Road Infrastructure and Enterprise Performance: Evidence from TMEA's Mombasa Roads Improvement Initiative

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1. Introduction

A good and efficient infrastructure is critical to the socio-economic development of any country or region (UNECA, 2013). Infrastructure is key in facilitating access to inputs such as knowledge, resources, and technology; as well reducing the barriers to free movement of goods and persons and increasing access to the markets for goods and services (AfDB & UNECA, 2003).Transport infrastructure more so a good road network promotes cross-border trade and investment, improves countries' competitiveness, and raises domestic output, thus fostering regional integration. Evidence from Mbekeani (2010) and Ndulu (2006) show that countries with good road infrastructure experience favorable enterprise growth, higher productivity and trade compared to those with weak transport network that stagnate in trade and development due to reduced mobility, low firm productivity, high transport cost and low competitiveness of firms.

The World Bank estimates that developing countries currently invest about 3-4% of their annual GDP in infrastructure against a recommended investment of 7-9% needed to achieve broader economic growth and poverty reduction goals (World Bank 2009). Given that infrastructure provides essential social services, boosts capital and labor, extends as an input to private sector production of goods and services, and reduces overall cost of production due to reduced overhead cost (Ayogu, 2007), there is need for African countries to commit more resources to improve infrastructure if they are to tap into the benefits arising thereof ranging from intra-regional trade, economic development, cooperation to integration (Buys et al. 2010; UNCTAD, 2013; Bafoil & Ruiwen, 2010; AfDB, 2012).

In the East African Community (EAC) region, the Northern Corridor is the main corridor, starting at the port of Mombasa in Kenya and runs inland to connect four of the five East African Community (EAC) countries (Kenya, Uganda, Rwanda, and Burundi). According to the 2011 EAC Corridor Diagnostic Study, only 13% of roads in the Northern Corridor are in good condition, 44% in fair condition, and 43% in bad condition. The Central Corridor also plays an important role connecting the port of Dar es Salaam to markets in Tanzania, Burundi, Rwanda, Uganda, and the DRC (AfDB, 2013). Among the EAC member states, Kenya has made great stride towards improving its road infrastructure over the last 15 years. Notably, among them is the US$ 360 million Nairobi–Thika superhighway covering 50 km from the Nairobi Metropolitan and Kiambu County. The road completed in 2011 now serves workers, students and businesses along the road network thereby reducing travel time, opening up of supply chains for raw materials to industries in Thika and promoting efficient delivery of goods and services to markets (AfDB, 2012). Other road and infrastructure projects include: Nairobi (Southern bypass road improvement; Northern Bypass road improvement project: JKIA expressway): Mombasa (Magongo Road; Kipevu road, Moi Airport-Port Reitz, Lamu Port access road) among other projects throughout the country (KENHA, 2020).

2. Mombasa Roads Improvement and Business performance

Mombasa is an urban coastal city, an important tourist destination due to it most historic attractions and beaches. Further, it also hosts the port of Mombasa an important international trade hub in the region. The Port of Mombasa is a principal gateway and key entry point to the Eastern Africa Region as it serves both Kenya and neighboring countries (Uganda, Rwanda, Tanzania, Burundi and DRC). The

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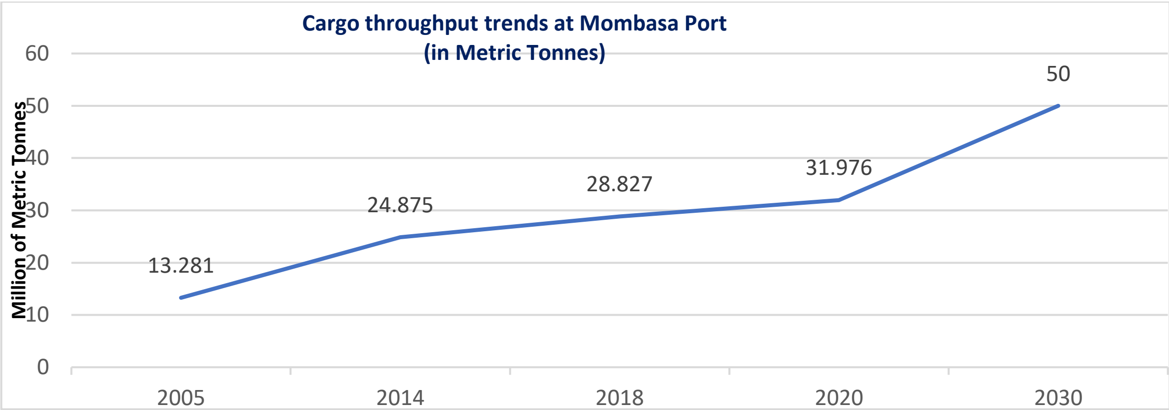
efficiency of the port in cargo handling time and costs is key for EAC economies as it determines their trade and eventually economic growth potential.

