

47783

**KENYA: ISSUES IN TRADE LOGISTICS**

July 2005

## TABLE OF CONTENTS

<b>ACRONYMS</b>	<b>1</b>
<b>EXECUTIVE SUMMARY</b>	<b>2</b>
<b>INTRODUCTION</b>	<b>10</b>
<b>1. TRADE FLOWS AND TRADE LOGISTICS</b>	<b>13</b>
1-1 Trade Flows	13
Northern Corridor	15
1-2 Shipping Patterns and Global Connections	18
<i>Container Throughput</i>	19
<i>Traffic with Europe</i>	19
<i>Traffic with Asia</i>	20
1-3 The importance of Air Freight in Kenya.	21
1-4 A Long Supply Chain: the Case of the Garment Sector	23
<b>2. INSTITUTIONAL FRAMEWORK FOR TRADE LOGISTICS AND THE REFORM AGENDA</b>	<b>26</b>
2-1 Background	26
2-2 Transportation policies.	28
Railways	30
Ports and Shipping	30
Air Transport	30
2-3 Regional Cooperation in Trade and Transport Facilitation.	31
COMESA Yellow Card	32
2-4. Current initiatives and projects in facilitation.	34
<i>Regional and Local Trade Facilitation Forums in Kenya</i>	34
<i>KRA Modernization Initiatives</i>	34
<i>KPA Modernization Initiatives</i>	35
<i>Railways Modernization Initiatives</i>	36
<i>World Bank led facilitation projects.</i>	37
<i>Other Donor Supported Initiatives</i>	37
<b>3. OBSTACLES IN TRADE AND TRANSPORT FACILITATION</b>	<b>39</b>
3-1 Cost and Delays for Imports or Transit of Goods	39
3-2 The Congestion at the Port in Mombasa	41
<i>Equipment and Infrastructure</i>	43
<i>Organization and Management of the Container Terminal</i>	43
<i>Consignees</i>	44
<i>Evacuation of Containers: Road and Rail</i>	44
3-3 Documentation and Procedures	45
<i>Flow of Documents</i>	46
<i>One Stop Centre</i>	47
3-4 Transit Procedures	47
<i>Proposed Improvements</i>	49
3-5 The case for integrated management of trade information and the Potential of EDI for Kenya and Landlocked Countries	51
3-6 Weighbridges	54
<i>Inconsistency in Regional Regulations</i>	54

<b>4. TRANSPORT AND LOGISTICS SERVICES</b>	<b>57</b>
4-1 Forwarders and clearing agents.	57
4-2 Road Transport Services	58
<i>Regional operations and Comparison with Tanzania Trucking Sector.</i>	61
4-3 Bottlenecks on the development of logistics services..	63
4-4 The nexus of trade logistics and rural logistics.	65
<b>5. CONCLUSIONS: FROM TRANSPORT TO LOGISTICS?</b>	<b>69</b>
<b>REFERENCES</b>	<b>74</b>
<b>ANNEX 1 AXLE LOAD REGULATIONS IN TANZANIA, UGANDA AND KENYA</b>	<b>77</b>
<b>ANNEX 2 RAIL VS. ROAD COMPARISON BENEFITS OF EDI SYSTEMS</b>	<b>80</b>
To Nairobi	82
<b>ANNEX 3 LOGISTICS FRIENDLINESS INDEX</b>	<b>85</b>

### LIST OF TABLES

Benchmarking of Kenyan Reforms Against Other Countries in Sub-Saharan Africa.....	9
Kenya Imports and Exports (000 tons) .....	13
Container Traffic in Mombasa (000 tons) .....	14
Total Exports and Imports by Destination (Ksh Billion).....	14
Transit Traffic: 1999- 2003 (1000 DWT).....	15
Distance from Mombasa .....	16
Import Shares of Rail in Local and Transit Markets in Imports .....	18
Container Throughput in TEU .....	19
Evolution of Rates for 20ft Containers Between North Europe and East Africa .....	20
Shipping Rates for Asia (1996-2004) .....	20
Logistics Routes and Time Estimates .....	25
Cost of Transportation for Containers (road).....	40
Mombasa Port Charges .....	40
Delay statistics on the Mombasa-Kampala road observed by a major operator in 2004.....	41
Performance Indicators at Dar es Salaam Container Terminal.....	42
Axle Load Controls for East and South Africa.....	55
The World Food Program tariffs (USD).....	60
Cost Structure for a Trucking Company .....	60
Transaction Costs in Kisumu District.....	67
Existing Projects: Critical Issues Addressed by the Existing Projects .....	71
Matrix of Recommendations.....	72
Volume and costs projections for the railroad concession.....	81
Railway charges from Mombasa to Nairobi (US \$) .....	82
road transport rates for 20' container.....	83
Road and Rail Split for Containers .....	83
Overall Logistics Perception Index (2004). (1 worst - 7 best).....	85

## **LIST OF FIGURES**

Main Routes of the Northern Corridor	16
Simple Supply Chain Illustration for Textiles	24
Point to Point Information Flow	53
EDI Information Flow	53
Figure Supply Value Chain for Nyandarua District	66
Tanzania Maximum Legal Axle Loads and Gross Vehicle Weights	77
Uganda Maximum Legal Axle Loads and Gross Vehicle Weights	78
Kenya Maximum Legal Axle Loads and Gross Vehicle Weights	79

## **LIST OF BOXES**

The Northern Corridor Authority	17
Delay vs. Predictability	40
The Productivity Jump at Dar Es Salaam	42
Import Declaration Process in Mombasa	46
Import/Export Documentation	46
Securing Containers for Transit by Train	50

## ACRONYMS

AGOA	African Growth and Opportunity Act
ASYCUDA	Automated System for Customs Data
ATRB	Air Transport Regulatory Board
CAA	Civil Aviation Authority
COMESA	The Common Market for Eastern and Southern Africa
CRM	Customs Reforms and Modernization
EAC	East African Community
EAU	East African Union
EDI	Electronic Data Interchange
FIAS	Foreign Investment Advisory Service
GOK	Government of Kenya
IFC	International Finance Corporation
JKIA	Jomo Kenyatta International Airport
CAA	Kenya Airports Authority
KEPHIS	Kenya Plant Health Inspectorate Service
KIFWA	Kenya International Freight and Warehousing Association
KPA	Kenya Ports Authority
KRA	Kenya Revenue Authority
KRC	Kenya Railways Corporation
MaGeRwa	Magasins Généraux du Rwanda
MFA	Multi-Fibre Agreement
MoRPW	Ministry of Roads and Public Works
MTC	Ministry of Transport and Communication
PMAESA	Port Management Association of Eastern And Southern Africa
RMV	Registrar of Motor Vehicles
RA	Rwanda Revenue Authority
SADC	Southern African Development Community
TEU	Twenty Foot Equivalent Unit
TLB	Transport Licensing Board
TRS	Time Release Study
TTCA	Transit Transport Coordination Authority of the Northern Corridor.
URA	Uganda Revenue Authority
URC	Uganda Railway Corporation
WCO	World Customs Organization

## EXECUTIVE SUMMARY

The objective of this report is to analyze Kenya's trade logistics performance. It looks at issues such as cost and efficiency of international and national logistics services, or physical and procedural impediment to trade and transport facilitation.

Competitiveness is a vast and multi-faceted concept, encompassing issues as diverse as labor skills, technological innovation and quality, infrastructure, judicial security and red tape. Facilitation and logistics play a key role in enhancing a country's competitiveness, by reducing transactions costs and improve the integration of the country in World trade. Achieving a smooth logistics reduces the cost of imports. It is also crucial to manufactures or producers to be able to participate in global production circles and eventually diversify into new business opportunities. Improving logistics includes several dimensions: enhancement of logistics capabilities, the development or rehabilitation of the physical infrastructure, and the streamlining of trade related procedures.

Historically, Kenyan trade and national logistics developed from the port of Mombasa taking advantage of the Ugandan railroad. This linear spatial structure along a corridor, so common in sub-Saharan Africa, remains even after road traffic took over the rail and the more recent development of aerial alternative to the corridor. Today most of the cities and economic activities in Kenya and the hinterland (Uganda, Rwanda) are located or close to the so called Northern corridor. Logistics in Kenya is therefore very much about one type of operation: operators struggling against various procedural and physical impediments to move goods along the corridor and eventually not too far off. Currently about ten million tons are moving along the corridor by various means: trucking, railroad or the Kenyan pipeline.

Despite this apparent simplicity, today's Kenyan logistics is a story of contrasts. On one hand, the country is addressing daunting challenges on the public sector side to catch up on investment in infrastructure and reforms that have been neglecting for two decades, and implement modernization projects at the port and the customs, or privatize the railways. On the other hand, a rather efficient private sector emerged and was able to develop innovative solutions despite a poor investment climate.

The most famous and documented example is the emergence of a very efficient air logistics, which provides a first class connection between Kenya and the global markets. Air transport, not only sustains the tourist industry but also made possible the Kenyan presence in the flower and horticulture markets. Kenya has become a leader in the field because private entrepreneurs, Kenyan and foreign investors alike, have been able to develop a very efficient supply chain, reaping the potential of JKIA. The cycle from the field to market in Europe can take as little as 24 hours. The volume of exports is over 100000 tons, with cost of shipments to Europe around 50% of cargo rates in other African countries. This success was made possible by private initiative and global liberalization of air-transport, and despite a backlog in the physical infrastructure.

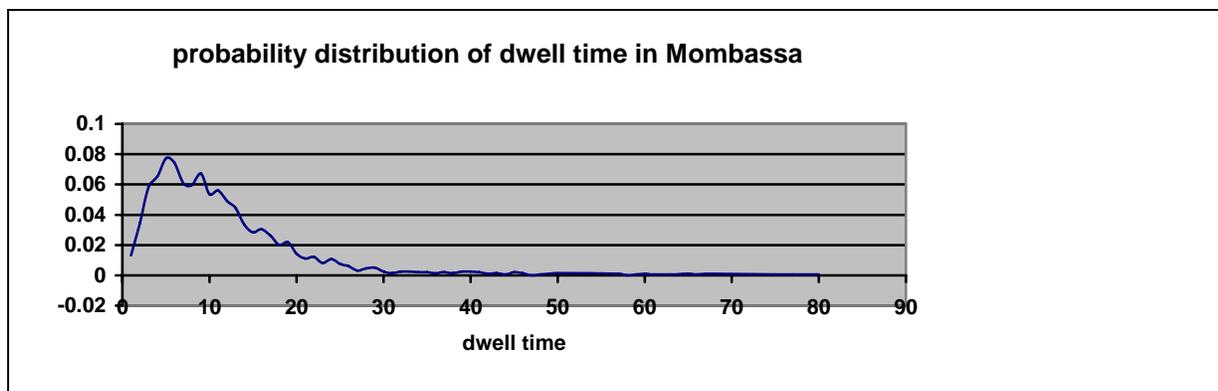
This example has become a paradigm (English- Jaffee 2004, Jaffee, 2003 and GDS, 2004) on how efficient and innovative logistics is critical for growth and private sector development. Another example is the recent concentration, modernization and increased professionalism of road transporters and freight forwarders who provide the logistics services along the corridor.

### **A poor performance due to the backlog in investments and reforms.**

In contrast, the trade by sea and land routes (98% of the trade in volume or 10 million tons) is facing major hurdle and bottlenecks. These problems are well known, and are results of past public policies. They include:

- *Customs operations.* They are still essentially manual and relatively complex procedures.
- *The port operations in Mombassa.* They have not kept pace with the needs of the shipping and trading communities. The port faces congestion, less for capacity reasons than for management issues including sub-optimal investments, complex procedures, and lack of cooperation in the port community...
- *The collapse of Kenyan Railways since the 80's.* Kenyan Railways Corporation (KRC) has essentially left the freight market to the road sector.
- *The backlog in road infrastructure.* Kenya has a dense network of road but maintenance has been neglected for the past two decades. The condition of some section of the main road of the corridor is very bad and is a serious bottleneck to a relatively high traffic (600 trucks a day from Mombasa).
- *Constraining transit and border crossing procedures,* which affect the transit trade towards landlocked destinations such as Uganda and Rwanda. (About 20% of the trade going through Mombasa).

As a result the facilitation indicators are not favorable. On average it takes about two weeks to clear a container at the port. Furthermore, a container in transit must register into an escorted convoy to the Ugandan border (Malaba), which doubles the time of transit compared to an unimpeded truck driving at the speed permitted by the infrastructure (in practice more than 4 days for eight hundred km). Land border crossing can take two days. Furthermore, these links on the supply chain of Kenya and landlocked country are afflicted by a high degree of unpredictability, which can result from the treatment of procedures, especially poor information systems, of physical bottlenecks at the port or en route (bad road to Nairobi or queue at the weighing station). For instance, there is a huge dispersion in the container dwell time in Mombasa, as illustrated by the data provided by one of the most organized operator.



Delay statistics on the Mombasa-Kampala road observed by a major operator in 2004.

	mean	standard dev	median
Port Mombasa	11.6	9.4	8.8
Transit Kenya	4.3	2.1	3.5
Malaba	2.0	1.6	1.3
Transit Uganda	1.8	0.8	1.3

*In days*

These patterns imply that Kenya and the landlocked countries depending on Kenya have less than perfect connections to the global economy. Poor trade logistics create a high burden on these economies. Uncertainty is a huge burden to operators and consignees, especially manufacturers. Furthermore, Kenya has less than an ideal location from main markets. Shipping relies on long routes through hubs in South Africa or the Middle East. Kenyan manufacturing sector is constrained by supplies coming from distant locations (mainly Asia) as demonstrated by the textile sector example in Chapter 2. Even the well organized air-freight at Nairobi International Airport is dependent upon global trends and is vulnerable to directional imbalances and high fluctuation in rates that amputate the revenue of producers. The later had recently to absorb an increase of the share of transportation from 33% in 2004 to 47% of the delivered price.

Changes in shipping and air-freight are global trends and clearly cannot be mitigated by policies at the Kenyan level. But investing in trade facilitation is imperative in order not to add to the impact of distance.

Beyond facilitation issue, a widespread perception is that Kenya suffers from very high inland cost of transportation and that they are acute problems in rural areas. Notwithstanding the problem of rural poverty and the potential of trade to reduce poverty, existing logistics are not major constraints either for long distance transport or to transport goods from the farm to processing plant or collection centers. Rural accessibility has been targeted by consistent policies supported by donors such as the Road 2000 programs for minor roads. Furthermore field data shows that rural transportation costs are potentially a small fraction of total? A More serious constraint is to be found in the traditional commercial organization.

Several layers of intermediaries filter market signals to the primary producers and capture substantial rent on the price gap from farm to market.

For international and long distance logistics, thanks to early deregulation of the transport industry, transport and more generally logistics services have been thriving in Kenya during the last decade, in part to compensate for the decaying public services especially concerning rail transport... For instance, Kenya hosts one of the most efficient and best organized road transport industry in Africa. The same can be said for the forwarding industry. The private sector has been a key player in instigating and pushing the modernization agenda. The quality of services and operating costs of top providers in the trucking industry are closer to Europe than to other sub-Saharan African countries.

Therefore, there is no clear gap in existing transportation policies that should address issues beyond the existing constraints on the international infrastructure and the enabling of a facilitation environment.

Underscoring also the urgency of the modernization agenda, is the fact that Kenya is very much behind other sub-Saharan gateway countries in the design and implementation of core trade and transport facilitation measures in ports, railroad and custom modernization. It is not that the core problems have not been identified, there have been a facilitation forum at Mombasa and in the Northern corridor for years and some issues have been pointed out by development agencies for a decade. But due to lack of political impulsion, or clear prioritization, even obvious consensual facilitation measures (e.g. bond waiver for train transit) were not implemented. At the same time investment were made in lesser priority project were made: KPA invested in ICD while neglecting much needed and less costly investments at the container terminal (gantry cranes, container tracking).

Therefore and, despite the recent measures, it is not surprising that international logistics operators have a rather negative perception of the logistical performance of Kenya compared to other developing economies. A recent assessment (2003 published in 2004) is given by the Logistics Perception Index, which reflects the experience of major international operators. Kenya is ranked as the **least logistically friendly** of a set of 70 countries, which also includes Nigeria, Ghana, South Africa and Zambia. (See Annex 3 for more information on Logistics Friendliness Index and a list of rankings)

### **A drive for modernization.**

In the last two years, Kenya saw an unprecedented drive for modernization. The current agenda addresses four main areas:

- Improvement in road infrastructure. With the help of donors, mainly the EU and the World Bank, Kenya is carrying out an ambitious program to upgrade its road infrastructure backed by a consistent maintenance policy (World Bank 2004).
- A Customs Reform and Modernization (CRM) program has been launched in 2003 with support from the World Bank and the IMF.

- The governments of Kenya and Uganda are currently concessioning the operations on the Mombasa-Nairobi-Kampala line
- As part of its modernization program, the Kenyan Port Authority (KPA) is investing in key equipment (gantry cranes) at the container terminal and is working on the automation of the waterfront information system. The Grain terminal has been privatized.

Current projects, if seriously implemented, will improve productivity (e.g. new equipment in the port) enhance facilitation and bring down the time of customs processing (GAINDE 2000) However, a successful implementation requires not only new equipments but also the will to eliminate a proliferation of rent activities that stem from the present inefficiency of the system. Better organization and coordination is also needed to avoid unnecessary logistics at the port. The first test is the implementation of an effective container tracking system.

Although not as critical as other components (customs, port, roads), a successful privatization of the railways can bring more competition and spur further positive changes in the transport services. But it the privatization may not alter radically the current modal shares. Improvements in the road infrastructure, such as the Northern corridor project, will also bring down cost and delays and help improve the quality of services.

There are still some implementation due to the many vested interests and entrenched improper practices. However, there is unique conjunction of favorable factors of implementation of the modernization projects.

First the private is an active agent for change. The maturity and the quality of the professional organization in the key areas (freight forwarding transport) guarantee that the private sector can be an active participant in the reform and there will be no issue of adaptation to new procedures and technology. In fact the problem may be the reverse, in some areas (such as transit), the public modernization program should factor the technologies already deployed by the private operators.

There is a lot of cooperation on the ground, with two closely related facilitation forums. The first one is the port community in Mombasa around KRA and KPA, which is an active reality on the ground with the capacity to move consensual projects. The second are the Northern Corridor organization and its stakeholders' forum, which that make the link with other countries and therefore focuses more of transit. There is competent staff in those organizations working closely together. There is proliferation of facilitation initiatives in Kenya, in part, due to the donors' policy. While a good thing in principle, a large mobilization is not needed given the work on the ground and may be a distraction.

Finally there is significant donor support to this activity. The World Bank is probably the most active donors with a comprehensive approach to trade logistics. An EAC facilitation projects under preparation will target further facilitation measures in the ports and along the Northern and Central corridor (border crossing, transit). It will pave the way towards the

customs union project. Bilateral donors (USAID and DFID) are also providing support to some facilitation activities (studies, workshops).

### **Further critical measures.**

Yet, the mission found that it is today necessary to look further than the existing set of measures.

To insure consistency and benefit fully from the projects under implementation it is crucial to develop a roadmap of EDI. Such a topic goes beyond Mombasa, as it should involve also transit activities (e.g. cargo tracking). EDI is not utopian in Kenya, given the degree of sophistication of the private sector. By nature, a federating project, EDI deployment can bring together operators and stakeholders from Kenya and other countries. It is likely to be implemented as part of the preparation of the EAC World Bank project.

Transit is a big issue not addressed in a fully comprehensive manner under current plans. The CRM has developed very sophisticated plans, based on unproven techniques, without consultations of stakeholders and other countries. It is urgent that stakeholders and governments re-discuss the issue and propose simple and proven tools to dismantle the present convoy system. Technological solution for sealing or cargo tracking should not be considered before the implementation of a basic information system on goods in transit is in place. It should rely simply on two ingredients: a carnet system (road manifest attached to the truck) and real time reconciliation of transit information between port of entry and port of exit.

There is a lack of indicators on facilitation and also on market structures and operational cost of services. This knowledge is important to prepare future project and policies and measured the results. Automation projects will make the collection of some data easier (customs and port performance). The secretariat the TTCA, Northern Corridor Authority, is probably the most qualified and experienced body to take the lead and compile information from government agencies in the sub-region and the private sector.

Present weighbridge regulations operations create major disruptions and are also the source of cross-country inconsistency. The road department should address first the modus operandi and the associated bad practices (move to weigh in Motion?). Furthermore, it is highly desirable to insure consistency between regulations in the EAC countries: individual countries have diverged from the initial COMESA recommendation.

### **The future: a regional hub of logistics services?**

There is not yet in Kenya the emergence of third party logistics services, witnessed in transition or emerging economies, and which would provide new services to importers and exporters. Such an occurrence would signal a new degree of integration of services in the sub-region. It is unlikely to happen in Kenya at a large scale. In fact, logistics in Kenya is still very much organized along one corridor, reflecting the segmentation along corridors of

the regional demand for logistics services. There is limited overlap between port hinterlands (the Central and Northern corridor compete only in Rwanda). However, there is potential for increasingly bring more added value than point-to-point transportation on the Northern Corridor (e.g. regional hubs to distribute products in several countries). Operators based in Kenya are certainly well positioned to provide services regionally. Today only express carriers such as DHL are beginning to provide those services.

