Gender

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Krc</th>
<th>Pct</th>
<th>Rvr</th>
<th>Pct</th>
<th>Mof</th>
<th>Pct</th>
<th>Mot</th>
<th>Pct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational</td>
<td>41</td>
<td>30.6</td>
<td>68</td>
<td>38.0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>109</td>
</tr>
<tr>
<td>Managerial</td>
<td>11</td>
<td>8.2</td>
<td>23</td>
<td>12.8</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>21.7</td>
<td>39</td>
</tr>
<tr>
<td>Technical</td>
<td>80</td>
<td>59.7</td>
<td>88</td>
<td>49.2</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>26.1</td>
<td>174</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>2</td>
<td>1.5</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>41.7</td>
<td>5</td>
<td>21.7</td>
<td>12</td>
</tr>
<tr>
<td>Advisory</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>58.3</td>
<td>7</td>
<td>30.4</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>100.0</td>
<td>179</td>
<td>100.0</td>
<td>12</td>
<td>100.0</td>
<td>23</td>
<td>100.0</td>
<td>348</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91</td>
<td>67.9</td>
<td>115</td>
<td>64.2</td>
<td>7</td>
<td>58.3</td>
<td>17</td>
<td>73.9</td>
<td>230</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>32.1</td>
<td>64</td>
<td>35.8</td>
<td>5</td>
<td>41.7</td>
<td>6</td>
<td>26.1</td>
<td>118</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>100.0</td>
<td>179</td>
<td>100.0</td>
<td>12</td>
<td>100.0</td>
<td>23</td>
<td>100.0</td>
<td>348</td>
</tr>
</tbody>
</table>

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.

Furthermore, 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 \( \rho \)-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 & \( \rho = 0.183 \)).

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), 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 in terms of years of professional experience (F(3, 344) = 2.255 & \( \rho \)-value = 0.102).
Table 3: Distribution of Participants by Age

<table>
<thead>
<tr>
<th>Attributes</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>Se</th>
<th>95% CI for Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KRC</td>
<td>134</td>
<td>38.47</td>
<td>7.928</td>
<td>0.685</td>
<td>37.12, 39.82</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>RVR</td>
<td>179</td>
<td>38.09</td>
<td>6.345</td>
<td>1.323</td>
<td>35.34, 40.83</td>
<td>26</td>
<td>48</td>
</tr>
<tr>
<td>MOF</td>
<td>12</td>
<td>43.50</td>
<td>7.167</td>
<td>0.959</td>
<td>37.37, 39.69</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>MOT</td>
<td>23</td>
<td>38.53</td>
<td>7.891</td>
<td>0.590</td>
<td>37.83, 39.47</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>38.65</td>
<td>7.814</td>
<td>0.419</td>
<td>37.83, 39.47</td>
<td>22</td>
<td>54</td>
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</table>

ANOVA

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>296.442</td>
<td>3</td>
<td>98.814</td>
<td>1.627</td>
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<tr>
<td>Within Groups</td>
<td>20892.788</td>
<td>344</td>
<td>60.735</td>
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<td>Total</td>
<td>21189.230</td>
<td>347</td>
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</tbody>
</table>

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 and the range of reported data, that is, the minimum (MIN.) and maximum (MAX.).

Table 4: Participants’ Distribution Based on Years of Experience

<table>
<thead>
<tr>
<th>Attributes</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>Se</th>
<th>95% CI for Mean</th>
<th>Min.</th>
<th>Max.</th>
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</thead>
<tbody>
<tr>
<td>Years experience</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KRC</td>
<td>134</td>
<td>16.07</td>
<td>7.869</td>
<td>0.680</td>
<td>14.73, 17.42</td>
<td>1</td>
<td>33</td>
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<tr>
<td>RVR</td>
<td>179</td>
<td>15.83</td>
<td>6.534</td>
<td>1.362</td>
<td>13.00, 18.65</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>MOF</td>
<td>12</td>
<td>22.17</td>
<td>7.371</td>
<td>2.128</td>
<td>17.48, 26.85</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>MOT</td>
<td>23</td>
<td>16.34</td>
<td>8.094</td>
<td>0.605</td>
<td>15.15, 17.53</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>16.41</td>
<td>7.936</td>
<td>0.425</td>
<td>15.57, 17.24</td>
<td>1</td>
<td>35</td>
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</table>

ANOVA

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>Within Groups</td>
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<td>344</td>
<td>62.304</td>
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<td>Total</td>
<td>21853.871</td>
<td>347</td>
<td></td>
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</tbody>
</table>

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 and the range of reported data, that is, the minimum (MIN.) and maximum (MAX.) 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 macro-economic 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 most background attributes. This assumption was important for offsetting the risk of invalidity.

