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Effects of Standard Gauge Railway (SGR) Cargo Transportation Policy on the Level of Competition in Imported Cargo Transportation Industry in Kenya

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Abstract: The Kenyan government had instituted and effected a policy that all imported shipments discharged at Mombasa port and headed to Nairobi, locality and transit to be transferred via the Standard Gauge Railway (SGR). This paper examines the effect of SGR cargo transportation policy on the level of competition in imported cargo transportation market in Kenya. Data was obtained from freight forwarding companies and cargo owners as well as from key informants in imported cargo transport industry. The article adopted descriptive research design through cross sectional survey and concurrent mixed methods. Univariate, multivariate, cross-tabulations and multinomial probit regression were utilized in analysis. Equally, text analysis was used. The results show that SGR cargo transportation policy reduced the level of competition in imported cargo transportation market by 17.6%. Aspects of competition that have been affected by the policy included: limited the choices available to cargo owners/shippers to only one mode of transport; restricted transportation of imported cargo to SGR, creating SGR monopoly; limited number of entrants in imported cargo transportation from Mombasa to Nairobi; and resulted in higher cost of transporting imported cargo from Mombasa to Nairobi. The study recommends liberalization of imported cargo transport market, use of SGR to transport cargo to be discretionary, incorporation of multi-modal rail-road cargo transportation, review of the policy and expunge monopoly creating clauses and facilitating road transporters of imported cargo to explore other markets in East Africa Community.

Keywords: Standard Gauge Railway, Policy, Competition, Transport and Imported Cargo

1. Introduction

Cargo transport policy encompasses strategies for achieving specific objectives in transportation industry. The policies provide guidance on functioning of cargo transportation market. Unproductive transport services together with destitute transportation settings increase general transport costs, inhibit trade and benefits of industry freedom. Enactment of pertinent policy restructurings are prospects of eradicating inept transport system [21].

Cargo transportation policies globally are inspired by the admittance that transport is an enabler to economic growth [18]. Moreover, cargo transport policies are adopted worldwide to diminish and curtail monopolies in cargo transport industries. Societal disquiets surrounding accessibility, reliability, safety and increasing transport costs continue to emerge in markets where there is dampened competition in cargo transportation markets.

Globally, the fundamental policy constrain to cargo transport industry is the agitation to lower transportation costs, reduce cargo lead time and safety. These, however can only be attained where there exists competition in cargo transport market. At the core of policy predicament, is enactment of policies that satisfy the aspirations of importers whose interest is transport costs reduction and efficient railway cargo hauling systems [5].

To remedy against policy constraints in Africa, there is a call for the region to integrate issues of competition in their cargo transport policy frameworks [2]. Transport industry policy enactments present potential varied results on competition in the transport industry. Enforcement of transport policies ought therefore to be anchored on a broad comprehension of the potential effects on competition in provision of transportation services and on concomitant public costs and benefits. [4]

Kenya Vision 2030 recognizes transport sector as a critical enabler in its success and fundamental in increasing the competitiveness of the country's locally produced merchandise (Republic of Kenya, 2009). Consequently, cargo transport policies that strengthen competition in the industry are vital in aiding and stimulating trade and businesses [12].

Kenya Railways Corporation, which is the railway sector regulator, owns and manages rail transportation in Kenya. Therefore, railways transportation industry policy implementation is under the ambit of Kenya Railway Corporation. In July 2019, the Kenyan government issued a policy position on Standard Gauge Railway (SGR) usage, directing that all imported cargo discharged at Mombasa port, headed to Nairobi, hinterland as well as transit be transported via SGR to Nairobi Inland Container Depot. Efficiency improvements and service quality in cargo transportation as well as the need to boost SGR revenues were the main objectives of the policy.

Consequently, the quantity of cargo transported via SGR rose from 2,899,000 tons to 4,420,000 tons in 2018 and 2020 respectively, a remarkable increase in percentage of cargo conveyed by rail, which was barely 2% by the year 2017. Before the policy was enacted, trucking by road was the favorite means for transporting imported cargo; nonetheless, this ended immediately after the policy was implemented. Cargo owners had no alternative, but to transport their cargo using SGR. To this end, it remains murky to what level the policy affected competition in the transportation of consignment imports offloaded at Mombasa port. Equally, there are dearth of studies that attempts to investigate the policy's effects on competition in the Kenyan imported cargo transportation market.

Premised on this background this article investigated the effects of SGR cargo transportation policy on the level competition in imported cargo transportation market in Kenya. It is hypothesized that the policy has strengthened competition in cargo transportation market in Kenya by providing competitive better services at competitive prices in comparison to road cargo transport.

The rest of this article is organized into: section two entailing the theoretical framework, while section three details the research design and methodology. Section four details results and discussion. Conclusions and recommendations are provided in section five.