There are many obstacles to overcome to reach a Kenyan and a regional environment conducive not only of trade facilitation in Kenya but also of more regionally integrated market structure of logistics. Part of the problem is the lack of a strong demand. Another issue is that the market structures of transport services are too different between Kenya and Tanzania to make integration easy. Tanzania trucking is very fragmented with old trucks; its modernization is a prerequisite to any regionalization of the market without ill effects on other countries.

There are also a number of regulatory and fiscal issues in Kenya that inhibit the development of regional logistics services. Kenya should, either unilaterally or with other countries as part of the customs union project, examine these changes. Known issues include: a) the VAT definition for logistics services imported and the potential for double taxation, b) the possibility of inventories under customs for regional distributions, c) a regional bond systems c) taxes on transportation equipments.

**Benchmarking of Kenyan Reforms  
Against Other Countries in Sub-Saharan Africa**

	<b>Ports</b>	<b>Railways</b>	<b>Customs</b>
<b>Kenya</b>	Lack of investment, lagging productivity. Grain operations privatized	Decayed operations. Concession bid launched, result expected in 2005	Modernization launched, supported by GAINDE 2000
<b>Cameroon</b>	Container terminal modernized and privatized. Rest of the port under rehabilitation	Very successful privatization: high quality of operations.	In the process of modernization since 2003, New IT system deployed. Single window in Douala to be automated.
<b>Côte d'Ivoire</b>	Good standard of operations. Most operations (containers, stevedoring, tugging) have been privatized	Very successful privatization. Operations compromised by the security situation	Partially modernized, Aging in house automation program.
<b>Ghana</b>	Very few privatization of services, quality average but cheapest in the sub-region.	Limited to local coastal and mining traffic. Not privatized.	Partially modernized, Successful automation program extended into a community system.
<b>Senegal</b>	Good standard of operations. Most operations (containers, stevedores) have been privatized.	Privatization completed, operations of the concessionaire started.	Customs successfully modernized, Locally made IT system GAINDE 2000, now being implemented in Kenya
<b>Tanzania</b>	Very efficient container terminal operation (privatized). Rest of the operations to be privatized, (currently with average performance)	Very decayed infrastructure. Privatization process ongoing for the TRC network (to Uganda, Rwanda and Burundi), results expected in 2005. Future privatization of the rail link to Zambia scheduled for 2006.	Modernization in progress: Implementation of ASYCUDA ++

## INTRODUCTION

The objective of this report is to analyze Kenya's trade logistics performance. It looks at issues such as cost and efficiency of international and national logistics services, or physical and procedural impediment to trade and transport facilitation. It is part of the Diagnostic for Trade Integration Study prepared by the World Bank for the Government of Kenya.

Facilitation and logistics play a key role in enhancing a country's competitiveness, by reducing transactions costs and improve the integration of the country in World trade. Achieving a smooth logistics not only reduces the cost of import but is vital to producers to be able to participate in global production circles and eventually move into new business opportunities. Improving logistics includes several dimensions: enhancement of logistics capabilities, the development or rehabilitation of the physical infrastructure, and the streamlining of trade related procedures.

Trade logistics is therefore a rather holistic topic. It involves many actors and encompasses elements of both 'software' and 'hardware' that are mutually complementary. The 'software' aspects of logistics include laws, regulations, procedures (e.g. customs procedures, markets, services and institutions associated with the movement and storage of products along the production chains and from firms to their destination markets. The 'hardware' aspects of logistics include the physical elements of transport infrastructure: ports, airports, roads, telecommunications networks, storage capacity, access facilities and inter-modal exchanges.

It is useful to look at logistics in terms of Supply Chain, which is the sequence of operation from ports to consumer or on the export side from farmers to markets. The supply chain is not only an operational concept but also a useful analytical framework to measure transaction costs or to identify bottlenecks.

The achievement of smooth logistics therefore requires action at a variety of levels. First, it has implications for the internal organization of production processes within firms, entailing integrated supply chain management and management of inventories, as well as suitable packaging practices. Second, it has implications for those sectors that provide services associated with the movement of goods, such as transportation, packaging, storage and insurance. Third, it has implications for the state that must ensure an appropriate legal, regulatory and institutional framework for the private sector especially the logistics services. And fourth, it does require a high-quality infrastructure stock (particularly in transport-related areas) with corresponding investment commitments, most critically in those logistics facilities that possess public-good characteristics.

Kenya is a rather complex country when it comes to trade logistics. Kenya is major gateway country for the interior of Eastern Africa, through the Mombasa corridor. There is a dynamic private logistics services active on this corridor. At the same time several modes of transportation are competing including a history railroad system and a burgeoning air freight organization for export of horticultural product. Until recently public policies have been

lagging behind, resulting in serious bottlenecks in areas such as customs or infrastructures (road and ports).

The current public modernization agenda addresses four main areas:

- Improvement in road infrastructure. With the help of donors, mainly the EU and the World Bank, Kenya is carrying out an ambitious program to upgrade its road infrastructure backed by a consistent maintenance policy (World Bank 2004).
- A Customs Reform and Modernization (CRM) program has been launched in 2003 with support from the World Bank and the IMF (FIAS 2004, IMF 2003).
- Advised by the International Finance Corporation (IFC), the governments of Kenya and Uganda are currently concessioning the operations on the Mombasa-Nairobi-Kampala line
- As part of its modernization program, the Kenyan Port Authority (KPA) is investing in key equipment (gantry cranes) at the container terminal and is working on the automation of the waterfront information system. The Grain terminal has been privatized.

The World Bank is currently preparing a project at the sub-regional level to further and coordinate the current facilitation efforts, notably on the Northern (Mombasa) and Central (Dar) corridors and help paved the way towards a customs Union in the East Africa Community. The current report has been in part written with this project in mind.

Given this overall objective this report is not an exhaustive review of trade logistics in Kenya. For instance it does not cover supply chain management by the private operators or the detail of the relevant investment of public sector reform projects now being implemented. The present work focuses on three related issues:

- The performance (market structure, quality of services, cost) of transport of logistics services and the potential for a regional integration of this market.
- The obstacles faced by logistics services on the path to a better performance and a better integration.
- Gaps in existing or planned facilitation initiatives, and potential for complementary measures and initiatives.

The report takes stock of available sources notably the reports and data compiled by the Northern corridor in Mombasa<sup>1</sup>. Recent analytical works on Kenya or East Africa have covered with details many aspect of facilitation. The most significant include:

- The Transport Sector Memorandum (World Bank, 2003)
- The Info-Memo on Joint Concessioning of the railways of Kenya and Uganda. (2004)
- The IMF report on the Customs Reforms and Modernization (CRM) (2003) and a FIAS follow up document (2004)

---

<sup>1</sup> A special thanks goes to Jean-Kizito Kababanguka for his help as well as to Joël Hartman in PMAESA

- The PMAESA corridor performance report. (2004).

Two component studies have been commissioned in parallel to this work: a study on rural logistics<sup>2</sup> costs and a regional Air transport study. Some of their results have been used.

The mission proceeded mostly through interviews in the private sector (transport companies, forwarders, shippers and consignees), or government agencies. It also visited key facilities in Mombassa and Nairobi.

The Report is organized as follows: Chapter 1 looks at the global trade connection of Kenya: logistics patterns, shipping, air transport. Chapter 2 summarizes the institutional background as well as the existing facilitation initiatives at the national or multi-country level. Chapter 3 scrutinizes the bottlenecks along the supply chain, especially customs and transit constraints on the corridor from Mombassa and finally Chapter 5 gives assess the market structure and performance (costs) of services available for trade operation in Kenya, special attention is given to the potential for regional integration of logistics services as well as availability of services to link farmers to market.

---

<sup>2</sup> The influence of rural logistics and rural transport costs on farm income and poverty in Kenya: The case of Kisumu and Nyandarua districts, by Dr Halima Noor.

## 1. TRADE FLOWS AND TRADE LOGISTICS

This Chapter examines trade and transit pattern, the sea and air connections to the global economy. A case study in garment gives an idea of the supply chain constraints in Kenya.

### 1-1 Trade Flows

Historically, the port of Mombasa has always been an important trading post in the Indian Ocean. Mombasa is the gateway for Kenya well as an hinterland that comprises Uganda, Northern DRC, Rwanda and Burundi, the later being mostly served from Dar es Salaam. However, a large fraction in value (18%), smaller in volume (5%) of Kenyan exports are now shipped by air from Nairobi. This very specific logistics and the corresponding issues are reviewed in section 1-3

In 2003, more nearly 12 million of tons were moved through Mombasa, including 9.3 million of imports for Kenya and landlocked countries, 2.1 tons of exports and 0.6 million tons of transshipments. Nearly half of the imports in volume, 4.5 million, are liquid product (oil). Out of the 9.3 million tons of imports, 2.2 million were transiting to Uganda and beyond. By comparison, air cargo represents about 200000 tons (80% exports).

Trade logistics in East Africa is still very much organized along the historical corridors. Furthermore, there is not much and limited potential for competitions between corridors (Dar es Salaam and Mombasa). The central corridor (Dar es Salaam) and the northern corridor (Mombasa) are competing only in the small market of Rwanda. Although each port is close to the Kenya-Tanzania border, there are only very limited shipments of goods from Mombasa to Dar es Salaam or vice versa.. The infrastructure does not favor those non-corridor related movements, The transport services, including the trucking services are also segmented by corridors.

Imbalance between exports and imports has been on the rise. This brings a serious logistical constraint because the transport costs increase due to lack of backload and empty return containers. The following table shows the difference between imports and exports between 1999 and 2003.

**Kenya Imports and Exports (000 tons)**

	1999	2000	2001	2002	2003
Imports (Dry)	3524	3704	4005	3918	4767
Imports (Liquid)	3180	3507	4292	3926	4490
Exports (Dry)	1609	1523	1802	2171	1797
Source: KPA statistics					

The container traffic has also been increasing steadily, essentially on the import side. Among container transport, the share of transshipments has been on the rise but not as fast as in Dar Es Salaam Port. The following table illustrates the full and empty containers passing through Mombasa from 1999 to 2003.

#### Container Traffic in Mombasa (000 tons)

		1999	2000	2001	2002	2003
<b>Imports</b>	Full	92.0	95.2	117.9	127.4	159.4
	Empty	17.0	17.1	16.6	15.9	14.2
<b>Exports</b>	Full	61.2	62.2	72.2	75.8	78.5
	Empty	47.1	44.7	58.1	58.9	78.7
<b>Transshipment</b>		15.1	17.7	25.8	27.4	49.6
<b>TOTAL:</b>		232.4	236.9	290.5	305.4	380.4
Source: KPA						

This imbalance is aggravated by the geographical patterns of Kenyan trade. The statistics show that Kenya is selling 46% of its products to other African countries. However, these shipments are mostly refined oil products from the refinery in Mombasa and to a lesser extent intermediate goods produced or transformed in Kenya (e.g. paper and iron products). In terms of major exports, Europe still remains as the principle destination for Kenyan commodities or manufactured good and a large part of these exports (flowers and horticulture) is shipped by air. The Far East is the second major destination for Kenyan exports. As for imports, Europe has lost its preeminence and now the imports are divided between Europe and Middle East (oil) with a growing influence from Far East.

#### Total Exports and Imports by Destination (Ksh Billion)

	Exports					Imports				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Europe	397	418	425	495	566	698	843	796	889	776
America	33	36	43	41	39	190	148	455	191	182
Africa	573	619	725	830	847	223	227	317	289	373
Middle East	54	66	89	71	66	431	735	689	513	754
Far East	153	157	165	188	212	480	492	609	666	711
Other	15	50	29	67	74	42	33	35	29	21
<b>Total</b>	<b>1,226</b>	<b>1,345</b>	<b>1,476</b>	<b>1,692</b>	<b>1,832</b>	<b>2,064</b>	<b>2,478</b>	<b>2,901</b>	<b>2,577</b>	<b>2,818</b>

Source: Kenya Economic Survey 2004

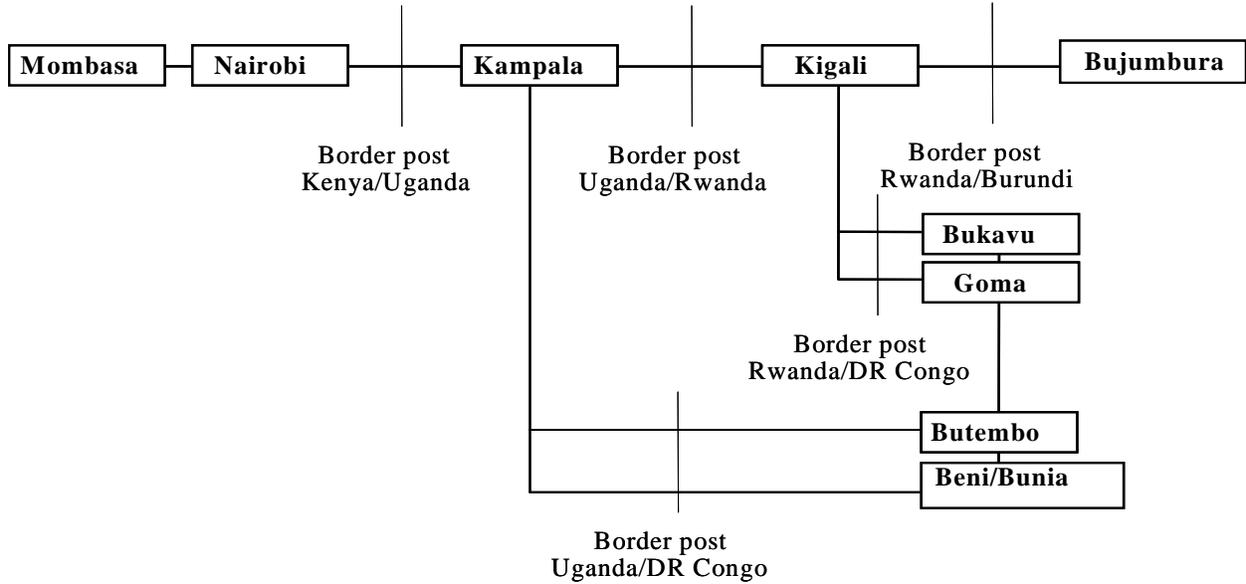
### Transit Traffic: 1999- 2003 (1000 DWT)

Country		1999	2000	2001	2002	2003 (October)*
<b>Uganda</b>	Imports	777	899	1,452	1,427	1,677
	Exports	235	216	217	283	217
	Total	1,013	1,115	1,670	1,710	1,894
<b>Tanzania</b>	Imports	51	79	126	135	161
	Exports	12	14	20	22	20
	Total	63	93	146	157	182
<b>Rwanda</b>	Imports	91	51	88	66	164
	Exports	18	21	21	15	13
	Total	109	72	109	81	177
<b>Sudan</b>	Imports	46	45	67	93	75
	Exports	0	0	0	0	0
	Total	46	45	67	93	75
<b>D.R. Congo</b>	Imports	42	27	57	86	57
	Exports	10	49	11	15	14
	Total	52	76	69	100	72
<b>Others</b>	Imports	16	53	52	68	52
	Exports	10	1	4	5	2
	Total	26	54	56	74	53
<b>Total</b>	Imports	1,025	1,153	1,844	1,875	2,186
	Exports	285	301	273	340	266
	Total	<b>1,310</b>	<b>1,454</b>	<b>2,117</b>	<b>2,215</b>	<b>2,453</b>
Source: KPA Statistics						

### Northern Corridor

The Northern Corridor is the main artery of transport facilities and infrastructure linking landlocked countries in the Great Lakes region of East and Central Africa. The corridor links Mombasa port with Burundi, D.R. Congo, Rwanda and Uganda. The following figure from TTCA shows the main routes on the northern corridor.

### Main Routes of the Northern Corridor



Source: TTCA

### Distance from Mombasa

Nairobi	Malaba	Kampala	Kigali	Bujumbura
485	941	1170	1670	1955

The Northern Corridor is a multimodal corridor that includes a combination of road and rail transport:

- The train goes from Mombasa to Nairobi, Malaba (border) and Kampala, with a branch to Kisumu. This train is operated by the KRC and the Uganda Railway Corporation (URC) since the break up of the EAU.
- Imports containers can be shipped to ICDs in Nairobi, Kisumu, Eldoret and Kampala. Major transport companies also have their private ICDs in Nairobi and Kampala. There are two publicly operated dry ports in Kigali (Magerwa) and Bujumbura (Entrepots Public du Burundi) where goods are cleared for Rwanda and Burundi.
- The road follows the tracks; there is no difference in distance for rail, road or multimodal transport.
- The pipeline goes from the refinery in Mombasa to Nairobi and Kisumu. The refined products are trucked from there to landlocked countries.

## **The Northern Corridor Authority**

The Transit Transport Coordination Authority of the Northern Corridor (TTCA) was created in mid 1980s with the mandate of promoting trade through improvement of transportation system and harmonization of trade practices and procedures. The TTCA is not an agency entrusted with administrative powers but a secretariat and a facilitator. Although a small organization, the TTCA has proven itself quite effective in:

- Providing diagnostics to member states and stakeholders: TTCA is the best statistical and analytic resource on trade and transport in the region.
- Bringing stakeholders from the countries together and help design improvements. In 2000, the TTCA established a stakeholder forum to look at critical issues in facilitation. This group includes transport operators and representatives from the private sector.

The TTCA helped simplify the transit documentation by implementing the COMESA Customs Document (CD-COM). It is currently supporting the revisions of the transit agreement and promoting the harmonization of axle-load regulations. The Stakeholders Forum has been instrumental in moving the debate on facilitation in Kenya in the sub-region, from advocating the reforms to concrete measures like the re-establishment of block trains between Mombasa and Kampala or the feasibility of one-stop border posts.

TTCA has been implementing a survey of obstacles to transit in 2004 and a feasibility study of cargo tracking with the help of donor funding.

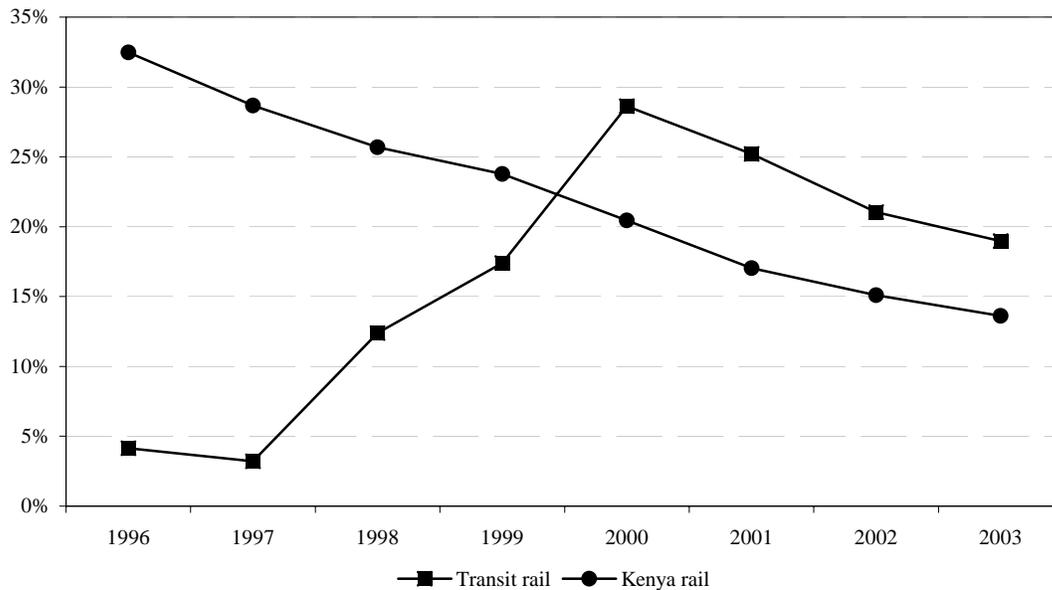
The quality of the infrastructure on the Northern Corridor is well documented. (World Bank 2003). The main concerns for the infrastructure can be summarized as the following:

1. The road network which transports 80% of the goods, is generally not in good condition. Maintenance of some of the sections has been very poor. Especially the section between Mombasa and Nairobi is in a critical condition and it handles a traffic of 400 to 600 trucks a day. Major rehabilitation is being implemented at Mombasa, Nairobi and Malaba (World Bank and EU projects) and at critical sections between Malaba and Kampala (EU project)
2. The quality of railway services in both Uganda and Kenya have been plummeting in the past two decades. Currently, the transit times are excessive and unpredictable. The railways suffer from:
  - Aging tracks and rolling stock
  - Not enough resources for maintenance
  - Inadequate communication systems and poor tracking of the wagons and cargo. The KRC and URC are not able to optimize the rotation of the wagons to meet the demand.