Macro-Economic Factors Influencing Financing of the Concession

The study captured participants’ perspectives regarding the extent to which four macro-economic factors influenced financing of the concession project, viz. inflation rates, interest rates, debt ratio and taxation burden. The results in Table 5 show that of the 348 participants, 146 (42.0%) believed that the influence of inflation rates on the project’s financing was ‘very strong’, while 72 (20.6%) felt that the influence of inflation rates was ‘strong’. Contrastingly, 56 (16.1%) participants described the influence inflation rates as ‘very weak’, while 26 (7.5%) indicated that the indicator’s influence was ‘weak’. Cumulatively, 218 (62.6%) participants believed that the influence of inflation rates on financing of the concession project was above average, while 82 (23.6%) felt that the indicator’s influence was below average. However, the
analysis revealed lack of a significant variation in perceptions regarding inflation rate’s influence on financing of the concession project ($\chi^2 = 8.024$, df = 12 & p-value = 0.115).

Table 5: Perceived Extent to Which Macro-Economic Factors Influence the Project’s Financing

<table>
<thead>
<tr>
<th>Macro-Economic Factors</th>
<th>Krc Freq</th>
<th>Rvr Freq</th>
<th>Mof Freq</th>
<th>Mot Freq</th>
<th>Total Freq</th>
<th>Chi Square Tests</th>
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<tr>
<td><strong>Inflation</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very strong</td>
<td>70</td>
<td>52.2</td>
<td>64</td>
<td>35.8</td>
<td>5</td>
<td></td>
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<tr>
<td>Strong</td>
<td>17</td>
<td>12.7</td>
<td>47</td>
<td>26.3</td>
<td>2</td>
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</tr>
<tr>
<td>Average</td>
<td>16</td>
<td>11.9</td>
<td>27</td>
<td>15.1</td>
<td>3</td>
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</tr>
<tr>
<td>Weak</td>
<td>9</td>
<td>6.8</td>
<td>15</td>
<td>8.3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Very weak</td>
<td>22</td>
<td>16.4</td>
<td>26</td>
<td>14.5</td>
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<tr>
<td>Total</td>
<td>134</td>
<td>100.0</td>
<td>179</td>
<td>100.0</td>
<td>12</td>
<td></td>
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<tr>
<td><strong>Interest rates</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very strong</td>
<td>45</td>
<td>33.5</td>
<td>57</td>
<td>31.8</td>
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</tr>
<tr>
<td>Strong</td>
<td>40</td>
<td>29.9</td>
<td>49</td>
<td>27.4</td>
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<tr>
<td>Average</td>
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<td>9.7</td>
<td>26</td>
<td>14.5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>19</td>
<td>14.2</td>
<td>16</td>
<td>8.9</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Very weak</td>
<td>17</td>
<td>12.7</td>
<td>31</td>
<td>17.4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
<td>179</td>
<td>100.0</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>Debt ratio</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Very strong</td>
<td>39</td>
<td>29.1</td>
<td>32</td>
<td>17.9</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>53</td>
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<td>75</td>
<td>40.7</td>
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<tr>
<td>Average</td>
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<td>42</td>
<td>23.5</td>
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<td></td>
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<tr>
<td>Weak</td>
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<td>11.2</td>
<td>14</td>
<td>7.8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Very weak</td>
<td>8</td>
<td>6.0</td>
<td>18</td>
<td>10.1</td>
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<tr>
<td>Total</td>
<td>134</td>
<td>100.0</td>
<td>179</td>
<td>100.0</td>
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<tr>
<td><strong>Taxation burden</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Very strong</td>
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<td>47.8</td>
<td>88</td>
<td>49.2</td>
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</tr>
<tr>
<td>Strong</td>
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<td>60</td>
<td>33.5</td>
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</tr>
<tr>
<td>Average</td>
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<td>14.9</td>
<td>17</td>
<td>9.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>6</td>
<td>4.5</td>
<td>9</td>
<td>5.0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Very weak</td>
<td>7</td>
<td>5.2</td>
<td>5</td>
<td>2.8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>100.0</td>
<td>179</td>
<td>100.0</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 presents participants’ perceptions regarding the extent to which various macro-economic factors influenced financing of the concession project. The 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).