Cargo throughput at the port has grown significantly by 87.2 % during a 10-year period from 13.281 million metric tons (MT) in 2005 to 24.875 million MT in 2014 followed by 15% increase to 28.8 million MT in 2018 and a further 10.95% rise to 31.9 million MT in 2020 and projected to hit 50 million MT by the year 2030 (Figure 1).

Figure 1: Trends in Cargo throughput at Mombasa Port (2005-2030)



Source: Constructed using Mombasa port data

However, the growth in port cargo throughput has not been matched by improvements and expansion in road and port infrastructure thereby putting a strain on the efficiency of the port in cargo handling and processing. It is against this backdrop that the Government of Kenya in partnership with TradeMark East Africa (TMEA) conceived the Mombasa Roads Improvement project targeted at Mombasa West roads - Kipevu Road, Magongo Road, Port Reitz Road, Airport Road Intersection, A109/Magongo Road Intersection, and Mbaraki Roads-linking the port of Mombasa and hinterland to reduce congestion, improve access to the port and inject much needed efficiency in operations and service delivery. The improvement as much as it benefited the port operations, also had significant benefits to other the road users and businesses around the locality where the road improvement was undertaken.

A baseline study was commissioned to enable assessment of the traffic and operational movement of cargo and vehicular traffic along selected roads within the Mombasa West-Urban metropolis and Mombasa County Port Access Roads in Mbaraki area plus possible causes of congestion at various nodes. This policy brief employs data from the traffic census survey baseline conducted in 2019 to examine the impact of the road improvement on businesses/enterprises in the Mombasa west Region. The business survey targeted some **212 businesses located along the** completed Port Reitz/Airport Road and Magongo Road.

Figure 2: Evolution of businesses within the project area

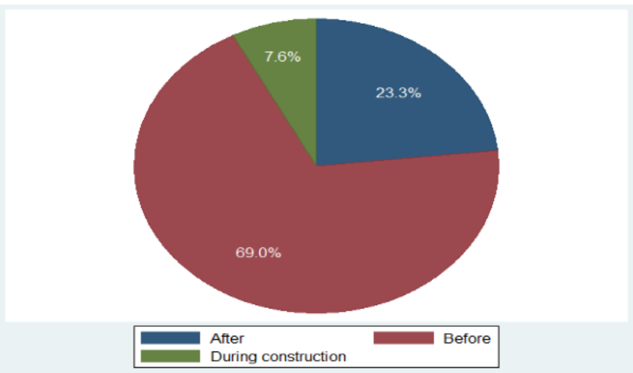
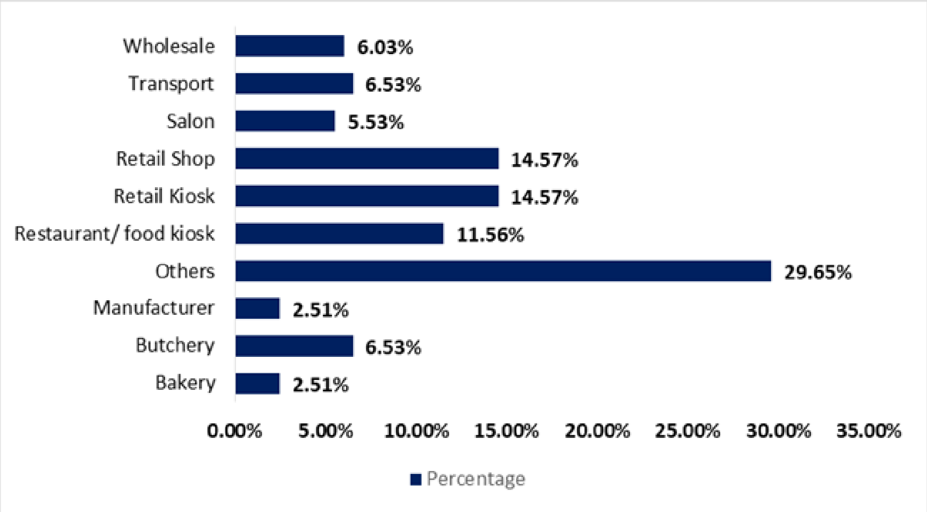


Figure 2 depicts the evolution of businesses within the road construction area. It reveals that 69 percent of businesses had been in operation before the construction of Magongo Road, Airport Road and Port Reitz Road; 23.3% were established after the construction while 7.6% of businesses were set-up during the construction. Overall, about 30% of new businesses sprung up during and after the road construction, an indication that the road improvement initiative attracted businesses in the area.