Despite the constraints on road transport due to the poor quality of the infrastructure and delays caused by transit procedures (Chapter 4), and lower freight rates for rail, the Kenya railways only has 15 to 20 percent market share in goods transport. In the 1980s the rail transported around 4 million tons of goods and dominated the market share while in 1990s the volumes dropped to around 2 million tons despite the overall increase in traffic.

The railways failed to capture the increasing volumes shipped through Mombasa. The railways were especially unable to organize the service and keep up with the demand for container transportation. While the container traffic in Mombassa increased by 65% in the last five years, the number of containers transported by rail did not increase. According to KPA statistics, in 2002 the rail only captured 17% of local traffic and 21% of transit for imports and 15% and 30% for exports of containers. The following figure illustrates the change in rail market share for imports between 1996 and 2003 where both the share of rail for both transit and local traffic has dropped 10% since 2000.

**Import Shares of Rail in Local and Transit Markets in Imports**



## 1-2 Shipping Patterns and Global Connections

East Africa is not on the major shipping routes and has little potential to become a hub. Furthermore, the volumes of trade between Eastern Africa and the major areas are too small to warrant regular direct lines that will call in Mombasa and Dar es Salaam. For example, the total trade of Eastern Africa to Europe is only around 100,000 TEUs both ways. The only direct to Mombasa and Dar es Salaam are from the Far East. Direct service from North Europe has been cancelled in mid-2004.

Therefore, Mombasa, like Dar es Salaam, is mainly served by feeder services from the Middle East and from South Africa. There are four main services that call at Mombasa Port:

- Maersk indirect service from Salalah (weekly)
- Conference of shipping lines (MSC, P&O Nedlloyd, ...) transshipment through Jeddah
- CMA-CGM, Delmas and SEAL via Indian Ocean Islands (every 10 days)

- Messina from Mediterranean to East Africa, South Africa and back to Mediterranean (weekly)

The shipping trends show that East African ports are increasingly served by feeder ships ports. Currently Mombasa port receives 40 to 50 container ships per month. On average these ships carry 2000 containers but due to the increase of feeders the ships are getting smaller. Therefore it is reasonable, to anticipate a relative increase in the number of calls compared to the throughput.

For Kenyan operators these patterns pose potentially serious constraints. Not only Kenya is far from the main markets, but it is being served by feeder ships that increase the delivery time and create uncertainty in delivery dates. The middle eastern ports like Jeddah are facing more and more congestion which means that the containers may not be transhipped in real time.

### *Container Throughput*

Both containerized cargo and break bulk have been increasing for Eastern and Southern Africa. Overall, there has been an 81% increase in container throughput in the region. Mombasa Port had its share from the growing trends but compared to the other ports in the region it had a slower growth as can be seen in the following table.

#### **Container Throughput in TEU**

Country	Port	1997	1998	1999	2000	2001	2002	2003	Change
Djibouti	Djibouti	144,314	133,128	124,425	122,473	142,185	176,453	241,122	67%
Kenya	Mombasa	230,698	248,451	232,417	236,928	290,500	305,427	380,353	65%
Tanzania	Dar-Es-Salaam	103,627	119,585	111,055	126,628	147,863	166,253	205,044	98%
South Africa	Durban	984,629	1,079,692	969,085	1,291,100	1,223,601	1,313,290	1,794,251	82%

Source: PMAESA, Liner Trades in Eastern and Southern Africa

It must be noted that for container shipping, distance is not the defining factor for price. It is more an effect of volume and competition. After the opening of South Africa to world trade, competition in the region increased and freight rates started to decrease. Between Asia and Africa the rates are falling while between Africa and Europe rates are stagnant and even decreasing as explained below.

### *Traffic with Europe*

PMAESA estimates the total volume of trade between Europe and Eastern Africa at 45,000 TEUs for the year 2001 (the actual figures are probably higher) but data is not available from the ports themselves because Kenya and Tanzania Port Authorities do not record the overseas

origin or destination of the cargo. The downward trend for shipping rates can be seen in the following table

**Evolution of Rates for 20ft Containers  
Between North Europe and East Africa**

	1995	1997	1999	2002	2004 <sup>3</sup>
Southbound (North Europe to East Africa)	US\$ 1600-1900	NA	\$1450	\$1100	\$1300
Northbound (East Africa to North Europe)	US\$ 1200-1550	\$1200	\$1000	\$850	\$850-950
Source: PMAESA					

***Traffic with Asia***

The official container volume figures for this Asia are not available. In 1995, the shipping lines estimated a 50,000 TEU for westbound and 25,000 TEU for eastbound traffic. More recently, a PMAESA analysis of container statistics for Dar Es Salaam and Mombasa showed that the traffic for Far East was around 23,000 TEU in 2000 which is consistent with the 1995 estimates. Until recently, there were no direct services to Mombasa or Dar Es Salaam and the shipments were through Middle Eastern hubs or Indian Ocean Islands. The trade with Asia is characterized by low volumes and high imbalance between eastbound and westbound trade.

The rate information from PMAESA indicates that the rates almost halved between 1996 and 2002 as can be seen in the following table. Starting in 2003, the shipping lines began implementing rate restoration programs. According to PMAESA interviews, the market rates are increasing for eastbound traffic are as follows:

**Shipping Rates for Asia (1996-2004)**

	1996	2002	2004 <sup>4</sup>
Westbound (from East Asia to Africa)	NA	NA	\$1600
Eastbound (from East Africa to Asia)	US\$ 1300 for 20 ft and US\$ 2200 for 40 ft	US\$600-800	\$400-600
Source: PMAESA			

<sup>3</sup> Shipping Lines announced several increases in 2002 in an attempt to recover the falling rates.

<sup>4</sup> Shipping Lines announced a series of rate increases between May 2003 and November 2004.

### 1-3 The importance of Air Freight in Kenya.

Air cargo import trade in the East Africa Region is very similar to that of other Regions in Africa (electronic goods, dairy products, luxury items) but the export business is very specific, with a high concentration on three categories of products:

- off-season high-value fresh vegetables (green beans, etc.);
- cut flowers;
- Freshwater fish from Lake Victoria (tilapia and Nile perch).

Kenya is the main exporter of fresh vegetables and cut-flowers in the region. The horticulture industry has now grown to be one the major job providers in the Nairobi and Kilimanjaro area. 18% of Kenyan exports in value are air-flown. It is estimated (East Africa Air Transport study 2005) that air transport sustains directly 25% of GDP:

- 15% for tourism with passenger transport
- 10% for horticulture with dedicated air cargo.

Air flown production in Kenya is a well documented success story. It shows that a dynamic Kenyan private sector has been able to access sustainable business opportunities. This was not the result of a positive economic but was made possible by the fact that there were few policy induced impediments and the services (air cargo) needed for the business could essentially developed without there was no government intervention.

The export freight business started in the Region when airlines offered attractive rates for outbound hold cargo because of the directional imbalance. This in turn encouraged the development of export-oriented agricultural productions. Specialized freighters stepped in the market when the demand became too big to be accommodated in the cargo hold of passenger aircraft; they were further attracted to the Region when some of the scheduled airlines withdrew from the passenger market.

Nairobi is the main cargo destination in Kenya and the region. A record of all-cargo flights at Nairobi International Airport is as follows:

2001-2002	Arrivals	Departures
Martinair Holland	597	599
Lufthansa Cargo	480	481
MK Airline Freight	340	347
DAS Air Cargo	328	330
Air France	235	235
Cargolux	129	129
Ethiopian Airlines	108	108
British Airways	68	68
El Al	28	28
Others	25	25
<b>Total</b>	<b>2338</b>	<b>2350</b>

Unfortunately there are no statistics available for volumes (Kenyan Airport Authority is not maintaining these anymore). According to exporters about 2000 tons are flown out of Kenya on average every week. Recent report on the flower business quoted a yearly volume of 41 000 tons for this product only (GDS 2004).

Although this logistics is very efficient, some features, stemming from the organization of the global industry, have a potential negative impact: unstable rates and directional imbalance. Unfortunately, these depend on global trends and are unambiguously beyond policy reach for the Government of Kenya.

The main concern of farmers and freight forwarders is the rate structure. In the time of IATA-regulated fares, there were officially posted fares, but these were undermined by everyone causing the industry to deregulate. Now, **the rate structure is unstable**, making it difficult for farmers to manage their costs in light of fluctuating selling prices in the destination countries. Like in shipping, the rates fluctuate upon demand and capacity: for instance there are inbound rates from Europe are lower than outbound rates. Rates are also directly dependent upon fuel prices.

The cost of air transport is a vital factor for this industry: airfreight used to represent 33% (\$ 1.7/kg in 2004) of the price, and it has now jumped to 47% with the impact of higher insurance and fuel costs. The farmers have to absorb this increase, as market prices are set at destination. The biggest wholesale buyers are in the Netherlands, with some also in the UK, Germany and Sweden. Airfreight is the responsibility of the farmers, as market prices are fixed CIF in the destination countries and fluctuate from day to day: the farmers ship their goods and pay the airfare without knowing what will be the next day's market price when their consignment arrives.

The regional passenger transport has evolved towards a hub and spoke patterns with Nairobi International airport as the hub. This sub-regional organization optimizes costs and capacity; it has been made possible by the consolidation of air transport in Africa and globally. By contrast air freight is carried out through point to point flights provided by very specialized operators linked or not major passenger carriers.

Exports volumes far exceed imports, but there are significant imbalances. The biggest import route is Dubai, which offers "sea-air" services (big consolidated shipments carried by sea from East Asia to Dubai, and then broken down for transshipment by air to African destinations). However, the European routes as a whole represent more business than Dubai's. **This traffic pattern is a cause of directional imbalance.** Export to Dubai remains low because of the competition of cheaper fresh products from India, resulting in bad northbound load factors; on the European routes, it is the opposite, with higher northbound than southbound load factors

In principle some form of optimization can be implemented with "tramping" (flying from place to place to consolidate their loads) through which carriers can adjust their operations to

the needs of the freight forwarders and ultimately provide cost savings for the shipper. However, scheduled direct flights are better for perishable farm products and more suitable for the needs of the biggest shippers such as the big flower farms.

#### **1-4 A Long Supply Chain: the Case of the Garment Sector**

The textile is a good illustration of the stringent supply chain constraints on manufacturing activities in Kenya, which are even worse for the countries in the interior of the sub-region. Producers must only exports to distant market but also supply from distant markets. On top of those logistics costs imposed by geography, the manufacturer typically faces trade facilitation bottlenecks on imported inputs which add cost but even worse unpredictability on the lead time of inputs and make the integration in a global production circle even more difficult.

Kenya Textile sector has been expanding under the United States' Africa Growth and Opportunity Act (AGOA). AGOA has been responsible for the creation of an estimated 30,000 jobs in Kenya during the past three years. The act was launched in 2000 and allows duty-free entry to the United States for most exports from Kenya and 35 other sub-Saharan countries. The value of duty-free sales to the United States consisting mainly of trousers and knit shirts , climbed from \$128.5 million in 2001, to \$249 million in 2003, and had reached 544 million by September of 2004. With the end of MFA on January 1<sup>st</sup> 2004, AGOA will continue to provide duty free provisions which will give Kenya an advantage in exporting to the US.

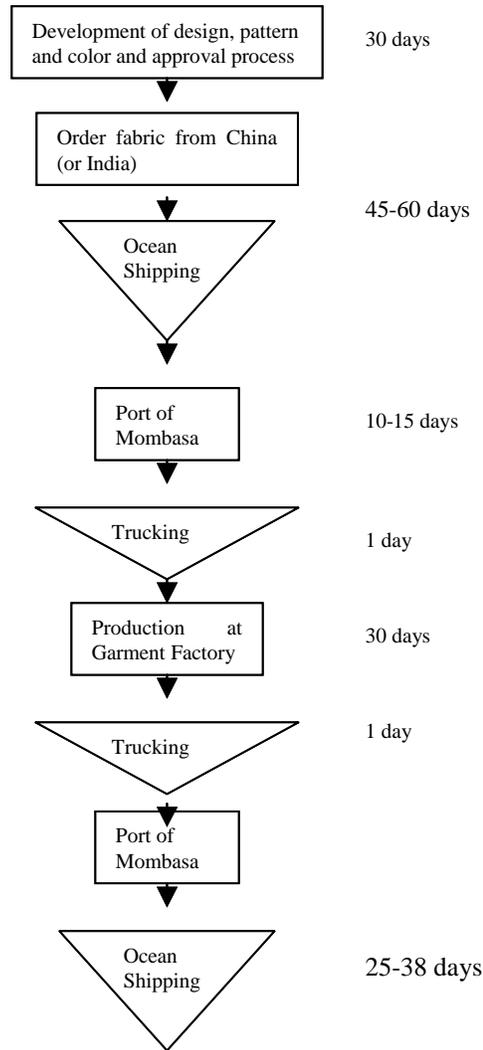
Most of the garments made in Kenya are produced from non African fabrics<sup>5</sup>. Purchased in India or China. It means that Kenyan garment manufacturers need to import and wait for the fabric's arrival to start production and this increases their turnaround time. In addition, lack of dying plants, mills and production of other garment parts including zippers and labels also increase the order cycles. By contrast, direct competitors in China are integrated garment factories where the process starts from raw cotton and ends with the final trousers or shirts all done in the same factory.

The difference in turnaround times between Kenya and China is striking. The order cycles for Kenyan textile companies are around 150 days. The cycle begins with the development of the design, pattern and colors which takes around 30 days. At this stage the samples are sent mostly by courier services. Once they agree on the pattern , the manufacturers order the specified cloth from China or India . Receiving this fabric takes about 45 to 60 days. When they receive the cloth, they start producing the garments which takes around 30 days and it takes another 28 to 30 days to ship to garments to USA. This cycle is very long compared to a 60 day cycle for China.

---

<sup>5</sup> Under the AGOA, this practice of using third part materials is allowed until 2007

## Simple Supply Chain Illustration for Textiles



By improving the transport and clearance process in Kenya, there is room to improve this cycle but only to a moderate extent. The exporters assessments indicate that faster transportation of materials within Kenya could save 4-5 days and if combined with faster customs procedures up to 7 business days but this is not enough to cover the time difference between China or India.

An important bottleneck for textile exporters is at Mombasa port where the clearing imports between 5 to 15 days. When shipping their final exports to the US (East Coast), the average time is 25 to 29 days but in the case of an emergency the garments can be shipped by air which takes 2 to 3 days for a cost of \$2.8 to \$3.2 per kg depending on the season. The estimated shipping times and the frequency of service for various destinations can be seen in the table below:

## Logistics Routes and Time Estimates

<b>Fabric and Accessories</b>				
<b>From</b>	<b>To</b>	<b>Mode</b>	<b>Transit</b>	<b>Frequency</b>
Hong Kong/China	Mombasa	Sea	19-26 days	Weekly
	Nairobi	Air	1-3 days	Daily
Pakistan/India	Mombasa	Sea	12-16 days	Weekly
	Nairobi	Air	1-2 days	Daily
South Korea	Mombasa	Sea	19-21 days	Weekly
	Nairobi	Air	3-4 days	Daily
Sri Lanka/ India	Mombasa	Sea	9-12 days	Weekly
	Nairobi	Air	2-3 days	Daily
U.A.E.	Mombasa	Sea	5-14 days	Weekly
	Nairobi	Air	1-2 days	Daily
South Africa	Mombasa	Sea	4-8 days	Weekly
	Nairobi	Air	1-2 days	Daily
<b>Finished Goods</b>				
<b>From</b>	<b>To</b>	<b>Mode</b>	<b>Transit</b>	<b>Frequency</b>
Nairobi	Mombasa	Road	2 days	Daily
Mombasa	East Coast , USA	Sea	25-29 days	Weekly
Mombasa	West Coast, USA	Sea	35-38 days	Weekly
Nairobi	East Coast, USA	Air	2-3 days	Daily
Nairobi	West Coast, USA	Air	3-4 days	Daily
Provided by United Aryan, EPZ company				

## 2. INSTITUTIONAL FRAMEWORK FOR TRADE LOGISTICS AND THE REFORM AGENDA

### 2-1 Background

Successive governments in Kenya have always recognized the provision of adequate infrastructure as an essential precondition for sustainable economic and social development.<sup>6</sup> The policy concern has been about how to ensure the provision and maintenance of adequate infrastructure. At the time of independence, the provision of infrastructure was deemed a public sector responsibility on the rationale that the market would not be a suitable mechanism. That is, it was thought that “pervasive market failures” justified public sector involvement in the development of physical infrastructure.<sup>7</sup> Thus while Kenya’s independence government recognized the need for limited private sector participation, it largely pursued a policy of public provision and maintenance of physical infrastructure. The strategy was to develop physical infrastructure “so as to draw the entire nation into the market economy and to lay the basis for rapid industrial growth.”<sup>8</sup>

This chapter reviews Kenya’s legislative and institutional framework for the regulation of the transport sector. In Kenya, there are comparatively many different bodies with responsibilities in the field of transport of goods (and passengers). The sources of regulation are the traffic act, and the acts establishing the specialized boards (e.g; road boards) or authorities (Port, airport, railways). During the interviews, institutional complexity was not mentioned as major source of problem in trade and transport facilitation. From the users’ perspective, even though, the procedures may not be friendly, there does not seem to be issues linked to overlap or unclear definition of responsibilities of the intervening agencies.

Regional cooperation also played an important role in shaping the regulatory environment for trade and transport facilitation especially the initiatives taken at the COMESA level. The later part of this chapter reviews those initiatives and the implementation status for Kenya.

#### *Institutions overseeing the Transport Sector*

There are three ministries directly involved in formulating and enforcing policies addressing transport:

- The Ministry of Transport and Communication (MTC) is entrusted with overall responsibility for transport policy formulation and implementation, and oversees road, railway, maritime and air transport.
- The Ministry of Roads and Public Works (MoRPW) is responsible for the infrastructure.
- The Ministry of Finances is present in many areas through the Kenya Revenue authority.

---

<sup>6</sup> Economic Recovery Strategy at 20 (2003).

<sup>7</sup> Wilson (2001).pg 20

<sup>8</sup> Wilson (2001) pg 21.

In practice, two ministries, Ministry of Transport and Communication and Ministry of Roads and Public work , are responsible for formulating transport policies. Kenya does not have an integrated approach that combines transport infrastructure and services yet.

The following table summarizes Kenya’s transport agencies and their responsibilities.

<b>Agency</b>	<b>Responsibility</b>	<b>Funding</b>
<b>Ministry of Transport and Communication</b>	Overall responsibility for transport policy	
Motor Vehicle Inspection Unit	Determine roadworthiness of public service vehicles.	
Transport Licensing Board	License public service vehicles and assign them routes Regulate operation time-tables for all passenger-carrying vehicles	
<b>Parastatals</b>	Report to the Ministry of Transport	
Kenya Port Authority	Own and operate port facilities Oversee shipping	
Kenya Airports Authority		
Civil Aviation Authority		
Kenya Railways Corporation		
<b>Ministry of Roads and Public Works</b>	Develop, standardize and maintain roads	
Roads Department	Manage national road network, (including the enforcement of axle-load regulations)	
Kenya Roads Board	Maintain national road network Manage Fuel Levy Fund Oversee District Roads Boards	Fuel Levy Fund Government recurrent expenditures
District Roads Boards	Manage minor roads	Fuel Levy Fund Government Revenue
<b>Ministry of Finances</b>		
Registrar of Motor Vehicles	Register and license all motor vehicles and drivers, and keep records thereof Determine and fix passenger and luggage capacity for all categories of vehicles	
Customs and Excise Department of Kenya Revenue Authority	Enforce transit procedures Collect taxes due on importation of motor vehicles	
<b>Others</b>		
Traffic Police Department	Enforce Traffic regulations	
Local Authorities	Maintain roads in their areas of jurisdiction	Tax revenue Fuel Levy Fund
Kenya Wildlife Service	Maintain roads in game reserves and national parks	Fuel Levy Fund Park revenues

## 2-2 Transportation policies.

Road transport is governed by a number of agencies, namely the Ministry of Transport and Communication, the Ministry of Roads, Public Works and Housing, the Transport Licensing Board (TLB), the Motor Vehicle Inspection Unit, the Registrar of Motor Vehicles, the Traffic Police Department and local authorities.<sup>9</sup> In addition, the Government established the Kenya Roads Board (KRB) in 2000 as a road fund responsible of the maintenance of the national road network.