2. Theoretical Framework

Rational Choice Theory (RCT) originated by Adam Smith 1776 has been adopted in investigating the effects of SGR cargo transportation policy on the level of competition in the Kenyan imported cargo transportation market. According to the theory, a specific policy decision is attained after an in-depth exploration of its society paybacks, costs including related threats that the policy alternative may pose, whereas its benefits are being maximized [1]. Enactment of SGR cargo transportation policy necessitated a rational analysis of its costs and paybacks including how the policy would affect the level of competition in imported cargo transport market in Kenya.

Equally, analysis of alternative policy options must have been undertaken and their costs and benefits compared against those of SGR cargo transportation policy. The alternative policy options included allowing SGR to compete with road cargo transportation and liberalization of imported cargo transportation industry. In instances where one has various policy choices, selected alternative is deemed to be yielding the highest benefits to the public [10]. The benefits ought to include strengthened competition in imported cargo transport market in Kenya. The assumption attached to Rational Choice Theory include optimality, where selection of policy choice anchored on the option that offers the greatest gain based on preferences, the opportunities and constraints. [1]

Rational Choice Theory is suitable in examining the effects of SGR cargo transportation policy on competition in imported cargo transport market in Kenya as the policy is perceived to have resulted in various benefits including affecting the level of competition in imported cargo transport market, lowered road accidents between Mombasa and Nairobi, reduced road damage by heavy commercial vehicles. Among other benefits of rail transportation are reduced accidents, less damage on roads, reduction in road congestion, and lessened air pollution from heavy cargo trucks. [6] Correspondingly, SGR cargo transport policy is a follow up policy with regard to SGR infrastructural development, which is a Public Private Partnership project objectified at yielding the maximum gains to the society, hence Rational Choice Theory is very apposite in establishing the policy's effects on the level of competition in imported cargo transport market in Kenya.

3. Research Design and Methodology

The employed research design is descriptive involving cross sectional survey. Concurrent mixed methods encompassing quantitative and qualitative data has been adopted in achieving the objective of the paper. Use of mixed methods is anchored on the basis that statistical and transcript information were obtained through questionnaires and Key Informant Interview tools correspondingly. Primary quantitative information was collected from seventy-seven (77) freight forwarder firms and ten (10) cargo owners. In addition, qualitative methods through open-ended questions were utilized. Further, qualitative data from four Key Informants were collected using key informant interview guides. The Key Informant interviewees included the Ministry of Roads and Transport, Kenya Transporters Association, Kenya Ports Authority and Shippers Council of East Africa.

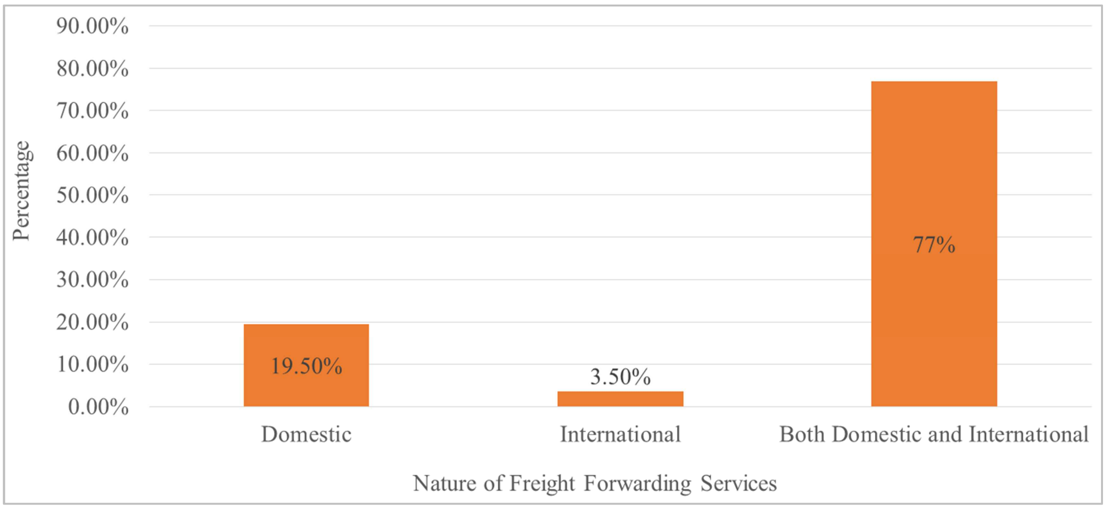
Statistical Package for Social Sciences version 26 was utilized in analysis of data. Univariate analysis was equally performed on the data entailing descriptive statistics and the results presented in frequencies tables. Further cross-tabulations as well as multivariate analysis were performed. Analysis by attribution involved the application of multivariate approach. Attribution was with regards to nature of freight forwarding services. Employing multivariate analysis and cross tabulations is anchored on the argument that they facilitated investigation on how the policy affected the level of competition from the perceptive of the three classification of freight forwarding services offered by freight forwarding firms. Policies are known to affect different actors different.