The results in Table 5 further show that 113 (32.5%) participants believed that the influence of interest rates on financing of the concession project was ‘very strong’, while 96 (27.6%) felt that the indicator had a ‘strong’ influence on the project’s financing. However, 53 (15.2%) participants perceived that the influence of interest rates was ‘very weak’, while 37 (10.6%) believed that the indicator’s influence was ‘weak’. Cumulative results show that 209 (60.1%) participants described the influence of interest rates on the project’s financing as above average, while 90 (25.8%) felt that the indicator had ‘a-below-average’ influence on the project’s financing. Based on this, the analysis revealed lack of a significant variation in perceptions regarding the influence of interest rates on the project’s financing ($\chi^2 = 3.120$, df = 12 & p-value = 0.360). Regarding debt ratio, the results show that 82 (23.6%) participants reported that the indicator had a ‘very strong’ influence on the project’s financing, while 139 (39.9%) described the indicators’ influence as ‘strong’. Contrastingly, 29 (8.3%) participants stated that the debt ratio had a ‘very weak’ influence, while 33 (9.5%) felt that the indicator’s influence on the project’s financing was ‘weak’. More still, cumulative results show that more than two-thirds of participants, 221 (63.5%), perceived that the influence of debt ratio on the project’s financing was above average, while 62 (17.8%) felt that the indicator’s influence was below average. Again, the analysis revealed lack of a significant variation in perceptions regarding the influence of debt ratio on the project’s financing ($\chi^2 = 7.592$, df = 12 & p-value = 0.129).

In addition, nearly one-half of participants, 166 (47.8%) described the influence of taxation burden on the project’s financing as ‘very strong’, while 111 (31.9%) felt that the indicator had a ‘strong’ influence on.
However, 12 (3.4%) participants perceived that the influence of taxation burden was ‘very weak’, while 15 (4.3%) felt that the indicator had a ‘weak’ influence on the project’s financing. Besides, cumulative results show that whereas 277 (79.7%) participants perceived the influence of taxation burden as ‘above average’, those who felt that the indicator’s influence was below average were only 27 (7.7%). Based on this, the results show lack of a significant variation in perceptions regarding the influence of taxation burden on financing of the concession project ($\chi^2 = 13.499$, df = 12 & p-value = 0.334).

Relative Importance of Macro-Economic Factors Influencing the Project’s Financing

Table 6 presents results obtained from RII analysis. Notably, the results show that inflation rate was the most important macro-economic factor influencing financing of the concession project. The indicator scored a relative importance index of 0.774 ($\approx 0.8$). In this regard, participants asserted that inflation is usually a challenge when its rate rises above 2%. In Kenya, inflation rates averaged 7.8% during the concession 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). Participants noted that high inflation influenced the project’s financing by increasing the cost of essential supplies such as fuel, electricity, water and labour. Reportedly, RVR coped with the situation by adjusting its tariffs upwards, hoping to pass the effect to service consumers. However, the initiative worked negatively by discouraging consumers from utilizing freight and passenger services, leading to a drop in the volume of goods and passengers by about 30% between 2007/08 and 2011/12 financial years.

Some participants associated high inflation rates with a high cost of hiring and maintaining technical labour. Due to high inflation rates, the concessionaire experienced increasing demands for higher wages from its workers to keep-up with escalating consumer prices. In this regard, an increase in the unit cost of labour inflated RVR’s wage bill, which ate into revenues. Not only did the challenge undermine RVR’s ability to meet its concessional obligations, but also transmitted negative signals to external financiers. As a result, RVR failed to mobilize additional financing in time to meet contractual terms, as financiers paused to study status of the economy, vis-à-vis measures taken by the Government to manage inflation trends and to stabilize the market. In addition, participants reported that high inflation rates weakened the confidence of existing and potential financiers. In this regard, financiers often cited various risks, including higher tariffs, which discouraged appetite for freight and passenger services; as well as rising overhead costs, resulting from increasing cost of essential services and supplies. The situation prevented RVR from meeting its performance targets as well as concessional obligations.

Table 6: Relative Importance Index of Macro-Economic Factors

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

Next in the order of importance was interest rate (0.7). Participants noted that the rising interest rates affected the project’s financing. 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 (Central Bank of Kenya, 2015a). Participants pointed out that the escalating interest rates ate into revenues, which constrained the ability of
RVR partners plough back sufficient resources, as per their financing share. Besides, rising interest rates made local credit too expensive for partners focusing on the local market; thus, discouraging or delaying further borrowing to meet investment targets as per contractual agreement. Participants also noted that RVR transmitted high interest rates to consumers through higher tariffs. However, like in the case of inflation rates, the market responded negatively, leading to a drastic drop in freight and passenger volumes. Participants further noted that government borrowing from the domestic market was a key factor fuelling interest rates. Local borrowing made the state a competitor for scarce local resources, thus, triggering interest rates to increase rapidly.