The TLB is established by the Transport Licensing Act and its main task is to license public transportation service vehicles and assign them routes. TLB regulates the operation time-tables for all passenger-carrying vehicles. TLB comprises eight members appointed by the Minister of Transport and Communication to represent each of Kenya's eight administrative provinces, and a chairman appointed by the president. Appeals from the decisions of TLB on licensing may be lodged with the Transport Licensing Appeal Tribunal. TLB seems to have been a poor regulator. Public transportation vehicles continue to choose their own routes without allocation by the TLB.<sup>10</sup>

The Registrar of Motor Vehicles (RMV) is part of the Kenya Revenue Authority but also reports to the Minister of Transport and Communication, in accordance with the Traffic Act.<sup>11</sup> The main function of the RMV is to register and license all motor vehicles and drivers, and keep records thereof. Various fees are levied for the registration and licensing of all motor vehicles set by the First Schedule to the Traffic Act. These fees vary according to engine capacity of the vehicle. For example, a motor vehicle with an engine capacity of 2000cc pays a registration fee of Kshs1350, while one with an engine capacity of 3000cc pays Kshs 2850. In the case of licensing fees, public transportation service vehicles pay additional fees. The licensing fees are higher than the registration fees, but are also levied according to the engine capacity of the vehicle.<sup>12</sup> In fact, the RMV faces the same problem as the TLB in monitoring the licensing of private transportation of passengers. Furthermore, foreign vehicles (private, commercial and public service vehicles) are subject to a different licensing schedule.

The Traffic Act provides that motor vehicles are only to be registered where the vehicle in question is duly registered, the particulars in the registration book are correct and the vehicle is insured against third party risks in accordance with the provisions of the Insurance (Motor Vehicles Third Party Risks) Act.<sup>13</sup> In addition, the Traffic Act requires that public service vehicles must be inspected and a certificate of fitness issued before it can be licensed.<sup>14</sup> The Ministry of Transport's Motor Vehicle Inspection Unit performs this task. It is the duty of the RMV to determine and fix passenger and luggage capacity for all categories of vehicles.

---

<sup>9</sup> Local authorities are empowered by the Traffic Act to designate parking places for all vehicles. Traffic Act, Laws of Kenya, Chapter 403, Part VIA.

<sup>10</sup> Asingo (2004), 19

<sup>11</sup> Traffic Act, §3.

<sup>12</sup> See The Traffic (vehicle Licences) Duration, Fees and Refund) Rules

<sup>13</sup> Traffic Act, §17.

<sup>14</sup> Traffic Act, §96.

Administratively, the RMV is a department of the Kenya Revenue Authority largely because the registration and licensing of motor vehicles constitutes a significant source of government revenue.

The Traffic Act, among other things, provides with weight regulations the enforcement of which will be analyzed in section 4. The rules derive from the COMESA axle-load guidelines, with some Kenya specific variations. Kenya applies both per-axle limit and a comprehensive gross weight limit. The overall regulation is complex, as there are 18 cases depending on the type of ensemble, the number of axles and the positions of axles. The act posits that contravention of these limits constitutes a criminal offense and invites fines of up to Kshs.20,000 (about \$220)<sup>15</sup>

The Traffic Police Department (TPD) is empowered by the Police Act to enforce traffic regulations. Unfortunately, the TPD has not performed adequately, for a number of reasons including corruption in the police force and inadequate resources.

The Kenya Roads Board (KRB) was established under the Kenya Roads Board Act of 2000. It is a financial agency, which share the responsible of work implementation with the Roads Department of the Ministry of Roads and Public Works (for national road) and the District Roads Board (DRBs) for local roads. The DRBs are established under the Public Roads and Roads of Access Act and are responsible for minor roads.<sup>16</sup> The KRB now manages the fuel levy fund, which it distributes to agencies such as the Roads Department and the DRBs for implementation of approved roadwork programs. The fuel levy fund is a consolidated pool of funds derived from a levy on fuel and transit tolls charged on trucks passing through Kenya established in 1994 to finance road rehabilitation, repairs and maintenance. The fuel levy generates Kshs. 8 billion per annum, and is charged at Kshs. 5.80 per liter. The fuel levy fund is typically distributed as follows: 55% for highways and main roads; 17% for district roads and KWS; 11% is allocated to local government; 14% is allocated to constituencies; and 3% funds the operations of KRB.

The KRB also monitors the activities of the above road agencies and audits their financial and technical compliance with approved roadwork programs.<sup>17</sup> It should also be noted that the private sector has significant representation in the roads board. In fact, 8 of the 13 Directors are from the private sector and the Chairman is also selected from the private sector..

Reform initiatives being implemented by the government include involving the private sector in road maintenance, and privatizing axle load control and its management.<sup>18</sup> The government also intends to review axle load control regularly in consultation with other member states within the COMESA and EAC regional frameworks.<sup>19</sup> In addition, the

---

<sup>15</sup> Twelfth Schedule, Traffic Act.

<sup>16</sup> Chapter 399, Laws of Kenya.

<sup>17</sup> Asingo, supra note \_\_ at 12.

<sup>18</sup> Republic of Kenya, supra note \_\_ at 21.

<sup>19</sup> Id.

government proposes to reform the law so as to enhance the proper design of roads, integrity in road contract procurement, enhance safety and maintenance of the road network, and allow for private sector participation.<sup>20</sup>

## **Railways**

The Kenya Railways Corporation (KRC), a parastatal created by the Kenya Railways Corporation Act, provides railway transport services.<sup>21</sup> In addition, KRC provides inland waterways transport services and port facilities in relation to those services.

Plans are underway to privatize KRC (see Chapter 3).

## **Ports and Shipping**

Ports and Shipping falls under the docket of the Kenya Ports Authority (KPA), a parastatal established by the Kenya Ports Authority Act.<sup>22</sup> Thus KPA is entrusted with three functions: regulator (shipping and ports), landlord of the infrastructure and port operator. KPA's core activities are to provide stevedoring and cargo handling services, to maintain the physical infrastructure, and to operate port handling equipment, tugs and other marine craft. KPA administers Kenya's principal seaport, which is situated in Mombasa. KPA also manages inland container depots in Nairobi, Kisumu and Eldoret. Like KRC, KPA has not performed well over the years due to a combination of factors such as aging equipment, lack of personnel with appropriate skills, non-commercial management, over-staffing, corruption and political interference.

The government has endorsed the conversion of KPA into a landlord port authority. An appropriate regulatory framework is, however, required before such a conversion can take place. Thus the government proposes to establish a "ship open registry" and a Maritime Regulatory Authority to de-link seafaring administration activities from the KPA's core business.<sup>23</sup> These proposals are yet to be implemented.

## **Air Transport**

Air transport is regulated by the Kenya Airports Authority (KAA) and the Civil Aviation Authority (CAA). The KAA is established by the Kenya Airports Authority Act.<sup>24</sup> Its responsibility is to manage airports, including safety and security. The CAA was established by the Civil Aviation (Amendment) Act of 2002 and is entrusted with the task of regulating aviation activities, including air traffic control. Both agencies now report to the Ministry of Transport.

The government has also taken measures to improve efficiency in air transport by liberalization of the domestic passenger and cargo market. Thus domestic air services are

---

<sup>20</sup> Id at 22.

<sup>21</sup> Kenya Railways Corporation Act, Chapter 397, Laws of Kenya, § 8.

<sup>22</sup> Kenya Ports Authority Act, Chapter 391, Laws of Kenya.

<sup>23</sup> Economic Recovery Strategy, 25.

<sup>24</sup> Kenya Airports Authority Act, Chapter 395, Laws of Kenya.

now provided by competing carriers. The main carriers here are Flamingo (a subsidiary of Kenya Airways), Air Kenya and Regional Air (franchise of British Airways). . The government now proposes to take further institutional and regulatory reforms, including modernizing the air traffic management system, privatizing commercial and non-regulatory services at the airports, and to explore possibilities of private sector participation in airport development and management.<sup>25</sup>

### **2-3 Regional Cooperation in Trade and Transport Facilitation.**

Kenya is a member of both COMESA and EAC. As far as trade and transport facilitation is concerned, COMESA has made the most efforts towards ensuring regional cooperation in transportation. It should also be noted that EAC and COMESA have agreed to harmonize their activities in various areas, including trade liberalization and facilitation.<sup>26</sup>

In the area of trade facilitation, COMESA secretariat has been implementing various programs to improve the transport and communications systems of the region. These programs include:

**Harmonized road transit charges system** – which specifies that heavy goods trucks with more than three axles should pay a charge of \$10 per 100km; trucks with up to three axles should pay a charge of \$6 per 100km; and buses with a capacity of more than 25 passengers pay \$5 per 100km. Kenya has implemented this system, along with Burundi, Malawi, Rwanda, Sudan, Uganda, Zambia and Zimbabwe.

**COMESA Carrier’s License** – which allows commercial goods vehicles to be licensed with one license that is valid throughout the region, so that the vehicles can operate in all member states. The system’s benefit is that vehicles can pick up back-loads in other countries which makes more efficient use of the region’s transport fleet and so reduces the cost of trade. Kenya has introduced this license, along with Burundi, Kenya, Malawi, Rwanda, Swaziland, Uganda, Zambia and Zimbabwe.

**Harmonized Axle Loading and Maximum Vehicle Weight** – which aims to preserve the road infrastructure. The member states have agreed on the following axle load limits for freight vehicles:

- Single steering axle – 8 tonnes.
- Single load or drive axle – 10 tonnes
- Tandem axle group – 16 tonnes
- Triple axle group – 24 tonnes

Kenya has implemented this system, along with Angola, Burundi, Eritrea, Ethiopia, Malawi, Mozambique, Rwanda, Sudan, Tanzania, Uganda, Zambia and Zimbabwe. However, as we

---

<sup>25</sup> Economic Recovery Strategy, 24.

<sup>26</sup> COMESA, COMESA IN BRIEF 7 (2003).

shall see later the countries have implemented the rules with further country specific adaptations. They are not always compatible from one country to the other.

### **COMESA Yellow Card**

The COMESA Yellow Card is a motor vehicle insurance scheme which covers third-party liabilities and medical expenses. A yellow card is issued in one COMESA country and is valid in all other countries participating in the program. The Yellow card is implemented along the Northern Corridor countries and also in Tanzania (no more a member of COMESA).

### **COMESA Customs Declaration Document (CD-COM)**

The declaration is a template applicable for Imports, Exports and Transit of goods. The objective is to avoid creation of new documentation at every border for goods in transit. It can reduce cost and delays for economic operators and facilitate information sharing between customs. The CD-COM is compliant with the widely accepted standards (UN keys and ASYCUDA). It is being partially used on the northern corridor.

**Customs Bond Guarantee scheme** – Currently transit bonds are country specific. It means that the transport operator needs to create a new bond each time the cargo crosses a border. The COMESA bond will be a unique bond accepted by all the countries of transit. The objective is to reduce the cost associated with a series of nationally executed customs bond guarantees for transit traffic. The scheme is yet to come into force.

**Liberalization of the skies**<sup>27</sup> – COMESA is also working with member states to remove air traffic controls, except those concerned with safety. The aim is to increase competition within regional routes, which will reduce the cost of air travel and transport and encourage regional trade.

COMESA introduced the “COMESA Regulations for the Implementation of Liberalization of Air Transport Services – Legal Notice No. 2 of 1999.” These regulations require liberalization to be undertaken in 2 phases:

- Phase 1 provides for free movement of intra-COMESA cargo and non-scheduled passenger services; free movement of intra-COMESA scheduled passenger services with frequency limit of up to two daily frequencies between any city pairs; adoption of multiple designation; and, elimination of capacity restrictions.
- Phase 2 Provides for free movement of intra-COMESA air transport services.

To ensure the successful implementation of the air transport liberalization program, COMESA established an Air Transport Regulatory Board (ATRB). Its responsibilities are to advise on all matters relating to air transport, formulate and enforce air transport rules and

---

<sup>27</sup> excerpted from Marawa (2003).

regulations in accordance with the decisions of the COMESA Council, set standards and guidelines, and promote safety and security and development of air transport in the region.

Kenya has implemented Phase 1 of the program, along with Burundi, Djibouti, Egypt, Eritrea, Ethiopia, Madagascar, Rwanda, Uganda, Sudan, Zambia and Zimbabwe. The COMESA Council has suspended the implementation of Phase 2, pending the formulation of the COMESA Air Transport Competition Rules. The implementation of Phase 1 has so far yielded positive results: There has been an increase in the frequency of flights between city pairs; the number of new privately owned airlines has increased; and passengers are benefiting from cheaper fares. It is estimated that as a result of implementation of Phase I of the COMESA transport facilitation measures, transport costs have thus far been reduced by a factor of about 25%.<sup>28</sup>

The following table summarizes Kenya's implementation of the COMESA regulations:

<b>COMESA Regulation</b>	<b>Kenya's Status</b>	<b>COMESA Regulation</b>	<b>Kenya's Status</b>
Harmonized road transit charges	Implemented	Coupon systems for harmonized transit charge	No
COMESA Customs Document	Adopted but not always used on the Northern Corridor	COMESA Customs Bond Guarantees	Not used
Axle Load Limits	Yes, generally implemented in the Region, but with country specific variations	Transit Plates	No
Yellow Card	Yes, generally implemented in the Region	Liberalization of the skies Phase 1	Yes
COMESA Carriers License	Yes, generally implemented in the Region		
Source: COMESA 2004			

<sup>28</sup> Marawa (2003).

## **2-4. Current initiatives and projects in facilitation.**

The topic of trade and transport facilitation is not entirely new in Kenya; some of the current initiatives started as early as 1980s like the Northern Corridor Authority. In the last two years, there has been a new momentum that translated into the launch of major projects, including the Customs Reforms and Modernization program and the privatization of the railways. In addition, today there is a proliferation of initiatives and forums under various sponsors and eventually donors, the consistency of which is not always clear.

### ***Regional and Local Trade Facilitation Forums in Kenya***

Kenya Government is actively involved in promoting trade facilitation in the country and supports local and regional initiatives in this area. In addition, Kenya houses regional organizations including the Northern Corridor Authority (TTCA) and the Port Management Association of Eastern and Southern Africa (PMAESA).

There are now a number of established committees or forums to discuss facilitation at various levels from daily operations to high profile meetings. The most established bodies are:

- The facilitation committee at the port of Mombassa. It was established five years ago by KPA and KRA to help streamline the documentation procedures and discuss the solution of problems in real time. It involves the stakeholders in the port community like KPA, KRA, KRC, clearing and forwarding agents, Kenya Police, KEPHIS, PBS, Shipping agents and Public Health. This committee is meeting once a week.
- The stakeholders group in the TTCA has been a driving force in pushing improvements in transit procedures. It convenes twice a year alternatively in the different members countries.

More recently, working groups have been created as part of the CRM and for the Community Based System Initiative.

The Ministry of Trade and Industry launched the Trade Facilitation Project in May 19, 2004. The project is supported by the Commonwealth Secretariat and aims to critically look at trade facilitation issues in Kenya and provide a framework to improve Kenya's competitiveness, address issues related to the Doha development agenda and suggest internationally accepted best practices in trade facilitation. As part of this project the government set up a core working group that meets on regular intervals but the role of the respective bodies is not very clear. In a series of workshops, the participants have been exploring trade facilitation related topics including "one stop shop," institutional best practices, administrative barriers and capacity building. From the content of the workshops, it seems that this initiative essentially brings higher visibility to topics already discussed in the existing operational groups.

### ***KRA Modernization Initiatives***

Kenya is currently implementing the **Customs Reform Modernization Program**. This program, initiated in 2003, includes a working group of all stakeholders. The group meets regularly in Mombasa and Nairobi to discuss the implementation of the system. Group meetings also include visits to border posts and airports.

The Modernization program benefited from a series of studies and technical assistance by international organizations. The IMF carried out a study on customs reform and Modernization in March 2004 and shared their findings and recommendation regarding the reform process with the government. World Bank Foreign Investment Advisory Service (FIAS) carried out a study on Administrative and Regulatory Barriers to Investment in February 2004. and the results of this study were discussed at a national workshop in mid-2004.

As part of the Customs Modernization Program, and following the recommendations of the FIAS study, Kenya Revenue Authority carried out a time release study in July 2004 to measure the time it takes to clear goods through customs. The study followed the WCO framework and analyzed the clearance process in all border posts for one week.

Kenya Revenue Authority decided to adopt GAINDE 2000, an in house automated system developed by the Senegalese customs authority. The KRA is planning to start testing the system and deploy it in the summer of 2005. This system will replace the obsolete Boffin system and, in fact, will automatize what is today essentially a manual and lengthy procedure. It will be implemented in the Mombasa long room, JKIA and land border posts over the course of 12 months. From the users perspective this will be a major change.

### ***KPA Modernization Initiatives***

To address issues of congestion and quality of services the **Kenya Port Authority** (KPA) is also undertaking modernization efforts. KPA is upgrading some equipment and is also moving to implement IT systems for its management of the interaction with the customers. The modernization efforts have been discussed for many year but they actual implementation has only started recently and the pace is increasing.

On the infrastructure side, KPA has ordered eight new gantry cranes<sup>29</sup> to replace the old (1982) Caillard equipment. Two cranes arrived in November 2004 and there others are to be delivered in May 2005. The new cranes will have the capacity to stack five containers instead of four. They will replace the old stock of rubber tyred gantry cranes that were bought in 1982. In addition the port received two new stackers in November 2004, and expects to receive another three from the Netherlands in December.

To enhance its not so successful operations with the Inland Container Depots in Nairobi, Kisumu and Eldoret, KPA decided to acquire 400 railway wagons to speed up the transit rail traffic. KPA is planning to purchase 200 custom-built flat bed wagons and lease the rest.

---

<sup>29</sup> purchased with Zhenhua Port Machinery Company (ZPMC) of Shanghai in China

KPA adopted a fully integrated information technology strategy to make Mombasa a fully integrated electronic port by the year 2010. The IT strategy involves a three-phased project and its first phase of enterprise resource planning (ERP) system has been implemented and KPA successfully introduced a comprehensive computerized management system developed by SAP. The other two phases involve the Kilindini waterfront project and the community based system which is joint project by KPA and KRA.

The Kilindini water front project is a computerized information system that will assist in the running of the water front and cargo operations. The project will cover operations at the container terminal, marine, conventional cargo and the inland container depots. This project started in January 2004 and will go live in August 2005. As part of this project , the KPA is installing a computerized container tracking system called COSMOS, a high priority given the present operational situation. This system has modules governing traffic and operations, container tracing control system module, finance, ship planning and electronic document interchange.

The third phase of this strategy is the community based system (CBS). The initiative is a joint initiative by the KPA and KRA and has been continuing for several years. There is a CBS Task Force to develop a system that would allow electronic interchange of information. KPA and KRA intend to work with shipping agents to exchange the manifests electronically. There are already pilot experiments between KPA and Maersk.

### ***Railways Modernization Initiatives***

The Government of Kenya and the Government of Uganda have jointly decided to **concession the railroad from Mombasa to Kampala**. The International Finance Corporation is an advisor for this transaction.. Effective concessioning of railroad operations is expected to have a big impact on trade facilitation for both Kenya and Uganda.

In July 2004, a memorandum of understanding for a joint concessioning of the railways was signed by Uganda and Kenya governments, and Canarail and International Finance Corporation (IFC) have been appointed as transaction advisers. The joint privatization committee expects to make a final decision in April to allow the concessionaire to start in July 2005

This 25 year concession covers 1924km of the KRC network, excluding the 150km Konza - Magadi line currently leased to the Magadi Soda Co. It also includes the Malaba - Kampala line in Uganda and the branches to Port Bell and Soroti, totaling 551km, plus the Lake Victoria train ferries. Under the government's planned concession structure, the winning 'core investor' will get a 60% stake in the new operating company, with the two governments holding the remaining 40%.

According to the IFC advisors, 2000 to 3000 staff will be sufficient for the operation of the railways. Initial recommendation is a 2000 employee reduction in staff. World Bank is currently working with the government on pension plans and other financial issues related to the concession.

As of January 2005, five groups were short-listed for the concession. These groups are led by Canac of Canada, Maersk Sealand Kenya Ltd, Rites of India, New Limpopo Projects Investments and China Railways First Group Ltd. Two others bidders, Kenyan-based Magadi Soda Co and Sheltam Service of South Africa were asked to meet certain conditions

### ***World Bank led facilitation projects.***

The World Bank is the leading development institution for facilitation projects in the sub-region and has been supporting this agenda with the governments (Kenya, Uganda, Tanzania, Rwanda), the corridor bodies and the stakeholders.

The World Bank is financing the **Northern Corridor Project**. The Northern corridor is a multimodal corridor (road and rail), which connect the port of Mombassa to the main cities in Kenya and beyond to the landlocked countries of Eastern Africa (Uganda, Rwanda, Burundi). The World Bank has engaged in a number of activities to improve efficiency of the transport chains, facilitate trade along the corridor, and promote regional integration. The components include improvement of infrastructure (including a specific component on road rehabilitation) and customs modernization.

The World Bank is also preparing an **East African Community Project** that will address specifically trade and transport facilitation issue to support the integration process between the countries. This project will enhance facilitation along the Northern and Central corridor and help the country move towards the broader objective of a customs union. Its tentative components include support to the KRC-URC infrastructure, implementation of further facilitation measures (cf. next section) on the two corridors, including border crossing, transit and information management.

### ***Other Donor Supported Initiatives***

Beyond the World Bank, several donors have contributed to the facilitation agenda. The mission could not seriously assess the degree of relevance and complementarity between the various contributions and how these initiatives contribute to the wider World Bank led effort.