In testing the hypothesis that SGR cargo transportation policy has strengthened competition in imported cargo transportation market in Kenya by providing competitive better services at competitive prices in comparison to road cargo transport, multinomial probit regression was employed. The variable "Company using SGR to transport cargo is a binary variable which is 1 if the company used SGR to transport cargo and 0, if otherwise. The dependent variable was usage of SGR to transport cargo while level of competition in imported cargo transport market is the independent variable.

3.1. Respondents' Descriptive Characteristics

Select characteristics of freight forwarding companies and cargo owners have been analyzed descriptively including nature of freight forwarding and use of SGR for transportation of imported cargo from Mombasa to Nairobi.

Analysis by nature of freight forwarding companies and cargo owners is based on domestic, international or both domestic and international services. Figure 1 details the outcome.



Source: Author's own computation.

Figure 1. *Nature of Freight Forwarding Services.*

Figure 1, shows that 77% of the respondent firms offered a combination of domestics and international freight forwarding services, whereas 19.5% were providing only domestic freight forwarding services. International freight forwarding services were offered by measly 3.4% of the companies Most of the freight forwarding firms interviewed served both domestic and international marketplaces.

3.2. Usage of SGR for Imported Cargo Transportation

Characteristics of freight forwarding companies and cargo owners in terms of whether they used or did not use SGR in transporting cargo between Mombasa and Nairobi were equally analyzed.

According to figure 2, about 93.1% of freight forwarding companies used SGR in transportation of imported cargo from Mombasa to Nairobi, while 6.9% did not. Usage of SGR to transport imported cargo was quite high. Those who were not using SGR were mainly involved in the transportation of specialized consignment through cargo aircrafts. Others were also engaged in localized freight forwarding across the neighborhoods of Mombasa, Malindi Kilifi and Kwale Counties.

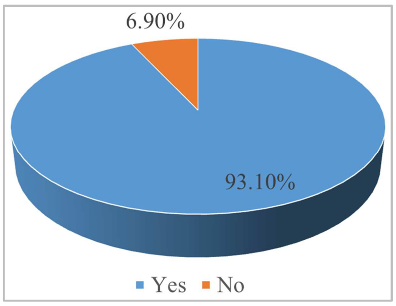


Figure 2. *Usage of SGR in Cargo transportation.*

SGR was used by majority of freight forwarding firms and cargo owners since it had become the only alternative mode of cargo transportation for shipments offloaded at Mombasa port intended for Nairobi, the locality and across the border. The

Ministry of Roads and Transport highlighted further that the policy was premised on Take or Pay Agreement (TOPA) which Exim Bank of China had signed with the Kenyan government. Kenyan Government therefore was at liberty of either guaranteeing that SGR gets sufficient freight to finance its infrastructure costs or paying for SGR infrastructure expenditure from secondary sources of funds. The government chose to enact the policy, which guaranteed SGR got sufficient load.

4. Results and Discussions

4.1. Effects of SGR Cargo Transportation Policy on the Level of Competition in Imported Cargo Transportation

The article investigated the effects of SGR cargo transportation policy on the level of competition in Kenyan imported cargo transportation market. Premised on this, the study hypothesized that SGR policy has strengthened competition in cargo transportation market in Kenya by providing competitive better services at competitive prices in comparison to road cargo transport. Multinomial probit regression was adopted in testing the null hypothesis. The paper performs analysis in this respect by category of freight forwarding services (section 4.2).

4.2. Effects of SGR Cargo Transportation Policy on the Level of Competition in Transportation of Imported Cargo from Mombasa to Nairobi by Category of Freight Forwarding

In establishing the effects of SGR cargo transport policy on the level of competition in transportation of imported cargo from Mombasa to Nairobi, the article undertakes analysis crosswise the three classifications of freight forwarding services offered by freight forwarding companies and cargo owners; domestic, international and both domestic and international. Table 1 below is a presentation of analyzed responses.

Table 1. *Effects of SGR cargo transportation policy on the level of competition in imported cargo transportation by category of freight forwarding.*

Freight Forwarding Category	**Has SGR cargo transportation policy affected the level of competition in transportation of imported cargo** **Yes**	**Total**
Domestic	17 100%	17 100%
International	3 100%	3 100%
Both International and Domestic	67 100	67 100
Total	87 100%	87 100%

Table 1 indicates that all (100%) freight forwarding companies that provided domestic freight forwarding services agreed that the policy had affected the level of competition in imported cargo transportation from Mombasa to Nairobi. Similarly, all (100%) of freight forwarding companies that offered international freight forwarding services, pointed out that SGR policy had affected level of competition imported cargo transportation from Mombasa to Nairobi. Further, all (100%) of freight forwarding companies that offered both domestic and international freight forwarding services indicated that the policy had affected level of competition in transportation of imported cargo from Mombasa to Nairobi.