Business by type

Majority of businesses in the area are Micro, Small and Medium Sized Enterprises (MSMEs) with small retail shops and kiosks being the most pronounced at 30% (figure 3). This can be attributed to the minimal capital requirement for establishment, and minimal skillsets in management. Specifically, business composition is as follows: Wholesale (6%); transport (6.5%); Salon (5.5%); retail (shops and kiosks-29%); restaurants (11.5%); manufacturing (2.51%); butchery (6.53%) and bakery (2.51%).

Figure 3: Types of businesses



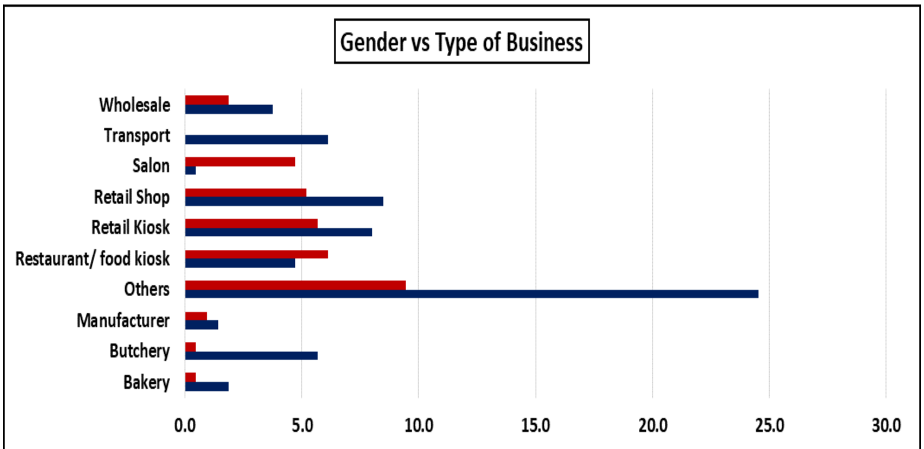
(Source: TMEA traffic census survey, 2019)

Restaurants/food kiosks businesses trading in food and food items i.e., restaurants, food kiosks, butcheries, and bakeries are popular after retail. Wholesale businesses might require more capital to start hence their little concentration.

Business Ownership

Overall, there 65 % of businesses are owned by male compared to 34.9 % owned by Women (figure 4).

Figure 4: Gender and business type



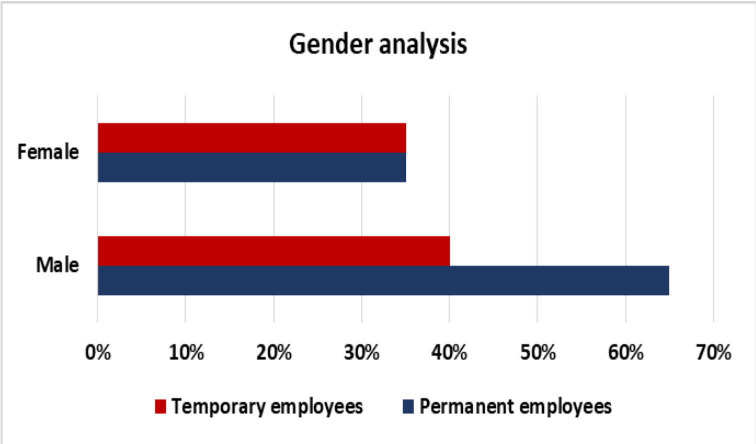
	Bakery	Butchery	Manufacturer	Others	Restaurant / food kiosk	Retail Kiosk	Retail Shop	Salon	Transport	Wholesale
Female	0.5	0.5	0.9	9.4	6.1	5.7	5.2	4.7	0.0	1.9
Male	1.9	5.7	1.4	24.5	4.7	8.0	8.5	0.5	6.1	3.8

Only specific businesses like salons and restaurants had female dominance. The aspect of male dominance in enterprise could be due to more opportunities available to men compared to women, risk averseness of the females, household duties and caregiver duties in the households for women hence less time to go out and do business. This might be an indication that more women could be caregivers at home or housewives, or they are involved in other professions or activities like farming or market traders hence the high number of male-owned businesses.

Employment

In terms of employment, about 65% of male employees are in long-term employment compared to 35% female employees, while their share in temporary employment is 40% male and 35 % female as depicted in figure 5.