The Commonwealth Secretariat's **Trade Facilitation Capacity Building Programme** for Kenya is financing consultants on trade capacity building. Specific activities include production of a manual on standard operating procedures for the planned "one-stop-shop" operation in imports/exports documentation and a handbook on importing and exporting to Kenya.

**USAID's East and Central Africa Global Competitiveness Hub** is a large multi-country project headquartered in Nairobi. The project has four components. One of the components support trade policy capacity building to help East and Central African countries to participate more effectively in the multilateral trading system, including Doha Round

negotiations. Other components support the African private sector to take advantage of AGOA, trade facilitation initiatives to promote creation of a more globally competitive region with specific focus on COMESA and Northern Corridor and the development of mechanisms to reduce trade related transaction costs in East and Central Africa. The Trade hub is currently financing a Cargo Tracking Study jointly undertaken by PMAESA and Northern Corridor Authority.

**ITCs National Export Strategy:** The goal of this project is to develop strategies that could be used to improve export performance through increased national competitiveness. Ten sector strategies covering horticulture, fish, tea, livestock, food and beverages, textiles and clothing, commercial crafts, ICT, tourism and transport services have been developed. Six cross cutting strategies have also been developed. These include trade information, trade facilitation, quality management, export packaging, competency development and trade finance. This National Export Strategy was completed in November 2003 and the government of Kenya is seeking financing to implement it. *(The information is adapted from DFID Evaluation of Trade Support to Trade Related Capacity Building: Case Study of Kenya (Blouin and Njoroge, 2004))*

### 3. OBSTACLES IN TRADE AND TRANSPORT FACILITATION

The analysis in Kenya shows that the transport costs and delays are significant on the Northern corridor. The dwell time of containers as reported by forwarders (KPA has no statistics on dwell times) is around two weeks. The transit to Kigali takes about ten days and costs 160-170 USD per ton. The main bottlenecks for transport operators are:

In Mombasa:

- The congestion at the container terminal
- The flow of procedures and documentation

In transit:

- The organization of transit cargo and procedures
- The implementation of axle-load policy (weighbridges)

This chapter reviews these issues, tries to identify the main causes and the potential mitigating measures.

#### 3-1 Cost and Delays for Imports or Transit of Goods

From interviews of forwarders, the breakdown of the typical import or transit cycle for a container reveals that delays are spread between the passage in the ports and transit operations.

Delay	Time	Comment
Arrival to Removal in the port of Mombasa	2 weeks	(not much difference between transit and clearance in Kenya)
Mombasa Nairobi	1-2 days	
Transit in Kenya (convoys)	3 to 6 days	Vehicle may have to wait up to two days for the departure of a convoy from Mariakani (3 times a week)
Border crossing in Malaba	2 days	
Malaba to Kampala	1-2 days	
Kampala to Kigali	2-3 days	

These delays although long are already improvement on delays observed 5 years ago. 28 days were needed to clear customs, and up to one month for the turnaround to landlocked countries.

### Cost of Transportation for Containers (road)

	Nairobi	Kampala	Kigali
20'	\$ 50 per ton	\$ 1350- \$1400	\$2500 or \$150 per ton up to 15 tons
40'	\$ 760-\$1000	\$ 2700	-

Ports handling and storage fees can be summarized in the following table. In addition to these charges, most forwarders mentioned small facilitation payments (100 to 500 Ksh) for each step required to move a container within the terminal

### Mombasa Port Charges

	20 ft	40 ft	Additional charges
After 4 days from the ships arrival port charge	12.5 \$ per day		
Handling charge	150\$	180\$	
Small trade levy	3\$	6\$	
Stripping fee			\$75 per container
Total inspection cost			\$200 per container

Forwarding fees (inclusive of port and customs charges) are typically 500 USD for a 20' container in transit. .

Finally shipping lines impose penalties for delays in the return on empty containers.. This is a perfectly legitimate procedure, but in the context of the Northern Corridor, this constraint is taken very seriously by the operators because there is not much margin for the extended procedures or containers stuck in transit. For local transport, the grace period for containers is 14 days and for transit it is 45 days. At the time of the mission Delmas had reduced this grace period to 35 days, which put a large constraint for Uganda, bound travel. The actual roundtrip almost always exceeds 35 days because in addition to normal delays caused by infrastructure and weighbridges, the containers are used for storage by Uganda customs which extends their roundtrip timing considerably.

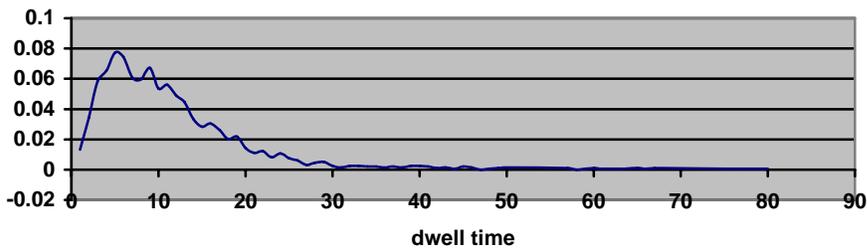
#### Delay vs. Predictability.

From the perspective of a consignee (cf. section 1-4) being supplied from outside the country, a most critical parameter is the lead time between when an order is placed with the supplier and the actual arrival of the goods. Delays at the port or in transit add to the shipping time and the processing in the country of origin. However unpredictability of the lead time is potential more damaging than delays, especially for manufacturers. It also increases dramatically the cost of inventories.

Indeed, the degree of unpredictability. The standard deviations of the various processes' time are comparable to their average.

Even worse is that the distribution curves of delays is very asymmetric (Pareto like), with extreme values possible: while the mean dwell time is less than 12 for this particular company, about 10% of the containers stay more than double this time. This asymmetry increases the potential costs of the unreliability in delay of the port and transit processes.

**probability distribution of dwell time in Mombassa**



**Delay statistics on the Mombasa-Kampala road observed by a major operator in 2004.**

	mean	standard dev	median
Port Mombasa	11.6	9.4	8.8
Transit Kenya	4.3	2.1	3.5
Malaba	2.0	1.6	1.3
Transit Uganda	1.8	0.8	1.3

*In days*

**3-2 The Congestion at the Port in Mombasa**

Congestion is a major problem at the port in Mombasa. The container terminal is full, and empty containers that are returned have to be stored at the adjacent quay. Like for most ports in developing countries, the responsibilities of congestion and delays are spread among the various actors. Problems are created by old equipment and poor infrastructure, port management, customs delays, and behavior of consignees.

There are no dwell time statistics produced by KPA. According to professionals it should be about two weeks.

The conventional wisdom in Kenya is that the container terminal is at saturation and should be extended. According to KPA, the container terminal has been designed for a throughput of

250,000 TEU, which has been surpassed after 2000. KPA is planning to extend the terminal by taking over the area that currently holds the empty containers.

The observed average throughput for an average container terminal is a about 100,000 TEU per hundred meter of berth. This will put the potential capacity of the 650 meters berth of Mombasa at double the stated capacity. This means that the congestion can probably be explained better with the following problems, inter alia: (cf. World Bank 2003):

- low productivity in the container terminal (obsolete handling equipment and lack of automation)
- lengthy customs procedures and the movements of cargo they generate
- slow evacuation by some consignees and transport operators (notably KRC).

These problems all exist at the same time. There is no reliable quantitative information about the individual responsibilities of the various actors (notably, KPA, KRA, KRC) in the delays. In fact, all the causes of delay combine and reinforce mutually their negative impact on port delay. It is not really possible to disentangle the causes of delay.<sup>30</sup>

The example of Dar Es Salaam shows that a port in the same environment can achieve enormous gains by just implementing soft measures like automation and management change. Dar es Salaam terminal experienced fast and drastic change in productivity after the privatization in September 2000.

### **Performance Indicators at Dar es Salaam Container Terminal**

	Measure	1997	1998	1999	2000	2001*	2002	2003
<b>Service time**</b>	Days/ship	1.02	1.02	1.09	1.10	1.10	0.69	0.76
<b>Crane productivity</b>	Moves/crane hours: (Net SSG)	14	12	14	15	19	20	21
<b>Dwell time</b>	Days/container	33.90	37.80	37.70	25.90	16.70	16.70	17.00
*Data before 2001 is provided by THA. The private terminal operator, TICTS, provided data after 2001.								
**Service time= pilot time + berth time.								

### **The Productivity Jump at Dar Es Salaam**

The container terminal at Dar es Salaam port was privatized in September 2000. Tanzania International Container Terminal Services (TICTS) was awarded a 10 year concession to operate the terminal. The main reason for this privatization was to increase the efficiency as well as the quality of service.

Prior to the privatization, the port already went under notable developments in terms of dredging and rehabilitation of cranes. In addition, global trends and trade lifting the embargo with Burundi had a positive impact on the trade flows.

<sup>30</sup> The authors do not think that the breakdown proposed by the KRA time release between customs delay and post and pre-customs delay is meaningful.

The container terminal had steady improvement in crane productivity following the rehabilitation in equipment however this productivity jumped to much higher levels following the privatization. This is a major reason of the favorable decrease in service times at Dar es Salaam port. The dwell times also showed a remarkable decrease. Many factors contributed to this decrease, including the lift of the embargo with Burundi, but the sharp decrease after 2000 is attributed to the strict measures of TICTS in penalizing overstayed containers.

### ***Equipment and Infrastructure***

The most urgent problem at Mombasa port is the handling equipment at the container terminal, especially the old Caillard cranes that were delivered in 1982 that are obsolete and experience frequent break downs. The crane productivity in Mombasa is substandard with around 10 moves per hour. This is 40 % of the performance at Dar Es Salaam port and 30% of the performance observed in transshipment facilities in the Gulf . Slow ship-to-shore handling has negative impact on all the clearance chain. It increases the berth time and forces ships to use adjacent berths and their on-board handling equipment.

After repeated requests, the equipment is currently being replaced. KPA has ordered eight new gantry cranes<sup>31</sup> to replace the old (1982) Caillard equipment. Two cranes arrived in November 2004 and there others are to be delivered in May 2005. The new cranes will have the capacity to stack five containers instead of four. The port received two new stackers in November 2004, and expects to receive another three from the Netherlands in December.

The port also suffers from a very poor pavement and needs urgent repairs but at the time of the mission there were no initiatives to improve the condition of the pavement.

The purchase of new equipment is a welcome move by the KPA but the need for upgrading has been blatant for many years. It is unclear why the KPA delayed these critical upgrades and the implementation of the much needed information systems. There was no financial constraint as KPA is a rather profitable operation and the above-mentioned upgrades are within the annual profit range of KPA which is around Ksh 2 billions.

### ***Organization and Management of the Container Terminal***

An obvious factor that slows down the container movements is the manual tracking card system of the KPA. For a few years, KPA has been intending to deploy a computerized tracking system (COSMOS), as part of its overall plan of modernization initiative.

The present manual system is the source of abnormal practices. Given the lack of reliability of the card systems, consignees (or forwarders), have to track the containers themselves . In practice, this creates a rent for a profession of intermediaries doing the tracking. These intermediaries are said to compete with KPA stackers which creates a potential source of

---

<sup>31</sup> Purchased with Zhenua Port Machinery Company (ZPMC) of Shanghai in China.

corruption. Therefore, the automation of container tracking is of the highest priority. It is a rather simple measure but it may face resistance due to the existing rents.<sup>32</sup>.

***Consignees***

According to many professionals, KPA productivity and customs procedures are not the only cause of extended dwell times. The inability or unwillingness of some operators to move their cargo fast contributes to those delays. Typically, parastatal organizations, even development agencies or charitable organizations like World Food Program are the ones that overstay at the port because they are less likely to pay. This view on the responsibility of the consignee is supported by the fact that when customs declarations are lodged before the arrival of the ship (pre-lodgement), the delay between arrival and removal is dramatically reduced (around one week). This does not mean that the clearance procedures are faster, it just means that the consignees are anticipating the customs delays in order to get their cargo faster.

The information from clearing agents is confirmed by the recent Time Release Study by the KRA. The results from the study can be summarized as follows:

<b>Process</b>	<b>Steps</b>	<b>Mean Time for Mombasa</b>
Pre Lodgement	Arrival to removal	5 days 13.2 hours
Post Lodgement	Arrival to removal	15 days 20 hours

**Time Release Study (TRS)**

Kenya Revenue Authority underwent a Time Release Study (TRS) to measure the time taken to clear goods through customs in July 2004. The study followed the World Customs Organization (WCO) methodology and analyzed the time required to clear goods through customs in 7 border posts including Mombasa port and Jomo Kenyatta Airport in Nairobi based on one week of continuous data.

Other than the TRS study, there are no statistics on the importance of pre-lodgement. Unfortunately, it is not always a feasible option for the clearing agents. For example, for cargo arriving from Durban or Dubai the shipping time is very short and the agents reported that many times the manifest arrives after the ship preventing the pre-lodgement option. The deployment of a comprehensive and efficient information system (EDI) would make pre-lodgment much more feasible.

***Evacuation of Containers: Road and Rail***

Evacuation from the port by road is not a major problem.. Trucks can avoid the city and the island and follow a bypass road to the Nairobi road. Forwarders and truckers are apparently

---

<sup>32</sup> When the concessionaire took over the terminal in Dar es Salaam, tracking was one of the first measure that he put in place. It was faced by enormous resistance, including riots, organized by the beneficiaries of the old system

organized enough to avoid the long queue of trucks waiting to be loaded, which is so common in other developing countries (e.g. Dar Es Salaam). The first permanent congestion is 30 km further at the Mariakani weighbridge.

KPA and KRC have been struggling for years to secure an efficient evacuation of containers to Kampala or to the Inland Container Depots (ICDs) in Kenya. KPA operates an ICD in Embakasi, close to the industrial zone in Nairobi. Despite its favorable location, and attractive fees<sup>33</sup> the ICD never attracted much traffic and was not able to get a share of the increased container imports. Its throughput has been stagnant at 25000 TEU. The main reason for this is that the unreliability of train services. The importers prefer road transport despite serious constraints in infrastructure, weighbridges or transit procedures.. In the past, there has been several initiatives to offer block trains for containers in transit but they were not put in practice.

The main problem is apparently with the rolling stocks and the ability of the companies to organize the turnaround of the flat wagons so that they are available for block trains. KRC has around 6000 wagons of which 4500 are maintainable but only around 2500 are in operating conditions. Of all these wagons only 400 are suitable for container traffic. The average wagon turnaround period with Kampala is 14.5 days which creates a clear capacity constraint. To speed up rail service for containers, the KPA decided to acquire 400 railway wagons. They are planning to purchase 200 custom-built flat bed wagons and lease the rest..

Kenya and Uganda Railways along with Kenya and Uganda Revenue Authorities launched seamless trains operating from Mombasa to Kampala in 2004. These trains move cargo in blocks and operate three times a week and have reduced transit times from 14 days to only 4 to 5 days. The leg from Mombasa to Kampala takes around 7-9 days. The Uganda section of the network has severe infrastructure problems that hamper the seamless train operations.

### **3-3 Documentation and Procedures**

Under the present organization the procedures and the documentation flow is very complex. Despite recent simplification, it involves many steps and two locations: the long room in central Mombasa (for customs), and the container terminal in the port (for customs and other agencies). The operators have a hard time following the documentation in both locations and help move it from one counter to the other. Forwarders employ a lot of messengers for this purpose.

A recent improvement as been brought by the creation of the one stop centre at the port. Still, the current procedures and organizations cause delays and also severe logistical constraints in the port. The later happens as some step in the procedure, inspection for instance, require physical movement of the containers within the port.

---

<sup>33</sup> KPA charges no additional port charges for the ICD and transport rates are much below road transport (see next section for comparisons with road).

## *Flow of Documents*

The import declaration process in Mombasa can be summarized as follows. There is a parallel process with the transit section for goods going to the landlocked countries.

### **Import Declaration Process in Mombasa**

At Mombasa Long Room

- 1) Documents lodged.
- 2) Customs Import Duty and VAT paid and entry number assigned
- 3) Manifests are sent by dispatch to customs at Kilindini

At Kilindini Customs (now one stop centre)

- 4) Documents are sent to KPA Revenue Office.
- 5) Documents are stamped for verification or for delivery of goods

At the Revenue Office

- 6) Documents received under dispatch.
- 7) Copy of delivery received from the shipping agent
- 8) Charges are paid and entry number assigned
- 9) Documents are forwarded to cargo storage.

At the Cargo Storage Section

- 10) The documents are attached to the relevant cargo.
- 11) Importer or clearing agent presents the documents to collect his cargo.
- 12) Gate pass is issued to remove the cargo from the port area.

At the time of the visit, the old system Boffin was still in place, the process was still essentially manual. The only truly automatized process was the electronic confirmation from the banks on duty and VAT payments (step 2). Notwithstanding bureaucratic hassle it is not surprising that such a manual process takes days. The number of steps has been reduced from over twenty in the last three years.

When the new customs system (GAINDE 2000) is implemented, the above mentioned process will change radically and will be done automatically. Under normal operation radical reduction of delays may be expected. However, it was unclear what will be the respective role of the two locations in Mombasa and whether the long room would still be in use for declarations

### **Import/Export Documentation**

All Kenyan imports are required to have the following documents: import declaration forms (IDF), a clean report of findings from the pre-shipment inspection firm, and valid pro forma invoices from the exporting firm.

Firms exporting from Kenya need to obtain Form C 29 from Customs Department and the following documents, which serve as certificates of origin, from Kenya's Ministry of Commerce and Industry: G.S.P. Form A for U.S. destined goods, EURO 1 for exports to the European Union, PTA Certificate of Origin for exports to the PTA (COMESA) area, and Ordinary Certificate of Origin for exports to all other parts of the world. Importers are given 21 days from the date of initial discharge of cargo to formally enter their goods. At the expiry of this period, the goods that have not been cleared are moved to the Customs warehouse.

Goods with a FOB value over \$US 5000 are subject to inspection in the country of export. The Government of Kenya has contracted Cotecna S.A. and Intertek Testing Services International Limited to provide pre-shipment inspection services. The initial contracts commenced on 1<sup>st</sup> February 2001 and are due to be phased out by July 2005.

Importers are required to submit an Import Declaration Form to the PSI company prior to importation for all imports although pre-shipment inspections are not required for all categories of goods. A Kshs. 5,000 IDF fee is paid in advance through the National Bank of Kenya. The PSI Company then arranges for the goods to be inspected by company personnel or agents in the country of export, and in the case of containerized cargo, install a tamper proof seals.

.If the importer has already paid the relevant duties and taxes, he attaches the bank receipts with the declaration. If the importer has not paid in advance, he receives a copy of the declaration to pay the duties. If payment is not made within five days the entry is rejected and must be re-submitted.

### ***One Stop Centre***

To simplify the clearance process, the (KRA and KPA) opened a One Stop Centre in August 2004. The institutions concerned are KPA, KRA, Kenya Bureau of Standards (KEBS), Kenya Plant Health Inspectorate Services (KEPHIS), The facility is located next to the container terminal. Previously these institutions were scattered all over the port, which caused interruption in the documentation process and inconsistent inspection practices.

As a complement the working hours of the various institutions have been harmonized as follows:

- 0800 – 1300 for morning hours
- 1400 – 1700 for afternoon hours
- 0800 – 1700 for cash office, including lunch hour.

The KRA installed a mobile scanner at the container terminal for fast and accurate inspections but this scanner is indirectly causing a logistical quagmire. As KPA is not providing the service, the importers are required to arrange for the transportation of their containers for the scanning process, which ties up the trucks for an additional 2 days and increases the number of trucks on the port area causing congestion. It would be preferable to use port handling equipment for this purpose.

### **3-4 Transit Procedures**

The present transit procedure is inducing substantial cost and delays, especially because of the escort system. The transit process can be described as follows:

- 1) Transit declaration at the long room in Mombasa: There is a specific section to process transit declarations The format used is the common document system used for COMESA countries (CD-COM)
- 2) In principle, there are no inspections or other procedures for transit at the one stop centre in Kilindini (port).
- 3) Once the goods are cleared for transit and the seals are apposed, the trucks go to the Mariakani station which is 30 kms from the port. At Mariakani, the trucks form convoys after the axle-load control (an overloaded transit truck must go back to the port to be unloaded under customs control).
- 4) A convoy of 100 trucks or more is formed about three times a week. The KRA issues a convoy manifest and the convoy is escorted by a KRA officer.
- 5) Convoys go through check points located at the other weighbridges (Athi River), and a new manifest is created at Athi.
- 6) The transit ends at Malaba, at the Uganda border
- 7) The convoy manifest is sent back to Mombasa where the information is compared with the exit-stamped copy of the declaration.

The goods transiting Kenya have to be covered by transit bonds called CB8. There are two different types of transit bonds: General and particular. General bonds work like a line of credit with the KRA based on the average value of goods carried by an operator. Particular bonds are created for one consignment only.