The study finds that, with regard to competition, all freight forwarding companies and cargo owners irrespective of the type of freight forwarding services, felt that SGR cargo transportation policy had affected the level of competition in transportation of imported cargo from Mombasa to Nairobi. Shippers Council of East Africa in their key informant interview, echoed the position that the policy did not allow cargo owners/shippers to decide which mode of transport to use to convey cargo hence not permitting competitive bidding between road and SGR. The Chairman Kenya Transporters Association, in the Key Informant interview reiterated that with enforcement of the same policy, competition in transportation of imported freight from Mombasa to Nairobi was non-existent. Key Informant interviewee from Kenya Transporters Association stated, "It is against the Competition Act No 12 of 2010 for the government to force cargo owners\shippers to strictly use SGR to transport imported cargo from Mombasa to Nairobi. Cargo owner should be at liberty to nominate between road and SGR for transporting their cargo".

Additionally, the study findings are inconsistent to findings by Franck & Bunel (1991) on competition and regulation in shipping transport services in Europe. Their findings advanced that regulatory policies in cargo shipment industry that encourage competition lead to improved quality of services in cargo shipment market in terms of lowered cargo shipment costs [11]. This demonstrating that regulatory policies may have similar outcome on competition in transport industry whether its rail, road or marine transport.

Our findings confirm the position by Van der (2007) on railways development in Africa and South Africa, that freedom to compete in railway cargo transport would result in enhanced quality of services in rail transport [20]. Nonetheless, SGR cargo transport policy denied trucking companies the liberty to compete with rail hence the poor quality of services and increased cargo transport costs from Mombasa to clients' yards witnessed by cargo owners/shippers. SGR cargo transportation policy by weakening competition did not permit contestability in imported cargo transportation market.

The findings fail to align to postulations by Carruthers, Bajpai, & Hummels, (2003) that transport policies that embolden competition in cargo transport industry lead to lowered cost of transportation and enhances quality of services in transportation markets in East Asia. However, transport policy transformations characterized by inflexibilities more often than not diminish competition in transportation industries [9].

Our findings on the effects of SGR cargo transport policy is echoed by Teravaninthorn & Raballand (2009), that despite considerable transport infrastructure expansion in Africa, transportation markets are still deficient of competition due enactment of inappropriate regulatory policies. To the extent that the policy diminishes competition in imported cargo transport market, cargo transportation costs reductions are consequently not realized. This is as opined by Franck & Bunel (1991) on competition and regulation in shipping transport industry in Europe that regulatory policies that bolster competition in cargo shipment industry led to enhanced quality of services in cargo shipping market through reduced cargo shipping costs [11].

The findings that SGR cargo transportation policy dampens competitions demonstrates that by implementing the policy, imported cargo transportation market lost the benefits of competitive markets including cost reductions and improved service quality. This is as per findings by Ncube et, al., (2015), that enactment of competition bolstering regulatory policies in road freight markets and industry have the potential to lower costs and enhance service quality in the concerned markets.

4.3. How SGR Policy Has Affected Competition in Imported Cargo Transportation Market

To further understand how SGR cargo transportation policy has affected competition in imported cargo transportation market, freight forwarding companies and cargo owners were interviewed on select aspects of competition that have been affected by the policy. They were asked, "How has the policy affected competition in imported cargo transportation market?" Analysis of responses has been undertaken by category of freight forwarding services (Table 2).

Table 2. *Policy limits number of entrants in imported cargo transportation market by category of freight forwarding.*

Category of Freight Forwarding Services	Limits number of entrants		Total
	No	Yes	
	7	10	17
Domestic	41.18%	58.82%	100%
	25.93	17.24	20.0
	0	2	2
International	0.00%	100%	100%
	0.00	3.45	2.35
	20	46	66
Both domestic and international	30.30%	69.70	100%
	74.07	79.31	77.65
	27	58	85
Total	31.76%	68.24%	100%
	100	100	100

Table 2 shows that 58.82% of freight forwarding companies that only provided domestic freight forwarding services, indicated that the policy affected competition by limiting the number of entrants in imported cargo transportation market from Mombasa to Nairobi. Majority (58.82%) of freight forwarding companies in the domestic category, therefore agreed that SGR cargo transportation policy has limited the number of companies that can venture in imported cargo transportation market from Mombasa to Nairobi.

From table 2, the study further notes that all (100%) of the freight forwarding companies that provided purely international freight forwarding, indicated that SGR cargo transportation policy had affected the level of competition by limiting number of entrants in imported cargo transportation market from Mombasa to Nairobi. Additionally, 69.70% of freight forwarding firms and shippers in both domestic and international market category, felt that SGR cargo transportation policy had affected the level of competition by limiting the number of entrants in imported cargo transportation market from Mombasa to Nairobi.

The study finds that majority of freight forwarding companies and cargo owners from the three classifications of cargo forwarding; domestic, international, international and domestic combined, indicated that the policy affected competition through limiting the number of entrants in imported cargo transport market.

Notwithstanding the above findings, analysis of interview report from Key Informant Interviews with the Senior Advocacy Officer from Shippers Council of East Africa revealed that the market for transporting imported cargo is too large and no new entrants had been limited by the policy from entering the market. Equally, there is adequate cargo for both trucks and SGR in spite of the policy directing more cargo to SGR.