Figure 5: Employment by Gender



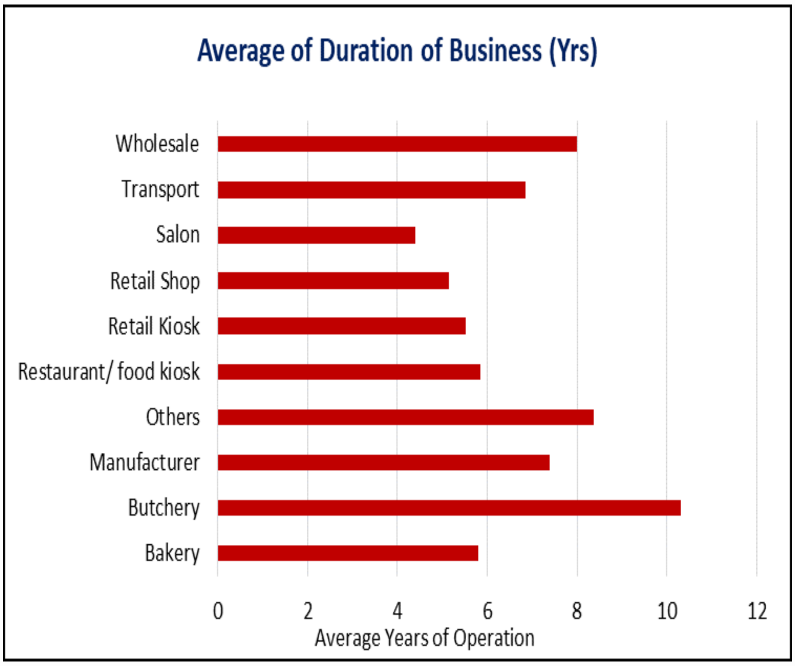
(Source: TMEA traffic census survey, 2019

It seems men have more stable tenure at employment in businesses compared to women and this might be an indication of high number of male-owned businesses, with women splitting their time between work and caregiving duties hence less permanent tenure and likely to be on and off employment on temporary tenure.

Duration of business existence

On average the surveyed business have been in existence for 5 years (figure 6) with the longest 10 years and the least about 4 years

Figure 6: Duration of business existence



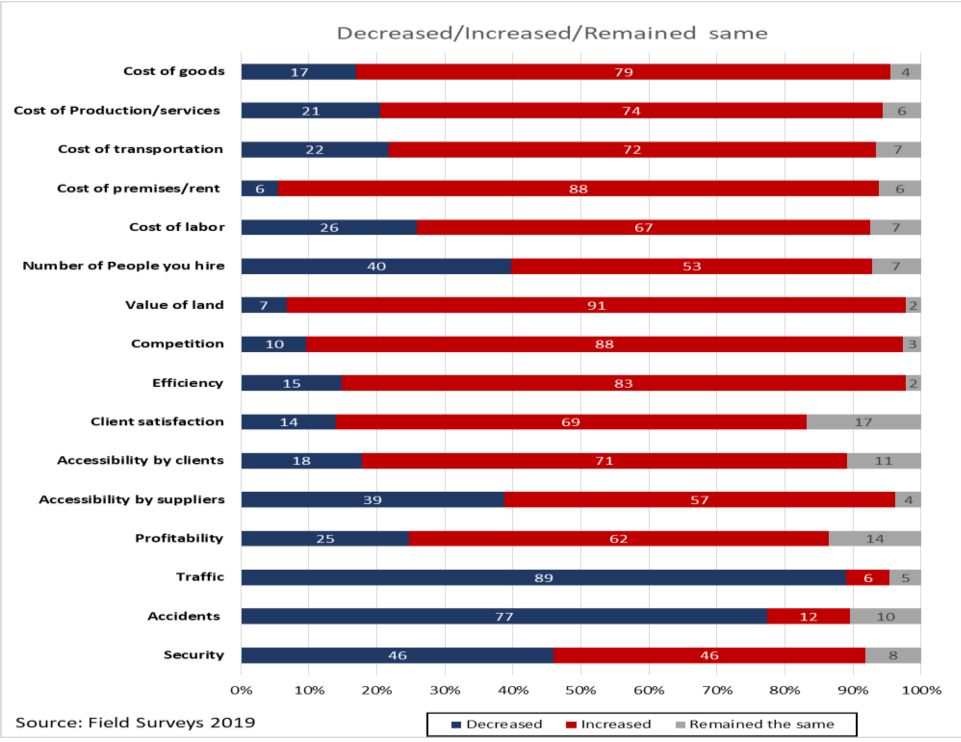
(Source: TMEA traffic census survey, 2019

The businesses that have been in longest existence are: Butchery (10yrs); Wholesalers (8yrs); Transport (7yrs); Manufacturers (7yrs); Bakery (6yrs); Restaurants (6yrs); Retail Kiosk (6yrs); Retail shops (5yrs). Salons that are women dominated have been in existence for 4 years. These businesses have lasted for over 3 years since they are mostly managed by their owners who have close knowledge of their businesses and offer consistent and satisfactory services to their customers who in turn ensure loyalty to the businesses.