These bonds usually cover 100% of the duties. For some products the coverage can go up as much as 300%. Most transit in Kenya is transported by a few operators under general bonds. This process is very cumbersome for the transporters and according to the interviewees it is more so than the other convoy systems in the region.

- According to the interviewees: The initiation of transit is not significantly faster than the clearance in Mombasa.
- The trucks have to wait for up to two days to form a convoy
- Trucking companies end up providing vehicles for the customs escort
- The escort carries the transit manifest and all the individual declarations and brings the documents to check points and the border at the same time as the trucks arrive. This causes congestion of vehicles and documentations at the check points and at the exit border posts. Whereas in Uganda, the convoy concept is more flexible. The customs escort brings the documentations everyday before the trucks arrive. . The trucks are all obliged to move the same day but not in escorted convoys.
- The return of the documentation to Mombasa takes time, and as a result, bonds are discharge with delays.

Ultimately, the transit process that normally takes only two days can take as long as one week and the bond discharge takes even longer. The cost implications are straightforward:

lower utilization of equipment and additional expenses yield higher unit transportation costs on transit compared to local transport in Kenya. (see section XX).

### ***Proposed Improvements***

As part of the CRM, the KRA intends to overhaul transit procedures, suppress convoys and promote a seamless transit. The cornerstone of KRA project for transit is the implementation of e-seals. These e-seals should be linked with a tracking system operated by the customs. The purchase of this system is currently under tender.

In theory, such a project could bring big benefits but it may also face serious feasibility problems:

- E-seals have never been implemented anywhere in the world. Although they are promoted by major organizations in the customs area, like the Crown Agents, many experts doubt their effectiveness compared to physical seals.
- Apparently, this project has not been discussed thoroughly with other stakeholders in Kenya and landlocked countries. In fact, some of its components like cargo tracking might be redundant with the existing or planned systems. Most truckers involved in transit already have GPS based systems. The TTAC has also been working on cargo tracking systems along the northern corridor.
- From a facilitation perspective, the transit procedures should be identical along the transit corridors.

KRA and other parties involved should work together on non-technology dependent solutions to facilitate transit. The two pillars of a transit system (Arvis 2005) are the bond scheme and a good IT system to check that the transit cargo has left the country and to discharge the bonds in real time.

In the short run, quick win measures could be designed to avoid the inconvenience of the present convoy system. One important step would be to create a carnet system as suggested by international practice. In a carnet system, the transit documents are attached to the truck and provide a good monitoring instrument that can essentially replace the current convoy manifest. A carnet can be checked en route at mandatory checkpoints, and the information can be stored in electronic format.

KRA and URA will have a manual tracking instrument that can compensate for the simplification of convoys. This system can be used later as the building blocks of a more sophisticated version. The current document used in for transit, CD-COM, is not a substitute for a carnet because it is only attached to the goods and not to the vehicle.

The possibility of implementing regional bonds has been discussed at the sub-regional level. A single bond would replace all the individual transit bonds by the countries and yield to potential savings. However, implementing this project can be very complex according to international experience and it is a lesser priority than improving documentation and tracking

systems because there are no availability problems for bonds in the countries of transit on the northern corridor and the main cost results from the delays between origination and discharge.

Thus, most of the gains on the cost of bonds will be derived from a facilitated transit system along with a good information system.

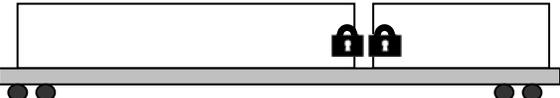
In Kenya, this transit bond system applies to rail transport as well. The KRA has pledged to waive bonds for transit by rail which is a normal procedure for rail transport. . This measure is crucial for the success of the block trains initiatives but despite confirmations in various stakeholders forums since 2000, it has never been implemented.

**Securing Containers for Transit by Train**

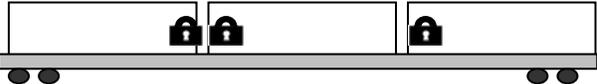
The international practice for transit of goods by rail is to waive customs bonds. The rationale for this is that rail transit offer a high degree of security because

Rail operators are large companies from the country of transit that cannot disappear.  
The opportunities of fraud are more limited than on the road as the cargo follows a pre-designated route with known stops. Fraud is possible when the company is negligent (with insecure stops and terminals) or its employees are massively involved in fraudulent activities.  
Furthermore, container traffic can easily be secured by simple loading practices that prevent access to the doors. In some countries, these practices are part of the deal between customs and the forwarder. Examples of loading configurations for a 60' wagon are illustrated below

One 40 ft and One 20 ft containers



Three light 20 ft containers



Two heavy 20 ft containers



### **3-5 The case for integrated management of trade information and the Potential of EDI for Kenya and Landlocked Countries**

As shown in the previous sections, a large part of the existing or potential development are based on the implementation of IT: GAINDE 2000 (KRA), COSMOS (KPA), cargo tracking... IT applications for document interchange can reduce the time and costs of clearing and moving consignments. Indeed IT properly deployed can move documents and information about cargo before the movement of cargo and therefore suppress waiting times.

The main feature of a true EDI system is that it allows the users to provide information only once and irrespective of the procedures the information is used for. It makes real time processing of trade information possible by various agencies instead of the traditional lengthy sequential procedures.

All over the world, the relative success of these projects has proved the importance of applying information technology for trade facilitation. However, in order to benefit from automated trade facilitation systems, a number of challenges need to be overcome:

- Complex and changing nature of logistics, documents, clearances, etc.
- Large number of actors involved in a trade transaction including port, customs, importers, clearing agents, shipping agents, banks and control agencies...
- Large volume of information exchange
- Complex procedures for treating electronic data
- Need for strong coordination and collaboration among various actors.

Unfortunately, in Kenya the initiatives are not yet advanced enough and there is not yet the comprehensive approach to trade information that is desirable to benefit fully from automation and help solve some of the most critical inefficiencies in the supply chain, which stems from the number of actors in the process (next section).

The deployment of EDI generally involves a complex project, because an integrated EDI system must take into account the needs of all the users and build on the automated systems put in place by the various actors (like port, customs and banking automated systems). The technical solution must be designed accordingly, including the decision of whether you need to operate a single platform and who should operate the platform.

Despite the low pace of automation in the ports and the customs, the last few years saw the emergence of a consensus in Mombasa on the potential on EDI for the port community. Under the leadership of the KPA, the idea of deploying an EDI system for the port community resulted in the creation of a specific company called "East African Information Services Company (EAISC)". This company, apparently inspired by the Tradenet model in place in Singapore and Mauritius, was supposed to support a so called Community Based

System (CBS). This company never became active, as the progress in automation was very slow until the very recent deployment in customs of GAINDE 2000 as part of the CRM, in place of the Boffin system, which could not be interfaced.

As part of this initiative the KRA and KPA jointly created a CBS Task Force which includes various stakeholders, a Secretariat based in KPA and the chairman who was KRA Customs Commissioner.

At the time of the mission KPA had proposed to begin electronic manifest exchange with large shipping lines. KRA declared renewed support for the application through the new customs system GAINDE 2000 which hosts an information exchange module, ORBUS

E-transmission of manifests is only one of the specific applications of EDI and it is probably the most important to start with. The recent experiences of port communities (e.g. Casablanca) shows that the community typically starts experiments with EDI by electronic manifest exchange before moving to a more comprehensive approach

A full assessment of the potential of EDI must also take in account other needs or projects in the trading community (forwarders, railroad, Banks...). EDI is also potentially a tool to facilitate the transit for the landlocked countries. There are several reasons to consider a broader approach to EDI without delay that will also include transit:

- In Kenya the private operators in transport and financial sector are very advanced in the use of modern technology, their needs and contributions must be factored in the project.
- Some regional bodies such as the Northern Corridor Authority, have also been supporting the use of IT systems to facilitate trade in the sub-regional context. TTCA carried out a feasibility study on the possibility of interfacing the various tracking systems to form a Regional Cargo Tracking System, with the assistance of the Economic Commission for Africa (ECA). This study was finalized in early 2004.

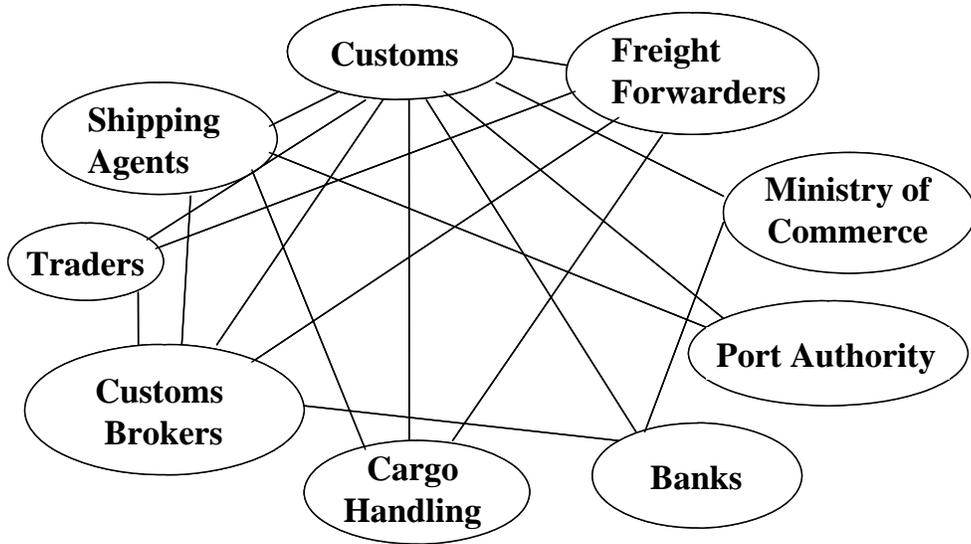
It is urgent for Kenya and the landlocked countries to develop a roadmap of the deployment of EDI. Such a project needs to be very carefully designed (Terms of Reference of a preliminary assessment can be found in Annex XX). Unfortunately there is no, off the shelf system that can bring everything together. ORBUS can bring a lot of benefit and can host experiments, but by itself is not a ready-made solution that can create services that are not already automatized. Such a project will have many potential benefits by:

- Bringing together the stakeholders on a concrete activity.
- Help solve issues like transit, which are very thorny today, in the absence of a common information system.

Engaging in a more comprehensive approach does not mean that the existing project on cargo tracking or e-manifest should be reconsidered or delayed These will be the setting stones of the future system.

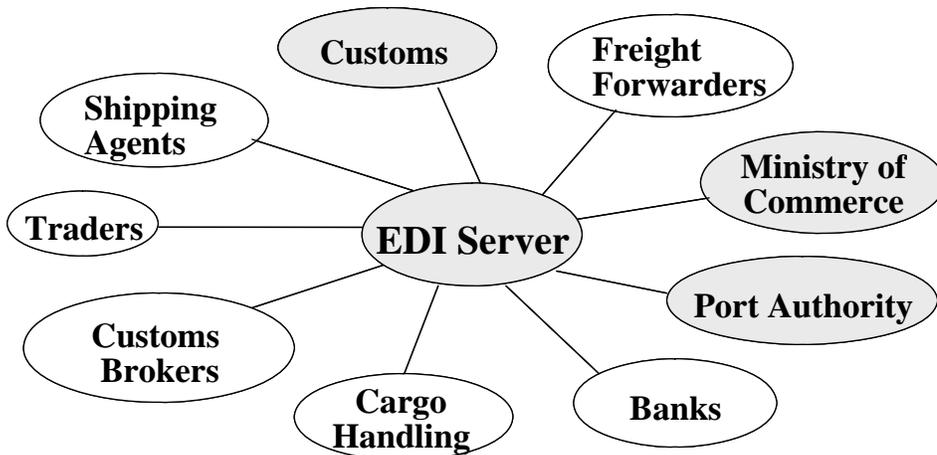
The traditional flow of information in the trading community can be illustrated as follows

### Point to Point Information Flow



Where as the flow of information in the trading community with EDI (Single Window) would look as follows

### EDI Information Flow



### **3-6 Weighbridges**

The management of axle-loads for heavy trucks is a very important aspect of the road policy. The damage to the road depends on the weight of each axle rather than the total weight of the truck. In fact the damage is approximately proportional to the weight of an axle raised to its 4th power. This means that an 11 ton axle causes about 45% more damage than a 10 ton axle. A systematic overloading of trucks can thus increase the maintenance needs considerably and cause the road maintenance budgets to explode. Therefore, a rational policy should include a control mechanism for axle loads but overzealous implementation makes it a serious impediment to transport.

This policy has been implemented in Kenya by the Ministry of Public Works (World Bank 2003 and World Bank 2004). It is reputed to have seriously reduced the previous overloading practices. While this practice helped reduce the overload, the weighbridges also caused unwanted impediments for trade facilitation because of the long truck queues and created a distortion for regional trade because the axle load regulations are not harmonized regionally

#### ***Inconsistency in Regional Regulations***

COMESA and SADC have proposed guidelines for axle-load limits. However the countries in the sub-region have somehow implemented non-compatible variations. For instance Kenya allows four axle trailers, which are forbidden in Tanzania, and are barely tolerated in Uganda and Rwanda. This is not the result of protectionist policies but rather the result of short-term gains by transporter lobbies.

COMESA regulation allows for single axles up to 8 ton and triple axles up to 24 tons. Kenya has introduced a four-axle load group with a maximum of 32 tonnes while allowing a higher gross weight allocation. This allows modified trucks to carry higher loads in Kenya but effectively prevents them from entering Tanzania or Uganda markets. In Tanzania, the government has introduced a maximum number of authorized axles on truck and trailer in such a way that commercial vehicles will never reach the 52 tons maximum. The following table summarizes axle load regulations in East and South Africa. Detailed information on axle load regulations in Kenya, Tanzania and Uganda can be found in Annex XX

## Axle Load Controls for East and South Africa

Country	Single Steering Axle	Single Drive Axle	Tandem Axle	Tridem	Four axle group	Gross Vehicle Mass (GVM)
Kenya	8	8	16	24	32	54
Uganda	8	8	16	24	32	54
Tanzania	7	10	18	24		52
South Africa	8	9	18	24		56
SADC	8	10	18	24		56
COMESA	8	8	16	24		53

### *Weighing Procedures*

There are currently 5 static (permanent) weighbridge stations located along the main international highway of Mombasa- Nairobi –Malaba at Mariakani, Athi River, Gilgil, Webuye and Isebania; and 9 mobile Weighbridge stations at Mombasa Port, Mtwapa, Namanga, Nairobi, Maai Mahiu, Kisumu, Eldoret, Busia and Malaba.

In principle, controlling axle load is necessary and useful for the road maintenance policy but in Kenya the implementation of these controls are problematic. The transporters frequently face the following problems:

- all trucks are stopped for weighing, and several times along the same route. This includes transit trucks, where the containers are sealed until they reach the final destination.
- the weighbridges are not calibrated, one weigh bridge reading does not match the other
- each axle load is weighed without consideration for axle group allocations. This process is very time consuming and readings are not always accurate.
- the readings from the weighbridges are not always available for the drivers. This causes lack of transparency and possible source of facilitation payments

The current equipment and procedures have major drawbacks. First of all, They are causing massive delays. For example at Mariakani weighbridge, the queues range between 1km with maximum 7km queues experienced in March 2004. (source TTCANC) and second, there is some uncertainty on the actual degree of enforcement of the axle-load regulations.

The weighbridges crews are reporting a 10 % overload rate. However there is serious suspicion that the figure does not reflect the actual numbers of overweight trucks for the following reasons:

- The transit trucks are weighted in Kigali at typically 60 tons of gross weight, which exceeds the limit in Kenya.

- Inquiries by the chief engineer at the Ministry of roads and public works.? suggest that there is widespread corruption (a point confirmed by the private sector) and that at least half of the trucks are not reported properly.

The interviews with the trucking companies show that the need for the axle-load policy is well accepted but the transporters believe that it should be enforced fairly, predictably, and without creating delays. The US\$ 200 fine for overloading is quite a small amount and may not be an effective deterrent. Nevertheless, transport operators are inclined to comply because exceeding the axle load limits and being stopped at the control point may considerably delay the delivery of goods to customers.

Based on these problems, a good and rational axle load policy for Kenya should have the following traits to protect the infrastructure while facilitating the transit:

- The system should allow a faster and more efficient process. This means reducing the number of weighbridges with faster processing for both domestic and transit trucks
- For transit goods, the trucks don't need to be weighed once after leaving Mombasa port because the containers are sealed and a well functioning transit system would prevent goods from being sold inside Kenya.
- Weighbridges should be equipped with facilities to offload heavy containers if offloading is desired.
- There is a need to change the weighing process for more efficiency. The practice of weighing each axle needs to be replaced with weighing axle groups. This can be facilitated by introduction by weigh in motion (WIM) scales which will provide fast and efficient weighing of trucks. These scales are often used for pre-selection purposes, allowing the operators to determine the weight of goods without interfering with their movements. In cases where serious over-weights are measured, the vehicles are stopped and further examined and re-weighed on static scales. In Kenya, the purchase of such scales is being discussed for several years but has not been put in practice.
- Axle Load Regulations should be harmonized with Tanzania and Uganda. This would require bilateral agreements with each country. This is one of the critical factors causing lack of competitiveness between the central and northern corridor. Kenyan trucking industry has a strong lobby to keep the heavier weight allocations that hurt regional transport services.

#### **4. TRANSPORT AND LOGISTICS SERVICES**

This Chapter reviews the performance of logistics services available in Kenya and assesses the potential for more regional integration of services between the EAC countries. The main players in this area are the forwarders/ clearing agents, the road transport companies and the express carriers.

The first two sectors are mature industries in Kenya, with organized companies and a significant dose of competition in the market. As for express carriers, the international companies are all present in the Kenya and the sub-region with a commercial dominance by DHL.

These companies are providing good and reasonably priced services to the Kenyan operators. However, those services are essentially limited to Kenya or the Northern corridor. There is virtually no trade between economic areas located on different corridors.

In principle there could be gains from regional operations, with logistics operations in the sub-region from a hub located in one country. This type of transition from transport to value added logistics services is observed in a number of emerging economies. It lowers transaction costs and can support the development of new activities in manufacturing or distribution. For the case of Kenya, the present environment is not conducive to regional logistics, due not only to the present segmentation of services but also to the regulatory environment.

##### **4-1 Forwarders and clearing agents.**

There are over 500 registered clearing agents, of which only 50 have proper offices while the rest can be considered as “suitcase businessmen”. In Uganda there are only 160 registered clearing agents. “Suitcase businessmen” are, like elsewhere in Africa, a nuisance as they essentially live from the deficiencies of the clearance process and tend to perpetuate them (unfair competition, improper practices). However, it seems that they are a lesser problem in Kenya as the mainstream forwarders are efficient and professionally well organized.

The business is dominated by large companies, the most prominent of which are affiliates of global logistics operators such as SDV-TRANSAMI (Bolloré group) or Panalpina. SDV dominates the market with around 25% market share. Another trend in the business is vertical integration with other transport operations like transport and shipping (for instance SDV is in all three businesses). In fact, although not all of them are registered clearing agents, large transport companies in Kenya are all providing forwarding services and operate inland facilities like private container depots.

Even though, in theory vertical integration may not be the most efficient organization, in the context of Kenya it is the market’s response to the deficiencies in the delivery of public services for trade. In fact, vertical integration allows a seamless flow of information,

eliminates duplications, and organizes the flow of goods especially when the port and customs process are not very efficient and cannot provide the private operators with the information they need.

The clearing agents in Kenya are represented by the Kenya International Freight & Warehousing Association (KIFWA). KIFWA merged in July 2004 with the Association of Clearing, Warehousing and Freight Forwarders of Kenya (ACWFFK) . The new body represents the interests of the freight forwarding and logistics professionals. The organization is an umbrella association with a branch in Mombassa and has around 1000 companies as members.

KIFWA is very active in pushing the facilitation agenda in the sub-region. It has been instrumental in moving forward with the CRM project and improvements at the Mombasa Port. For the past 4 years, KIFWA has been regularly reporting to the authorities on problems that affect the forwarders and clearing agents including customs clearance, automation, licensing of clearing agents and seamless train operations. The association is also very serious in maintaining professional integrity and excellence. Their priority activity is training in information technology and automation

***Licensing of clearing agents.***

- The clearing agents need to be registered as a business (with a Tax PIN) with a formal office with communication, transport and (non mandatory) warehousing facilities
- To get a licenses, a clearing agent, must apply with KIFWA first and must get approval from the association.
- Licenses are issued from 1-3 years (mostly 1 year)

#### **4-2 Road Transport Services**

The road transport sector in Kenya is a rather dynamic sector. Unfortunately, data availability on this sector is quite poor. Government agencies do not maintain a database on the fleet. There is no survey either by government agencies or by the KTA that could bring critical information about cost structure and operational issues. The Northern Corridor Authority is the only agency monitoring freight rates on the northern corridor by interrogating forwarders. Given the importance of this sector in Kenya and in the region, it would be strongly advisable to initiate and maintain a survey at the sub-regional level as part of the current facilitation initiative. Critical question that can be answered by this survey include: size and age of the fleet, size of companies, utilization, monthly mileage, operating cost, etc. ... Some commercial or financial companies (like transport equipment dealers or banks such as the National Industrial Credit) already have access to this information but it is limited to for their private use.