On the contrary, Key Informant Interview from the Chairman of Kenya Transporters Association nonetheless was of a contrary view and indicated that any new entrants would rather reconsider their investment decision of venturing into the business, but should consider cargo transportation market from Nairobi and beyond. Correspondingly, text analysis of qualitative responses from freight forwarding companies pointed out that a number of firms involved in cargo transportation had either closed down or were downsizing by reducing their fleet size. One freight forwarding company stated that "I know of cargo transportation companies that have sold off their fleets due to unavailability of cargo to transport from the port of Mombasa.

Our finding correspondingly is inconsistent to findings by Teravaninthorn & Raballand (2009) that elimination of limits on number entrants into transport sector saw the prices charged on freight decline by seventy-five percent and twenty-three percent in Mexico and Rwanda respectively [19]. However, this is not the case with SGR cargo transportation policy, where the number of entrants were limited and high cost of cargo transportation experienced. This by the same token augments the position by Teravaninthorn & Raballand, (2009) that, even with the immense transport infrastructure expansion, weak regulatory policies have made transport industry less competitive characterized by inefficient service delivery to the public [19].

4.4. Policy Restricted Transportation of Imported Cargo to SGR Only Hence Creating Monopoly of SGR

Further, the study analyzed whether the policy had affected the level of competition in imported cargo transport market by restricting transportation of imported cargo to SGR only hence creating a monopoly. Respondent freight forwarding firms and cargo owners were therefore probed to specify whether or not SGR policy has restricted transportation of imported cargo to SGR only thus creating monopoly of SGR.

In bolstering understanding the policy's effects on the level of competition in imported cargo transportation market, analysis is conducted on whether the policy restricted transportation of imported cargo to SGR only and hence created a monopoly of SGR in transportation of imported cargo from Mombasa to Nairobi by category of freight forwarding services.

Table 3. *Policy restricted transportation of imported cargo to SGR only hence creating monopoly of SGR by category of freight forwarding services.*

Category of freight forwarding services	Policy restricted transportation of imported cargo to SGR only hence creating monopoly of SGR		Total
	No	Yes	
Domestic	3 17.65% 23.08	14 82.35% 19.44	17 100% 20.00
International	1 50.00% 7.69	1 50.00% 1.39	2 100% 2.35
Both domestic and international	9 13.64% 69.23	57 86.36% 79.17	66 100% 77.65
Total	13 15.29% 100	72 84.71% 100	85 100% 100

According to table 3, 82.35% of firms that offered domestic category of freighting services indicated that the policy affected level of competition in imported cargo transportation market by restricting transportation of imported cargo to SGR only hence creating monopoly of SGR. Freighters and cargo owners offering international category of freight forwarding services were fifty-fifty on whether the policy restricted transportation of imported cargo to SGR, where 50% of them felt that the policy restricted imported cargo transportation to SGR while the remaining 50% felt otherwise.

About 86.3% of freight forwarding firms and shippers in the category of domestic and international, felt that the policy affected competition in imported cargo transportation market by restricting imported cargo transportation to SGR only hence creating monopoly of SGR.

In overall majority (84.7%) of the respondents (freighters and shippers) were of the opinion that SGR policy had effects on competition level in imported cargo transportation market, by restricting transportation of imported cargo to SGR only, hence creating a monopoly of SGR. Subsequently, the policy impedes and weakens competition in imported cargo transportation market by imposing restrictions on the mode of transportation for imported cargo from Mombasa to Nairobi. Equally, key informant interview with the Chairman of Kenya Transporters Association revealed the inefficiencies in service delivery in cargo transportation are linked to monopoly of SGR in imported cargo transportation. Founded on the above analysis, the article establishes that the policy to use SGR to transport imported cargo affected the level of competition in imported cargo transportation market by restricting imported cargo transportation to SGR only hence it created monopoly of SGR.

The study findings are in contrast with World Bank Group & African Competition Forum (2016), which indicated that presence of monopoly in cargo transportation may erode the gains of infrastructure developments as a result annulling the returns on investment in transport infrastructure [24]. Further, the findings contradict Teravaninthorn & Raballand, (2009) that transport industry policy changes with regard to competition indicated that removal of entry restrictions resulted in price reduction by 75% and 33% in Mexico and Rwanda correspondingly [19].

The findings that SGR cargo transport policy created a monopoly implies that the policy denied the country the benefits of SGR infrastructure improvements including lowered cargo transport costs; this is in line with the findings by Van der (2007) that retaining monopoly in rail transport in South Africa, deficient of competition might lessen benefits of railways infrastructure improvement [20]. To this end, actors in imported cargo transport market in Kenya need to advocate for policies that guarantee contestability in imported cargo transportation market.

4.5. Limited the Choices Available to Cargo Owners/Shippers to only One Mode of Transport

The section establishes whether the policy limited the choices available to cargo owners/shippers to only one mode of transport, thereby affecting competition in transportation of imported cargo industry. Analysis is this regards is therefore conducted based on the classifications of freight forwarding services offered. Table 4 below provides the output.