Business operations

Generally, 72% of the sampled businesses observed increases in costs of transportation, rent (88%), land value (91%), production (72%), labor (67%). With the road improved, more business opened up and those existing improved on their services by offering a variety of products resulting in 88% of the businesses reporting an increase in competition. Competition further resulted in increased client satisfaction in 69% of firms due to innovation and continuous improvement of products and services (figure 7).

Figure 7: Road impact on businesses operations



With more clients and suppliers accessing the businesses, product differentiation, and higher client satisfaction, 61% of the businesses reported increase in profits margins. This might be due to increased access to value-chains and markets.

Road safety improved greatly with 89% of firms noting reduction in traffic jams and 78% in accidents respectively. The good condition of the improved road ensured seamless use without stoppages.

3. Conclusions

Investment in transport infrastructure is critical for sustained economic growth and development. The Mombasa roads improvement project is important towards improving efficiency at the port and connecting the port to hinterland thereby boosting economic productivity and fostering economic integration among EAC Country member states that rely on it for trade. Some key insights are:

- The road infrastructure attracted additional 64 new businesses (a 30 % increase) due the associated benefits of efficient transport, access to markets by new ventures, suppliers and customers.

- Majority of businesses are MSMEs with 30% of retail type followed by restaurant and eateries at 11.5%. These kind of MSMEs are relatively easy to establish with minimal capital requirements and easy to manage hence could offer potential to provide large number of the populace with jobs and income earning opportunities.

- There is male dominance (65%) in businesses as compared to women (34.9%). Further, in terms of employment men have more stable job tenure compared to women who are mostly in temporary short-term roles. This shows that there is still a gender gap in business establishment and employment in MSMES to the disfavor of women.

- Competition has increased with 88% of businesses citing more competition as both new and old firms innovate and offer a variety of goods and services. As a result of competition, 69% of firms noted increased client satisfaction among their customers.

- Improvement in efficiency of supply chains was observed with 57% of firms indicating that they could easily access to supplies and 71% noting improved access to customers. Well-functioning supply chain is key for planning stocks and forecasting demand and supply.

- Overall, 61% of firms experienced increased profits as result of road improvement attributed to efficient supply chains, access to market and customers, innovations from competition and increased customer satisfaction.

- Road safety improved greatly with traffic jams and accidents reducing by 89 and 78 percent respectively. The good condition of the improved road ensured seamless use without stoppages due to bad sections. Further, the new road is in good condition hence reduced accidents.

4. Recommendations

Road transport has an expansive role in shaping development. Policy concerns in the next millennium should increasingly focus on the effects of transportation on where people live and where businesses are located; and on the effects that these location decisions have on land use patterns, congestion of urban transportation systems, use of natural resources, air and water quality, and the overall quality of life. These issues have already pushed their way to the forefront of policy debates at both the national and local levels. To reach prudent decisions, policy makers must be equipped with the best information and analysis possible on the interactions among these factors. (Mustapha Muktar, 2011). Key policy focus areas for policy makers are:

- First, key infrastructure among them roads, rail, and ports are essential to enterprise, opening up of supply chains, linkages, products and business diversification, competition, innovation and providing access to markets. Government in partnership with actors like TMEA could formulate policies and strategies for increased infrastructure development towards regional integration including the AfCFTA

- Secondly, with majority of business outlets being retail and MSMEs, it is imperative that actors create a favorable environment e.g., policies, regulations, and necessary infrastructure (access roads, electricity) that supports operations of MSMEs firms.
- Third, there still exists a gender gap in business establishment and employment in MSMEs with more men owners and employees in firms compared to women. Government and actors like TMEA could institute policies and programme targeted at encouraging women to participate in trade and lobby to have critical enabling infrastructure in areas/sectors for women to also benefit. TMEAs Women in Trade (WiT) programme that is targeted to contribute to greater inclusion of women in trade in Eastern Africa is one such initiative by a non-Governmental actor.

- Finally, infrastructure investment serves as a tool to guide industrial policy and value-chains access. Government should consider activating this channel by investing in specific infrastructure projects at strategic locations with the intention of guiding private-sector investment decisions. This will provide a direct avenue for TMEA to see its mandate of increasing market access plus enhancing trade environment.

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