Ranking third was debt ratio, with an RII of 0.6. Over the concession period 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 (Central Bank of Kenya, 2015b). In view of this, participants indicated that high debt ratio indirectly influenced the project’s financing, by triggering domestic borrowing by the Government, thereby, heightening the risk of inflation and high interest rates. Both factors prevented RVR partners 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 RVR partners. This caused a delay in the project’s financing, which in turn, affected efficiency of the railways system.

Taxation burden also scored an RII of 0.6. Participants reported that taxation burden negatively influenced the project’s financing by increasing overhead costs as well as reducing revenues and the ability of RVR partners to meet their investment targets. Of the greatest concern to participants was the fuel levy tax, which RVR paid through the purchase of diesel to power locomotive engines. However, the government use fuel levy to maintain roads and not to improve railway tracks. Consequently, participants felt that fuel levy disadvantaged RVR economically, while favoring competitors - road transporters. Fuel levy is one of the factors that rendered RVR’s tariffs uncompetitive, thereby, preventing the concessionaire from meeting investment and performance targets, as well as timely payment of concessional fees. In addition, import duty and excise tax on imported hardware affected the project’s financing by increasing the burden and reducing revenues. Participants suggested the need for tax incentives to RVR, since it was already paying monthly concession fees.

**Concordance of Perceptions on the Influence of Macro-Economic Factors on the Project’s Financing**

The results in Table 7 confirms show the mean rank of each macro-economic factor, where inflation rates ranked first, with a mean rank of 2.68; interest rates scored a mean rank of 2.64, followed by debt ratio with 2.53 and taxation burden with 2.16. Furthermore, the analysis obtained a strong level of concordance in the ranking of macro-economic factors influencing the project’s financing, which was also statistically significant at 0.01 error margin (W = 0.833, \( \chi^2 = 41.8223, \text{df} = 3 \) & \( \rho \text{-value} = 0.000 \)).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean Rank</th>
<th>N</th>
<th>Test Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation rates</td>
<td>2.68</td>
<td>348</td>
<td>Kendall's W 0.833</td>
</tr>
<tr>
<td>Interest rates</td>
<td>2.64</td>
<td></td>
<td>Chi-Square 41.822</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>2.53</td>
<td></td>
<td>df 3</td>
</tr>
<tr>
<td>Taxation burden</td>
<td>2.16</td>
<td></td>
<td>Asymp. Sig. 0.000***</td>
</tr>
</tbody>
</table>

Table 7 shows the ranking of macro-economic factors, based on the strength of perceived influence on the financing of the concession project, where inflation rates ranked first, with a mean rank of 2.68; interest rates scored a mean rank of 2.64, followed by debt ratio with 2.53 and taxation burden with 2.16. The last two columns show Kendall’s test statistics for the concordance of perceptions. Notably, the concordance is strong and statistically significant. *, **, *** shows significance at 10, 5 and 1 percent, respectively.
The results imply up to 99% chance that participants were concordant and that the identified macro-economic factors had a strong influence on the project’s financing. Consequently, regulating inflation and interest rates, as well as managing the level of public debt and waiving fuel levy are crucial interventions that stakeholders may consider to improve the macro-economic environment, as well as cushion the concessionaire against commercial risks.

CONCLUSIONS

The purpose of this study was to determine factors influencing financing of the railways concession project in Kenya. More specifically, the study ranked a set of macro-economic factors, based on their relative strength in influencing the project’s financing. The study reveals that all the four factors examined were strong predictors of the project’s financing, with inflation rates ranking highest (0.8), followed by interest rates (0.7), debt ratio (0.6) and taxation burden (0.6). In addition, the study obtained a strong level of concordance in the ranking of macro-economic factors vis-à-vis their influence on the project’s financing, which was also statistically significant at a high level of precision. Based on the findings, stakeholders should recognize the role of macro-economic factors on the financing and performance of the concession project. Similarly, stakeholders need to recognize that they have a crucial role of regulating the macro-economic environment to create a supportive and fair play ground for the concessionaire. It is unfair for stakeholders 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 expectation 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 enterprises.

Besides, the need to for a supportive policy environment, the Government should also consider appropriate measures to cushion the concessionaire when need arises. More specifically, the concessionaire requires cushion against inflation rates caused by global market dynamics by subsidizing essential supplies such as electricity, fuel, and water to provide room for the concessionaire to meet revenue targets; as well as waiver of fuel levy, which advantages road transporters, while disadvantaging the concessionaire. Doing so will enable the concessionaire to come up with more competitive tariffs, which is likely to make services more attractive to consumers.

ACKNOWLEDGEMENT

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BIOGRAPHY

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