Table 4. *Policy Limited the Choices Available to cargo owners/shippers to only one mode of transport by classification of forwarding services.*

Classification of cargo forwarding services	Policy Limited the Choices Available to cargo owners/shippers to only one mode of transport by nature of freight forwarding company		Total
	No	Yes	
	1	16	17
Domestic	5.88%	94.12%	100%
	33.33	19.51	20.00
	0	2	2
International	0.00%	100.00%	100%
	0.00	2.44	2.35
	2	64	66
Both domestic and international	3.03%	96.97%	100%
	66.67	78.05	77.65
	3	82	85
Total	3.53%	96.47%	100%
	100	100	100

Table 4 indicates that 94.12% of freight-forwarding firms and shippers/cargo owners in the domestic category, all (100%) of freight forwarding companies who provided international freight forwarding services and 96.97% of freight forwarding companies that offered international as well as domestic freight-forwarding services, felt that the policy to transport imported cargo using SGR affected competition in transportation of imported cargo by limiting the choices available to cargo owners/shippers to only one mode of transport.

In general, majority (96.47%) of freight-forwarding firms and cargo-owners/shippers indicated that SGR policy has effects on level competition in imported cargo transport market by limiting the choices available to cargo owners/shippers to only one mode of transportation. The study finding is consistent to finding by Averitt & Lande, (1996) that policies that limit the choices available to consumers of a good of a service diminishes competition in such markets by weakening consumers' ability to select a service or good that provides an accurate balance between quality and price [7]. Capobianco & Christiansen (2011) opine that consumer gains are higher when their choices are broadened in terms of superior services and goods, enhanced service quality and reduced price in markets where competition exists; such markets exhibit increased production and enhanced consumer benefits [8], our findings nonetheless contradicts this position.

4.6. Policy Resulted in Higher Costs of Transporting Imported Cargo from Port of Mombasa

This section investigates whether the policy had effects on level of competition in transportation of cargo imports market by resulting in higher cargo transport costs between Mombasa and Nairobi. To this end, freight forwarding companies and cargo owners were asked to indicate whether the policy had resulted in higher costs of transporting imported cargo from Mombasa to Nairobi. Table 5 below offers output of the analysis.

Table 5. *Policy resulted in higher transportation costs for imported cargo.*

Classification of freight-forwarding service	Resulted in Higher cargo transport costs		Total
	No	Yes	
	4	13	17
Domestic	23.53%	76.47%	100%
	21.05	19.70	20.00
	1	1	2
International	5.00%	50.00%	100%
	5.26	1.52	2.35
	14	52	66
Both domestic and international	21.21%	78.79%	100%
	66.67	78.05	77.65
	19	66	85
Total	22.35%	77.65%	100%
	100	100	100

Table 5 shows that 76.47% of freight forwarding companies that were offering domestic category of freight-forwarding services, felt that the policy had effects on competition since it results in higher cargo transport costs for imported cargo from port of Mombasa to Nairobi. Freight forwarding companies that provided only international freight forwarding services were however, half divided, where 50% of them pointed that, the policy resulted in higher cargo transport costs, while the other 50% felt otherwise. Further, 79.79% of freight-forwarders in domestic as well as international category felt that the policy affected competition level by resulting in higher cost of transportation for imported cargo from Mombasa to Nairobi. In general, 77.6% of the freight-forwarders and shippers/cargo-owners opined that SGR cargo transportation policy has effects on competition level in imported cargo transportation market by resulting in higher cargo transportation from Mombasa to Nairobi.

These study finds that most of the freight forwarding companies and cargo owners who provided domestic, international and both domestic and international freight forwarding services opined that SGR cargo transportation policy had affected the level of competition in imported cargo transportation market by resulting in higher costs of transporting imported cargo from Mombasa to Nairobi.

The findings fail to align to the findings by Lall et al. (2009) that markets where competition exist are characterized by lower costs of cargo transport and improved trade, whereby the level of competition in transport markets is a key determinant of costs of cargo transportation [14]. The finding that SGR cargo transportation policy reduced competition in imported cargo transport market contradicts verdicts by Osborne, Pachon and Araya (2014) that strengthened competition in road transportation is likely to lower costs of transportation by thirty-five percent in in Central America [16]. This substantiates that transport industry policies that exert barriers in markets results in high costs of cargo transportation and undermine competition in cargo transport markets.

Our findings that SGR cargo transportation policy dampened competition in imported cargo transportation industry are distinct to suppositions by Carruthers, Bajpai & Hummels, (2003) in their study in East Asia on trade logistics, that transport policies that encourages competition in cargo transport industry are beneficial by lowering transport costs [9].

This finding similarly substantiates postulations by Amos (2009) that competition is the key element of rail cargo transport pricing, therefore policies that bolsters competition in rail cargo transportation markets would ensure competitive pricing of cargo transportation services [3]. Competition in cargo transport industry is motivator to providers of cargo transportation service to meet market aspirations at minimal costs and stimulates innovation in service provision.