The mission estimates that there are over 50,000 trucks (all sizes) registered in Kenya. Only a fraction of those take parts in long distance transport in Kenya or transit:

- The sector is dominated by a few rather large (100 to 400 truck) companies including Mutiple Hauliers, SDV and 3 companies belonging to the Bayusuf family. The sector underwent a radical consolidation a few years ago. Single truck or small size companies (less than five) do not play a significant role.
- According to the financial institutions , these companies are financially sound and well managed.

From the turnaround times and the flow of trucks (600 daily in Mombasa), our estimate is that at least 4000 trucks take part in core international trade, with 1000 trucks belonging to just two groups of companies

### ***Operational features.***

The largest companies are buying new trucks (12 million Ksh), but the general practice is to bring second hand trucks from Europe at the end of their leasing period (3 years old or about 300,000 km). They operate the trucks for another 300,000 km and resell them in other countries or to the smaller companies. The cost of the 3-year-old truck is between 2 and 3 million Ksh. The duty on trucks is 25%, which is the rate also applied to non-professional vehicles.. In this case, trucks are used as capital goods and should be taxed less following international practice.

The companies seem very well organized with maintenance facilities, GPS based tracking systems and on board computers training policies for the drivers. Some companies have even been ISO-certified and designed a compliance code (at the initiative of some of their multinational clients). Most of the companies have a very good monitoring of their operating costs, but are reluctant to share this information.

### ***Operational costs.***

According to the companies, the operational conditions are somehow different for transit and local traffic. Due to the procedural bottlenecks, truck usage is less for transit, there are less opportunities of back load than for local traffic and the price for tom/km is higher. Therefore, the companies tend to use older trucks with less fixed costs for transit.

There was no reliable information on truck utilization for transit but based on the interviews the following information was gathered:

- Trucks run at least 5000 kms per month for transit and 7000 kms for local traffic. These numbers change from one company to the other and it can be as high as 10,000 kms. The estimate is that Kenya utilization is 1/3 below Europe, which is not bad.
- Most companies are estimating their break-even cost based on an empty back load. They make their profits from return loads, which is around 20%.

The cost information is more consistent

- In Kenya, the traction cost for semi-trailer is 80 Ksh for the running kilometer and 160 Ksh for the loaded kilometer<sup>34</sup>, which are very similar to the costs in Europe (0.8 to 1 Euro). The cost are higher for transit operations, due to lower backload and lower utilization of the vehicle due to transit and border waiting times.
- TKM rates are 7 to 9 Ksh for transit and 5 to 7 Ksh for local transport. .

The World Food Program pays the following rates for transport from Mombasa:

#### The World Food Program tariffs (USD)

	Kampala	Torora	Lokichoggio	
Bagged Cargo	92	75	100	
Carton	102	85	110	

As in other countries in Africa, the operational conditions induce high running expenditures. Due to poor road condition cost of maintenance and tyres are high (typically in Africa tires wear three times as fast as in Europe). Fuel efficiency is affected by the age of the truck and the road conditions as well. As a result the running costs amount to 60-75% of the operating costs vs. 60% in Europe (on Average). Based on the interviews, a breakdown of the cost structure for a trucking company is as follows:

#### Cost Structure for a Trucking Company

Item	Cost (% of total)	Notes
Personnel	8%	
Communication	1%	
Car running costs	60%	
Fuel	60%	
Maintenance	40%	25 Ksh. per km prime mover maintenance cost
Indirect overhead (security etc.)	7%	
Total operational costs for the fleet including insurance		78 Ksh/ km for prime mover
Utilization of the fleet	95%	
Profit Margin <sup>35</sup>	Around 20%	

Source: Interviews by the author

If the current reforms and projects are implemented fully, the operating cost will go down substantially. Improvement in infrastructure will impact the running cost (maintenance, tyres, fuel). Facilitation measures (transit, weighbridges) and better infrastructure will increase the

<sup>34</sup> Companies exporting horticulture product are relying on smaller trucks (4 tons) provided also by reliable companies, the cost of transportation is about 30 Khs per km: the distance are much smaller 100 to 200 km. These rates are higher but not considerably higher considering that the trucks have to go out of the main corridor directly to the farm on not so good road or off road (see section 4-4). Nevertheless, this cost is a lesser concern as compared with the volatile air-freight rates.

<sup>35</sup> The operational cost is \$1 (78 Ksh) per km per ton and they charge \$1.20 to the client (20% profit)

utilization rate of the truck measure by the number of km run per month. The following table simulates the cost impact of facilitation measures as benchmarked a typical current cost structure.

	Typical current	H1	H2	H3	H4
Number of kilometers per month	7000	10000	10000	7000	10000
Reduction in running cost due to facilitation measures	0%	-20%	-10%	-10%	0%
<b>Total traction cost (Khs per Km)</b>	<b>80</b>	<b>61</b>	<b>66</b>	<b>75</b>	<b>72</b>
Variable component	52	42	47	47	52
Fixed component	28	20	20	28	20
% of variable cost	65%	68%	70%	63%	73%

Most recent analysis, (World Bank 2003) anticipate major changes in logistics patterns with the privatization of the railroad. The underlying assumption is that an efficient privatized railroad will divert a very substantial part of the freight traffic, including the fastest growing segment the movement of import and export containers. Furthermore, it is expected that the rail will be competitive for both the long distance transport to Uganda and for the service from Mombasa to Nairobi. It is expected that the railroad can recapture as much as 50% of the local traffic as can be seen from the following market share analysis.

It is likely that, in the future, the truckers and at least the most competitive of them will be in position to match a more aggressive price policy by the concessionaire. The reactivity of the haulers will be much enhanced when the expected transit facilitation measures are put in place (see above the projection of trucking cost structures. Annex 3 proposes a comparison of the two services. This simulation supports the overall opinion of professionals, which is that the rail is unlikely to regain its historic market shares, although it has some advantage over road for transit containers.

### ***Regional operations and Comparison with Tanzania Trucking Sector.***

The transportation services are not integrated at the regional level. Today companies are operating on separate corridors: Kenyan Haulers operate on the northern corridor and Tanzanian haulers operate to Zambia and on the central corridor and to Zambia. There are very limited inter-corridor flows between Kenya and Tanzania and furthermore, the companies do not operate regionally on several corridors. This is reportedly a long term consequence of the break up of the East African Community in 1977, which created a long term separation between businesses. As a result, local transport in Tanzania is provided entirely by Tanzanian companies.

There are three categories of constraints that explain this rather sustainable segmentation of the market: border crossing conditions, regulatory issues and lack of market incentive, the later being probably the most critical.

The issues with border crossing, between Tanzania and Kenya, have been documented in recent studies by EAC and the World Bank. (e.g. EAC 2004). Border crossing is slowed by a number of issues such as opening hours, separate facilities on each side of the border. However the waiting times (a few hours at most) cannot be compared with the problems in Mombasa or at the Kenyan-Ugandan border, the traffic is also too limited to allow for congestions. Some of the trans-corridor infrastructure is poor, for instance between Dar and Mombasa.

Regulatory issues are part of the reason for the lack of regional operations. Different regulations in transport, especially regarding the axle load and number of axles make it difficult for Kenyan hauliers to operate in Tanzania.. This is due to the discrepancies between SADC and COMESA regulations as well as the countries own idiosyncratic application of these regulations. However a Kenyan horse can operate with a three axle trailer in Tanzania. The only restriction that apply is that cabotage is forbidden: a Kenyan cannot sell point to point transport services in Tanzania and conversely. It is difficult to evaluate how much this rule is an obstacle to trade in transport services. If cabotage was allowed two different strategies may emerge:

- Given the distances between the markets, (the zone of operations for cabotage are not very close to the border), an organized companies will have better up to set up separate operation in the other countries with proper facilities (e.g. maintenance workshop), which already possible.
- Independent truckers may migrate where the business is and dump the market. A bad scenario for instance, will be for instance to have the Kenyan market invaded by poor quality Tanzanian truckers. An undesirable outcome.

More importantly there is no market incentive to operate regionally. The market structures are very different between Tanzania and Kenya. Tanzania has a very fragmented and inefficient trucking industry. The desirable outcome of consolidation and regional operation is more likely to happen with foreign trucking companies from Kenya (along with South Africa and Zimbabwe) driving the changes. Unfortunately the Tanzanian market as it is not attractive to foreign investors.<sup>36</sup>

Based on the latest available data, there were about 29,000 road haulage companies in Tanzania in 1999 of which 92.4 percent were driver-owned. Only 286 companies had more than 5 trucks. The recent study on the trade facilitation in Tanzania indicates that around 50% of these companies are based in Dar es Salaam and their main business is ad hoc transport from the port (there are long queues of individual trucks waiting for a load at the port). There are very few companies with more than 50 trucks and these are mostly involved in transit operations and the equipment is older than in Kenya.

The operating costs in the sector are high with costs around 6.5 cents per ton/km in Dar es Salaam area and 9 cents per ton/km for longer distances including transit. For the organized companies running (variable) costs are about 70% (essentially fuel and maintenance). This

---

<sup>36</sup> for instance there is much less interest in vertical integration in Tanzania , forwarders like SDV are not present in the transport business.

cost is estimated to be higher for small operators and it seems that many small companies or individuals are selling their services below running cost (sometimes as low as 3-4 cents per ton/km)

#### **4-3 Bottlenecks on the development of logistics services..**

The spectrum of logistics services available in Kenya is limited. There are essentially two types of services: the traditional forwarding services including transport and container depots. In the context of horticulture, the services include conditioning the product for exports. Except for some courier services provided by express carriers there are no emerging third party logistics where value added is created by organizing distribution of shipments for the client.

Experience shows that there are great advantages in being able to optimize inventory and distribution of products, especially for companies operating in more than one country in the sub-region. For instance, under the present regulations, computer and electronic product distributors must maintain very large inventories in every country. The inventory levels can go as high as six month worth in landlocked countries. This is partly because of delays from procedures and transport and partly because the distributors are not allowed to keep large inventory levels for redistribution at a later date. Kenya regulations do not allow large number of goods to be stored in a warehouse for future sale; they require specific destination information for imports. . This has a large impact in terms of prices. The same computer is three times more expensive in Bujumbura (Burundi) than in Nairobi.

Another illustration on how far Kenya is from being an efficient sub-regional logistics hub is that for express carriers it is more expensive to move courier between East African countries than to or from Europe. Indeed some of the constraints stems from the supply of transport services. For instance air cargo within the region is limited and expensive as it is rated as excess passenger luggage (cf. parallel study). The remaining problems are in related to the regulatory and fiscal environment in Kenya.

Three major problems in these areas are listed below:

##### ***a) VAT applicable to imported services.***

One of the important features of logistics services is the split services between several countries. The trade in these services and settlement happens internationally and mostly within the same group of companies through a compensation system.

In the case of European Union, there is no VAT on imported services. According to the EU regulations, the VAT is based on a destination principle, which means that the VAT is due in the country where the services are delivered.

Kenya, like a number of developing countries, does not exclude VAT systematically from import of services. This creates double taxation when a logistics provider pays VAT in Kenya for a service by a correspondent for which the VAT is already due in Europe. In order

to avoid this type of complexity and fiscal escalation, Kenya and other EAC countries should adopt VAT regulations that are consistent with EU practices.

***b) Income tax withholding for transactions with non-residents.***

The Income Tax Act does not make room for international settlements within companies. It requires taxation on the entire value of the transaction from pick up at the origin to delivery at the destination. Thus, for instance, where DHL London ships a package to DHL Kenya for delivery in Nairobi, the Income Tax Act deems DHL London to be a non-resident person carrying on the business of N air transport operator in Kenya, and the profits from this transaction are also deemed to be income derived from Kenya.<sup>37</sup> Furthermore, the Income Tax requires that when DHL Kenya pays DHL London for its services in facilitating the above transaction, DHL Kenya should deduct tax at the appropriate non-resident rate.

This rule is not unique to Kenya and there may be some justification for checking against tax evasion. Never the less, the KRA should implement this rule in a manner that facilitates the businesses of major. For example the KRA can enter into conventions with some companies.

***c) Regional inventory under customs control.***

Managing bonded-inventories, although not impossible under the Customs and Excise Act, is cumbersome and not encouraged by the KRA. The main reason for the difficulty is due to previous fraudulent practices that the KRA encountered. For example some operators have abused the temporary admission clause for the Free Zone.

Kenya allows duty-free entry into the country for goods destined for neighboring countries or for transshipment; however, the goods must be covered by bonds at the level of the applicable duty and any additional sum that customs officials deem fit.<sup>38</sup> Such goods must be held in bonded warehouses designated by the Kenyan Customs Department. Release of the bonded goods into the Kenyan market is prohibited, unless statutory customs payments are made. The estimated duty and further sum are to be held on deposit and are to be forfeited unless the owner produces satisfactory evidence of the value of the goods and makes perfect entry thereof.<sup>39</sup> In practice, the Customs Department requires owners of goods to pay 2.75% of the value of the goods and to pay a sum of Kshs.5000 in advance, pending the making of perfect entry.

Changing the destination of goods in the other direction from local consumption to transit (for delivery in another country) is equally cumbersome, as the operator cannot recover the inspection fee (2.5 %), and must wait for the duty drawback. From this (very partial) perspective the PSI programs are an nuisance to regional logistics. Fortunately in Kenya the program is to be phase out in 2006, which will ease regional logistics on the Northern corridor (Uganda and Rwanda phased out already. Unfortunately Tanzania, switched recently

---

<sup>37</sup> Income Tax Act, Chapter 470, Laws of Kenya, § 9(1).

<sup>38</sup> Customs and Excise Duty, Chapter 472, Laws of Kenya, § 31(1).

<sup>39</sup> Id, §31(2).

to a destination inspection program (by COTECNA), which might be an obstacle to trans-corridor logistics.

As part of national and regional facilitation program, customs should discuss with major forwarders and express operators and find acceptable solutions. The EU practice in this area is to have conventions between operators and the customs agency. The phasing of inspection is also probably needed for bonded-inventories to work.

#### **4-4 The nexus of trade logistics and rural logistics.**

From a poverty reduction perspective, trade logistics is not only about how well the country is connected to global markets and trade and transport facilitation policies to improve this connection. It is crucial to look at the entire supply chain and the links to the original producer, especially for agricultural or horticultural exports. Indeed the rural farmer's revenue is diminished not only by the costs of international logistics but also by those of the local logistics to/from the processing plant or the collection center. Typically the inland transportation along the international corridor is the costliest leg in the export or import chain. However, in some developing countries the local logistics to get to the corridor may capture a substantial part of the margin, comparable to corridor transport, although the distances are much shorter. This situation results from the combination of failures, infrastructure, availability of transportation, organization...

In Kenya, knowledge of logistics patterns and costs at the local level is available through various recent studies<sup>40</sup>. As part of the current work, a rural logistics chain study was carried out in two districts: Kisumu and Nyandarua. The objective of the study was to describe how cash crops and subsistence crops go from the farmer's field to the final customers (local market or exporting firm) and to provide a cost analysis for each step in the logistics chain. The main information source for this study was interviews with farmers, local transport service providers, intermediaries, regional transporter and farmers associations or cooperative organizations.

The typical supply chain from the field to the local/regional markets or the processing plant involves a series of intermediary means of transportation as well as, so called, middlemen. The middlemen are in fact brokers who own the motorized means transportation or can easily charter them.

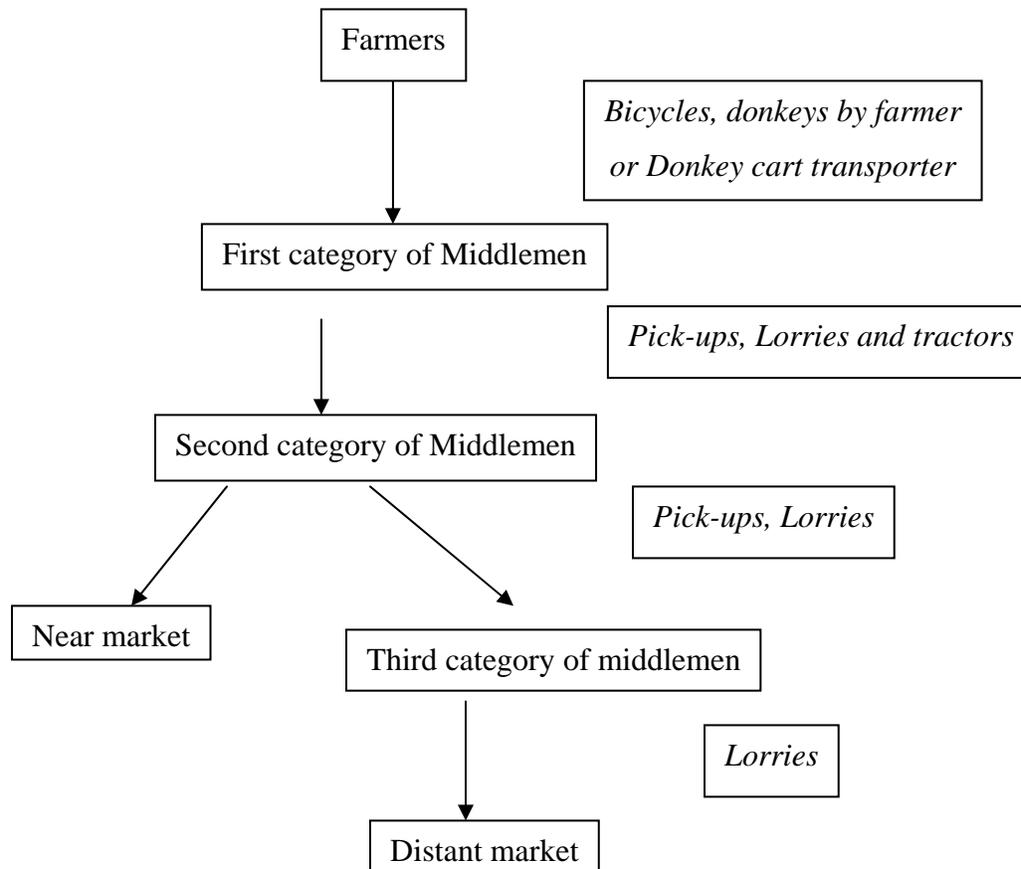
There are traditionally at least two levels of intermediation. The farmer uses non motorized means of transportation (his bicycle, a rented donkey cart) to reach over a few kilometers the village broker. The later has generally access to a pick up and reach the road to sell the goods

---

<sup>40</sup> Including a series of value chain analysis prepared in 2004 for the World Bank by Global Development Services (GDS), the chapter on coffee for instance contains information on costs. Some authors have also looked at the supply chain for urban markets: "Changing horticultural supply chains in Africa: Implication for Government and Donors Investment, Evidence from Kenya and Implication fro Africa", David Tschirley, Milton Aiyeko, World Bank rural week paper, April 2005.

to another broker who can carry goods over longer distances and access to the regional markets.

**Figure Supply Value Chain for Nyandarua District**



Due to higher fixed costs, transportation over shorter distances are naturally much more expensive than transportation over long distance. In the case of Kenya even Intermediary means of transportations used to get to roads or local market do not appear to be exceptionally expensive.

	Khs Per 90 kg bag	Equivalent ton per km
Donkey cart	20 for 10 km	22 Khs
Matatu on road	50 for 40 km	14
Typical commercial cost on international corridors		5-8 Khs

The cost over longer distances to reach Nairobi and the corridor are also consistent with what is observed on the northern corridor. In fact, for goods sold on urban markets the bulk of transportation is long distance costs on road as opposed to local cost by intermediary means of transportations.

<b>Transportation Costs(Maize, Beans)</b>	<b>Cost in Kshs</b>
Ndaragwa to Othaya (Nyeri-100 Km)	50-60 per 90 kg bag
Ndaragwa to Nairobi (250 Km)	110-120 per 90 kg ba
Ndaragwa to Nyahururu	20-30 per 90 kg bag
Donkey cart from Rural area to Ndaragwa	250 Per Trip

Yet most of the transaction costs along the supply chain are not transportation costs. They explain between one tenth to one fifth of the price gap between the farmer and the consumer. Most of the margin is captured by the series of intermediaries.