Similarly, our findings are divergent to deductions by Wheat et al. (2019) on policy changes within less developed nations in African Sub-Saharan and South Asian regions that underscored the need to strengthen competition in rail cargo transportation in order to eliminate bottlenecks to realizing lowered railway and road cargo transportation costs [22]. Policy restructurings including promotion of competitions would lead to; lower costs of transport, transportation services being priced competitively, and improved transport service delivery. Preference should be on abstaining from enforcing policies that impose restriction in cargo transportation markets in Kenya.

4.7. Aspect of Competition in Imported Cargo Transport Market, Which Has Been, Affected the Most by SGR Cargo Transportation Policy

To appreciate in depth, the policy's effect on level of competition in imported cargo transport market, we examined the aspect of competition, which was, affected the most by the policy. In this regard, we probed respondent freight-forwarders and shippers/cargo-owners to specify aspect that was affected the most by the policy.

The aspect of competition in cargo transportation market which has been affected the most by SGR cargo transportation policy is examined based on the opinions of different classifications of freight-forwarding services offered by freight-forwarders and shipper/cargo-owners. Table 6 details the analysis.

Table 6. *Aspect of Competition in Imported Cargo Transport market, which has been, affected the Most by SGR Cargo Transportation Policy by classification of freight forwarding companies.*

Classification of freight-forwarding service	**Competition aspect that has been affected the most**			**Total**
	Choices available to cargo owners owners/shippers have been limited to SGR only	**Has limited the number of providers of transportation of imported cargo to SGR**	**Distorted market forces of demand and supply in imported cargo transportation services**	
Domestic	15 88.24%	1 5.88%	1 5.88%	17 100%
International	2 100%	0 0.00%	0 0.00%	2 100%
Both domestic and international	61 91.04%	0 0.00%	6 8.96%	67 100%
Total	78 97.64%	1 1.18%	7 1.18%	85 100%

Table 6 shows that to freight forwarding companies that provided domestic freight forwarding services, choices available to cargo owners/shippers having been limited to SGR only (88.24%) was the aspect of competition in imported cargo transport market that was affected the most by SGR cargo transportation policy. Similarly, all (100%) of respondents that offered merely international freight-forwarding services felt choices available to cargo-owners/shippers having been limited to SGR only was the aspect of competition in imported cargo transport that was affected the most by the policy. Equally, 91.04% of freight-forwarders and cargo-owners who focused on domestic and international services, pointed out choices available to cargo-owners/shippers having been limited to SGR only as the aspect of competition that was affected the most by SGR cargo transportation policy.

In light of the above analysis, we find that choices available to cargo owners/shippers having been limited to SGR only was the aspect of competition that was affected the most by the policy. The policy has restricted transportation of imported goods headed to Nairobi, locality and cross-border to SGR mode of transport only. This eliminated the ability of cargo owners/shippers to nominate and switch between SGR and road transport to move imported cargo from Mombasa to Nairobi. This forced them to stick with SGR mode of transport despite their dissatisfaction with the quality of services.

In overall, 97.64% of freight-forwarders and shippers/cargo-owners indicated that choices available to cargo owners/shippers having been limited to SGR only, was the aspect of competition that has been affected most by SGR cargo transportation policy. The policy therefore affected competition in the market for imported cargo transportation by limiting the choices available to cargo owners/shippers. The role of choices was echoed by key informants from Shippers Council of East Africa and Kenya Transporters Association who highlighted that “With choices, cargo owners/shippers are able receive improved quality of services, which are tailored and personalized according to customer needs”. Equally, pricing, payment terms including credit periods are tailored according to customers’ negotiations abilities. SGR cargo transportation policy had however, denied cargo owners such benefits. By limiting the choices available to cargo owners/shippers, the efficiency benefits in provision of imported cargo transportation services are non-existent. If choices were provided, then cargo owners/shippers would rationally select the alternative that provides efficient cargo transportation services.

The Chairman of Kenya Transporters Association retorted that with choices, market forces of demand and supply come into play, through these forces, cargo owners/shippers are assured of efficiency coupled with innovation and personalized pricing of cargo transportation services. The market however has been denied all the above with enforcement of SGR cargo transportation policy.

Limiting the choices available to cargo owners/shippers has the potential to result in high prices and poor quality of services delivery to the public. The providers of such services have little or no incentives to be innovative and offer better quality of services owing to the fact that consumers of such services are locked in and cannot switch to other alternative providers of the same service. This finding is consistent to Averitt & Lande (1996) that policies which impose limitations on consumers’ choices for a good or a service diminishes competition in markets by constraining their capability to purchase a service or good that delivers a clear-cut equilibrium between quality and price [7].

Our finding is disparate to guidelines provided to policy makers that sector or industry regulatory policies should not limit the ability of consumers of a service to choose the service they would prefer and should not reduce the capability of consumers to move from one supplier of a service/product to another [23]. SGR policy by limiting the choices available to cargo owners/shippers to SGR only, curtailed competition in imported cargo transportation between Mombasa and Nairobi.

Correspondingly, the findings are distinct to findings by Ncube et al., (2015) on competition in road cargo transport industry in Malawi, Zambia and Tanzania. Their findings directed that implementation of policy regulations that encourage competition in markets and industries have the potential to have positive effects of pricing reduction, improved quality of service in the industry [15]. Further, pro-competitive policies would be instrumental in remedying against undesirable market outcomes. SGR cargo transportation policy notwithstanding did not promote competition in imported cargo transport market, consequently the observed poor quality of public services and increased costs of transporting imported cargo.

4.8. Hypothesis Testing

The objective of this paper is to evaluate the effects of SGR Cargo transportation policy on the level of competition in Kenyan imported cargo transportation market. We hypothesize that Standard Gauge Railway Cargo Transportation Policy had strengthened competition in cargo transportation market in Kenya by providing competitive better services at competitive prices in comparison to road cargo transport. Multinomial probit regression was adopted in testing the research hypothesis in this respect where use of SGR to transport imported cargo was the dependent variable, whereas opinion on effects of policy on level of competition is the independent variable. Table 7 below presents the outcome of the analysis.

Table 7. *Hypothesis Testing.*

	(1)
VARIABLES	**competition**
SGR use	-0.176
	(0.111)
Constant	1.127***
	(0.117)
Observations	87
R-squared	0.104

Robust standard error in parentheses
***p<0.01, **p<0.05, *p<0.1

Table 7 shows that from the regression we obtain a marginal effect of -0.176; a demonstration that usage of

Standard Gauge Railways to transporting cargo is more likely to reduce competition in the transportation of imported cargo from Mombasa to Nairobi by 17.6%. SGR cargo transport policy, directing that all imported cargo meant for Nairobi, locality as well as transit be transported using SGR therefore reduced competition in imported cargo transport market between Mombasa to Nairobi by 17.6%.

Anchored on findings on the effects of the policy on competition, we reject the research hypothesis that Standard Gauge Railway cargo transport policy has strengthened competition in cargo transportation market in Kenya by providing competitive better services at competitive prices in comparison to road cargo transport. We find that SGR cargo transportation policy has dampened competition in imported cargo transportation market in Kenya in various aspects. The policy discriminated against other providers of transport in imported cargo transport markets and prevented trucking companies from entering the market for transporting imported cargo between Mombasa and Nairobi. Equally, the policy resulted in higher cargo transportation costs from Mombasa to Nairobi as well as limited the choices available to cargo owners/shippers to only one mode of transport; restricted transportation of imported cargo to SGR only hence creating monopoly of SGR. Lastly, it limited number of entrants in imported cargo transportation from Mombasa to Nairobi.

5. Conclusions and Recommendation

The article finds that SGR Cargo Transportation Policy, requiring all cargo imports offloaded at Mombasa port the port of Mombasa, being transported to Nairobi, locality and cross-border be conveyed via SGR reduced the level of competition in imported cargo transport market between Mombasa to Nairobi by 17.6%. The aspects of competition that have been affected by the policy comprised of: discrimination against other providers of transport in imported cargo transport markets; prevented trucking companies from entering the market for transporting imported cargo between Mombasa and Nairobi; resulted in higher cargo transportation costs, limited the choices available to cargo owners/shippers to only one mode of transport; restricted transportation of imported cargo to SGR only hence creating monopoly of SGR and limited number of entrants in imported cargo transportation from Mombasa to Nairobi. To this end, it is imperative for transport policy makers to appreciate the effects transport policies on competition in transport markets.

These findings inform the following policy recommendations:

1. The Ministry of Transport and Infrastructure to liberalize imported cargo transportation market. This will allow the forces of demand and supply to determine the use of SGR for cargo transportation by permitting cargo owners/shippers and importers to nominate their preferred mode of transport to convey their cargo from Mombasa to Nairobi.
2. The Ministry of Roads and Transport to make usage of SGR for cargo transportation discretionary and ensure that SGR plays a complimentary role in cargo transportation by incorporating multi-modal rail-road means of cargo transportation. SGR cargo transport policy to be reviewed to expunge SGR monopoly creating clauses to the detriment of competitive pricing.
3. The government should take up the investment cost of SGR and permit cargo owners/shippers to pay for competitive prices. KRC should on the other hand, take up operational costs of SGR.
4. To facilitate road transporters of imported cargo to explore other markets in the East African Community market, the Ministry of Roads and Transport collaboratively with the Ministry of Investment, Trade and Industry should develop trade and transport policies that promote and smoothen diversification and access to other markets in countries like Rwanda, South Sudan, Democratic Republic of Congo (DRC). DRC having joined EAC is a potential market for exploration by road transporters of imported cargo, specifically players who felt that they had been pushed out market by SGR cargo transportation policy.

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