#### Transaction Costs in Kisumu District

<b>Transaction Channel</b>	<b>Maize (90 kg unit measure)-Kshs</b>	<b>Beans(90 kg unit measure)-Kshs</b>	<b>Rice (90 Kg Unit Measure)-Kshs</b>
Farmer to Rural trader	1,125	1,800	900
Rural trader to Urban trader	1,400	2,700	-
Urban trader to Miller	1,575	3,150	-
Miller to Retailer/Irrigation Board for Rice	2,250	-	2,250
Retailer to Consumer	2,475	3,600	3,600

<b>Transportation costs Per Bag (90 Kgs)</b>	<b>Pick-up</b>	<b>Lorry</b>	<b>Bicycle</b>	<b>Donkeys/Oxen</b>
Farm gate to Rural market/Trader (Radius 5 Km)	-	-	-	50
Rural Trader to Urban trader (30-35)	100 <sup>41</sup>	100	70-80	-
Urban trader to miller (5 Km)	50-60	50-60	--	-
From Miller to Retailer (5 km)	50	50	-	-
Nature of road infrastructure		Poor		

In most cases farmers sell the produce to middlemen and have very little bargaining power. Even if they bring the produce to the market, the middlemen arrange for the final sale. The study found that in the case of coffee the farmers did not know the price before actually reaching Kisumu. The impact of distance and accessibility is in a sense indirect, the more distant the farmer from the market, the more to asymmetry of information<sup>42</sup> and the more margin is eroded by brokers. Large commercial organizations dealing directly with the farmers exist in Kenya and are more favorable to farmers. They can also provide other services to the farmers in order to organize their logistics or meet standards. But their extension is limited and their supply areas remain close to Nairobi, where those organizations are based.

The case of milk is illustrative of the problem. Farmers, 75 kilometers or more from Nairobi, may get 22 percent less for their milk than farmers close to the urban areas which can access

<sup>41</sup> Price per bag + fare for farmer.

<sup>42</sup> For instance farmers complain of being cheated on the rejection of their products

other channels of distribution. In the Nyandarua district, while a farmer will sell its milk at best at 13 Khs to a local broker and pay for transportation (1-2 Khs on long distances) Dairy farms normally buy milk from the farmers at a price of Kshs 16 per liter and transport to the processing firm. They also offer credit facilities to farmers. Of importance also in this case is the fact that dairy farms have proper off road collection adequate for a perishable product like milk. With brokers, it is estimated that each additional kilometer of poor feeder road that separates a farmer from the main road reduces the milk price by some 0.5 shillings per liter, or about 3 percent per kilometer. (Of which only 0.2 percent per km is transportation).

Another illustration directly relevant for trade is the case of coffee. The comparisons provided in the World Bank between the primary processing costs between an estate and small holders in a cooperative find that the latter have higher cost on all the supply chain and that transport is relatively small part of a broader supply side problem.

#### Primary processing of coffee.

	Total cost Khs/kg	Of which transportation (in and out of plant)
Small holder cooperative	35	15%
Estate	13	10%

Source GDS/World Bank 2004.

From the perspective of management of Public infrastructure, the rural accessibility is a problem relatively well addressed in Kenya, at least compared to other country of the Region. About two thirds of the population is living in rural areas, yet most of the population is concentrated not too far from the main corridor, for obvious historical reasons. Yet the network of unclassified “roads” serving rural and small town is huge, about 120,000 in addition to a network of 63,000 classified road maintained by the Kenya Road Board plus 15,000 km of urban network. However according to the World Bank (2003) the concept of local road may to extensive and only 30%-50% may be considered the rest being footpath or track.

Kenya has developed with donors a consistent program of maintenance of “minor” roads called Road 2000, initiated in 1997. This program is based on the implementation of local labor low cost robust solutions to repair and maintenance (e.g. local SMEs building culverts). It seems that this program has been moving well, despite the initial lack of qualified local contractors.

Overall, potential problems of gap between markets and farmers’ revenue are only explained by transportation cost and accessibility. Access to international or national markets are bound by supply constraints that should be eventually addressed by other set of policies.

## 5. CONCLUSIONS: FROM TRANSPORT TO LOGISTICS?

As far as logistics is concerned, Kenya is a country of extreme contrasts. On one hand, the country is addressing daunting challenges on the public sector side to catch up on investment in infrastructure and reforms that have been lagging behind for many years by implementing modernization projects at the port and the customs and privatizing the railways. On the other hand, the private sector services have been thriving with a well organized and competitive transport sector with large companies.

The quality of services and operating costs of top providers in the trucking industry are closer to Europe than to other sub-Saharan African countries. The market structure for transport has also evolved with vertical integration between forwarders and transporters.

A successful privatization of the railways can bring more competition and spur further positive changes in the transport services, but may not alter radically the current modal shares. Improvements in the road infrastructure, such as the Northern corridor project, will also bring down cost and delays and help improve the quality of services.

However, there is not yet in Kenya the emergence of third party logistics services, witnessed in transition or emerging economies, and which would provide new services to importers and exporters. Such an occurrence would signal a new degree of integration of services in the sub-region. It is unlikely to happen in Kenya at a large scale. In fact, logistics in Kenya is still very much organized along one corridor, reflecting the segmentation of the demand along corridors, with only limited overlap between port hinterlands. However, there is potential for increasingly bring more added value than point-to-point transportation on the Northern Corridor (e.g. regional hubs to distribute products in several countries).

There are many obstacles to overcome to reach a Kenyan a regional environment conducive not only of trade facilitation in Kenya but also of more regionally integrated market structure of logistics. The core issues are the known facilitation problems at Mombasa, being addressed by recent modernization projects. The most important critical programs are the customs modernization program and the commercialization of container activities, whether privatized or not. The railroad concession although important is less critical for trade logistics.

Yet, the mission found that it is today necessary to look further than the existing set of measures.

Current projects, if seriously implemented, will improve productivity (e.g. new equipment in the port) and bring down the time of customs processing (GAINDE 2000) However, a successful implementation requires not only new equipments but also the will to eliminate a proliferation of rent activities that stem from the present inefficiency of the system. Better organization and coordination is also needed to avoid unnecessary logistics at the port. The first test is the implementation of an effective container tracking system.

To insure consistency and benefit fully from the projects under implementation it is crucial to develop a roadmap of EDI. Such a topic goes beyond Mombasa, as it should involve also transit activities (e.g. cargo tracking). EDI is not utopian in Kenya, given the degree of sophistication of the private sector. By nature, a federating project, EDI deployment can bring together operators and stakeholders from Kenya and other countries. It could be implemented as part of the preparation of the EAC World Bank project. Terms of reference are available in annex.

Transit is also a big issue not addressed in a fully comprehensive manner under current plans. The CRM has developed very sophisticated plans, based on unproven techniques, without consultations of stakeholders and other countries. It is urgent that stakeholders and governments re-discuss the issue and propose simple and proven tools (e.g. carnets) to dismantle the present convoy system.

There is a proliferation of facilitation initiatives in Kenya, in part, due to the donors' policy (notably the USAID and DFID). However, the TTCA, Northern Corridor Secretariat and the port community, are already probably the most qualified and experienced body to facilitate the dialogue with governments and stakeholders on some of the most complex issues, including transit facilitation measures to be taken as part of the CRM. It could also maintain through an adequate survey a database on market structure and cost of services in the sub-region, which is missing for more detailed policy work.

Present weighbridge regulations operations create major disruptions and are also the source of cross-country inconsistency. The road department should address first the modus operandi and the associated bad practices (move to Weigh in Motion?). Furthermore, it is highly desirable to insure consistency between regulations in the EAC countries: individual countries have diverged from the initial COMESA recommendation.

In the longer term Kenya will benefit from economies of scale and integration of logistics services at the regional level. Kenya should, probably in the EAC customs union context, look at some of the business environment issues (VAT, customs exemption, taxes) that inhibit the development of regional logistics services.

\* \* \*

The two matrices below summarize the expected impact of measures under implementation and the need for further actions.

### Existing Projects: Critical Issues Addressed by the Existing Projects

Theme	Key components of the reform for trade logistics	Comments	Timeframe	Implementing Partners
Port Modernization	Automation of maritime procedures	Will contribute to a community system	CT	KPA
Port Modernization	Implementation of a container tracking system at the container terminal	Potentially a very strong impact	CT	KPA
Port Modernization	Upgrading of port infrastructure			
Clearing agents	<p>Modernization of the profession supported by:</p> <ul style="list-style-type: none"> <li>▪ The new professional requirements set up by KRA and KIFWA</li> <li>▪ The KIFWA training program</li> <li>▪ The technical requirement on clearing agents imposed by automation</li> </ul>	At stakes are the professionalism of this community and the phasing out the so called “suitcase businessmen” who are supposedly perpetuating bad practice	MT	
CRM	Automation of Customs / Deployment of GAINDE	Automation has the potential to bring dramatic reduction on the time	CT	
CRM	Implementation of container verification procedures at the Port including the scanner and one stop centre.	The present flow of verification (scanner, physical) by customs and others is creating significant logistical pressure on the private sector.	CT/MT	
Railways privatization.	Concessioning of the railway	<p>The railway has the capacity to reach very high standards of performance compared to existing levels. The important issues to consider are:</p> <ul style="list-style-type: none"> <li>▪ Delays (fast evacuation of containers on block trains)</li> <li>▪ Prices. (the present long term marginal cost is too close to hauliers’ operating cost on the Kenyan market)</li> </ul>	CT/MT	

## Matrix of Recommendations

Theme	Action	Comments	Time frame	Implementing partners
EDI	Implement a comprehensive study : <ul style="list-style-type: none"> <li>▪ Evaluating the progress in automation</li> <li>▪ Assessing the need of private stakeholders</li> <li>▪ Providing a roadmap for EDI to government agencies and private stakeholders</li> <li>▪ Including railways in EDI plans</li> </ul>	The study will ensure consistency between various private and public sector plans and identify the most beneficial areas for automation. Make possible some of the facilitation initiatives undertaken or envisioned today.	CT	TTCA KPA, KRA, URA, shipping lines, forwarders, transporters, Banks
Weighbridges	Revamp the weighing equipments and procedures for: <ul style="list-style-type: none"> <li>▪ Initial weighing at KPA</li> <li>▪ Weighing in motion at intermediate steps</li> <li>▪ Weighing by group of axle</li> </ul>	Efficient and consistent enforcement of the axle-load regulations. Ensure consistency with international practices	MT	Ministry of Road,
Weighbridges	Align axle load regulations with SADC rules. Have bilateral agreements with Tanzania and Uganda to ensure regional uniformity	Enhances the potential for regional trade in goods and services	MT	EAC, COMESA
Transit facilitation	Remove the bond on rail transit	This measure has been on the drawing board for years	immediate	KRA, URA, Railways
Transit facilitation	Phase out the escort system and introduce: <ul style="list-style-type: none"> <li>▪ A transit document attached to the vehicle (cf. carnet)</li> <li>▪ A proper tracking system to provide customs security.</li> </ul>	Seamless transit procedures will prevent delays.	CT/MT	TTCA, KRA, URA, transporters
Transit facilitation	Introduce multi-country or corridor based bond system	Simplify border crossing on the corridors	MT/LT	TTCA, KRA, URA, RRA
CRM	Implement a study on future PSI practices following the termination of current contracts	Future PSI plans are not spelled out in the current plans.	MT	
Facilitate regional integration of logistics services	Align the VAT rules for imported services with EU fiscal practice	Avoid double taxation on international logistic services that typically include services paid in many countries.	CT/MT	MOF, KRA, URA? TRA, EAC
Facilitate regional integration of logistics services	Amend the customs and excise act in Kenya to allow bonded warehouses for regional distribution of goods.	Decrease transaction cost for logistics operated at regional level to allow for economies of scale and	CT/MT	MOF, KRA, URA? TRA, EAC

<b>Theme</b>	<b>Action</b>	<b>Comments</b>	<b>Time frame</b>	<b>Implementing partners</b>
		to create new services.		
Economics of logistics	Have a permanent or semi-permanent observatory of the logistics sector for Kenya and if possible at the regional level	This can be a cooperative initiative between existing bodies to monitor and survey on a regular basis the performance and trends in the sector	MT	TTCA, GOK, transporters, railways
Business Environment	Reduce duties on capital goods for transport and logistics from the current 25% levels	Duties on capital goods create distortion. Private and commercial vehicles should not have the same duty levels.	?	MOF

## REFERENCES

Ali, Athman, Jean Jizito Kabanguka and Anthony Murithi (2003) Feasibility Study for A Regional Cargo Tracking System on the Mombasa (Northern) and Dar-es-Salaam (Central) Corridors. TTCA and PMAESA.

Arvis J.F., « Transit and the special case of landlocked countries », in Customs modernization Handbook, Luc de Wulf, José Sokol ed., The World Bank 2005.

Blouin and Njoroge, 2004, *DFID Evaluation of Trade Support to Trade Related Capacity Building: Case Study of Kenya*

Blouin, Chantal and Isaac Njoroge (2004) Evaluation of DFID Support to Trade Related Capacity Building: Case Study of Kenya. The North-South Institute.

Central Bank of Kenya. (2002). Kenya Guidelines on Foreign Exchange. Nairobi, Kenya.

Central Bureau of Statistics (2004), *Economic Survey 2004*, Ministry of Finance and Planning: Nairobi, Kenya.

Central Bureau of Statistics (2004), *Economic Survey 2004*, Ministry of Finance and Planning: Nairobi, Kenya.

Commonwealth Secretariat (2002) *Technical Assistance for WTO Discussions on Trade Facilitation – Case Study for Kenya (Final Report)*, prepared by Almaco Management Consultants Ltd., Nairobi, Kenya.

DHL (2004) Revision of VAT Invoicing on VAT Exempt NGOs and Embassies. Mimeo. Nairobi, Kenya.

English, P., S. Jaffee and J. Okello (2004, forthcoming) *Exporting Out of Africa: The Kenya Horticulture Success Story*, paper prepared for Shanghai Conference.

EAC (2004) Study on a framework for joint utilization of border post facilities.

Global Development Solution (2004) Value Chain Analysis of Selected Strategic Sectors in Kenya. Prepared for World Bank.

IFC (2004) Information Memorandum-Joint Concessions of the Railways of Kenya and Uganda.

International Monetary Fund (2004) East Africa Community: Investment Tax Incentives and Harmonization

International Monetary Fund (2004) Kenya Customs Reform and Modernization. Washington DC.

International Red Cross (2004) Nairobi Regional Logistics Centre Briefing File February 2004. Nairobi. Kenya

Kenya Ports Authority (2003). Annual Review and Bulletin of Statistics 2002. Mombasa

Kenya Ports Authority (2004). Annual Review and Bulletin of Statistics 2003. Mombasa

Kenya Revenue Authority (2003) Customs Reform and Modernization Project: Project Charter. Nairobi. Kenya.

Kenya Roads Board. (2003) Roads Boards: The Kenyan Experience. Presented at the First African Conference on Road Maintenance Funds. Libreville.

Kenya Transport Association. (2003). The KTA Magazine Issue No: 2 May/June 2003.

KIFWA (2000) Report Submitted to the Deputy Commissioner, Southern Region, Customs and Excise Department. Mombasa, Kenya

KPMG (2004) BudgetBrief 2004: An overview of the three budgets from the East Africa region.

Kulaksiz, Sibel (2004) Poverty Reduction and Gender Effects of the Employment Generated by AGOA. Background paper for Kenya Diagnostic Trade Integration Study. World Bank.

Lunogelo, Bohela (2004) Study on a Framework for Joint Utilization of Border Post Infrastructure Facilities. East African Community

Marawa, Amos (2003) *The COMESA Air Transport Liberalization Experience*, Paper presented at the ICAO Seminar on Aviation in Transition, Montreal, 22-23 March 2003.

(2004) FIAS Administrative Barriers Study: Customs Modernization. Foreign Investment Advisory Service. World Bank Group. Washington DC.

Ministry of Planning and National Development (2003). Economic Recovery Strategy For Wealth And Employment Creation 2003-2007. Government of Kenya.

Ministry of Roads, Public Works and Housing (2004) Press Statement , 15<sup>th</sup> May 2004: Long Queues at Weighbridges. Nairobi. Kenya.

Murithi, Antony (2004) Corridor Performance Report: Facilitation of Transport in Eastern and Southern Africa Transport Corridors. PMAESA.

Njoroge, Isaac (2004) *Trade Facilitation Project in Kenya – Report of the Launch Workshop*. Nairobi, Kenya.

Onyango, Godfrey (2003) Review of Transit Transport Situation Along the Northern Corridor. Prepared for ECA Regional Preparatory Meeting for the Inter Ministerial Meeting of Landlocked and Transit Developing Countries. TTCA.

Patrick O. Asingo, The Institutional and Organizational Structure of Public Road Transport in Kenya, IPAR Discussion Paper No. 050/2004 at 19 (2004).

PMAESA (2004) Liner Trends in Eastern and Southern Africa

PMAESA (2004) Privatization at Dar es Salaam Port Container Terminal and Performance and Productivity.

PMAESA- Transit Facilitation Committee (2004) Container Trade of Uganda, Rwanda, Burundi and Democratic Republic of Congo. Mombasa.

Sunley, E. et al. (2004) *East African Community – Investment Tax Incentives and Harmonization*, International Monetary Fund: Washington DC, USA.

TTCA (2004) Investment Opportunities in the Northern Corridor with Emphasis in Transport Infrastructure. A Paper prepared by the TTCA Secretariat for presentation at the Business Summit, Kampala, Uganda.

TTCA (2004) Third Project Report: Baseline Survey of Non-Physical Barriers along the Northern Corridor and the Establishment of a Database at the TTCA Secretariat.

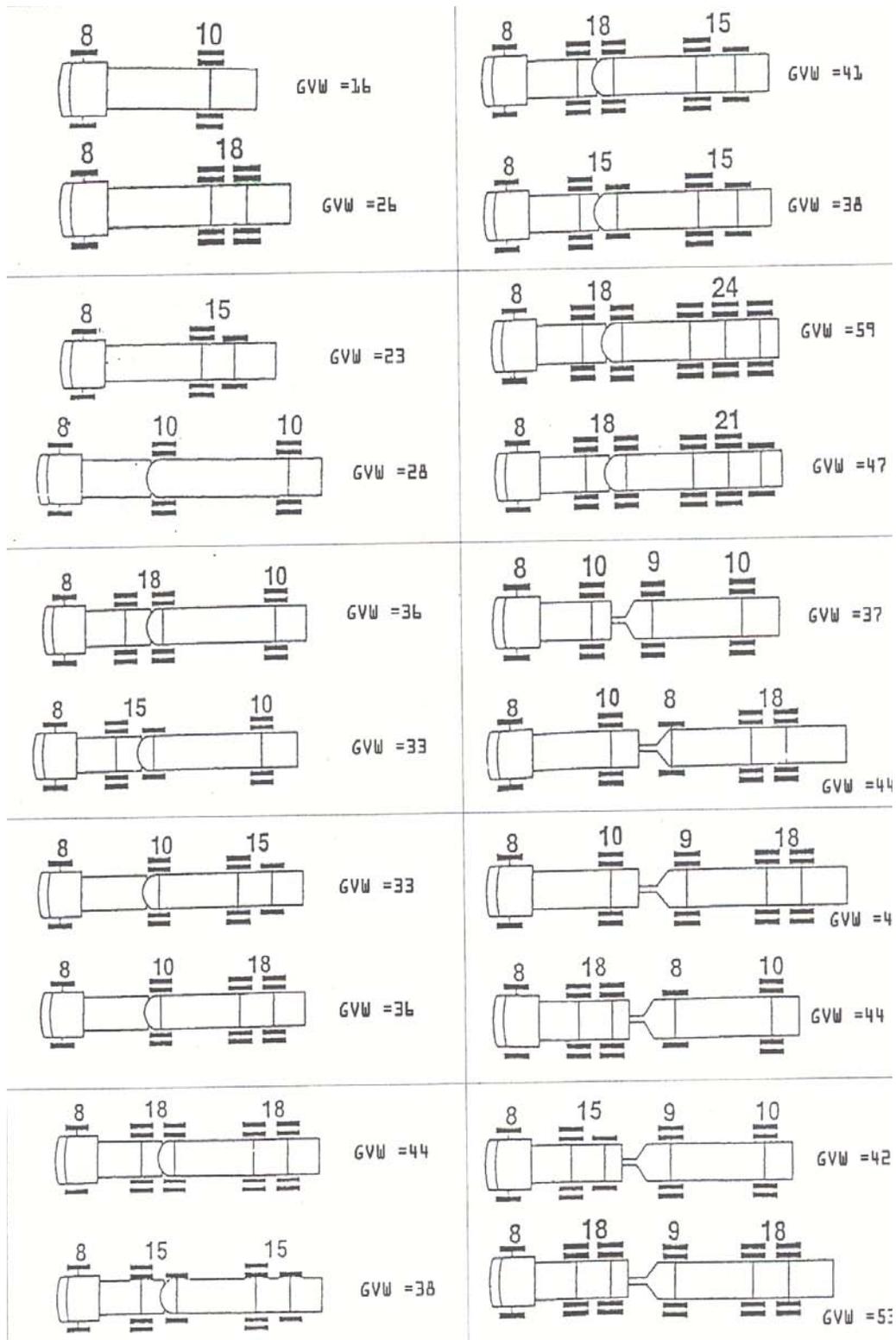
Wilson S. K. Wasike, *Road Infrastructure Policies in Kenya: Historical Trends and Current Challenges*, KIPPRA Working Paper No. 1 at 20 (2001)

World Bank (2003) Transport Sector Memorandum. Report No: 26444-KE. World Bank. Washington DC.

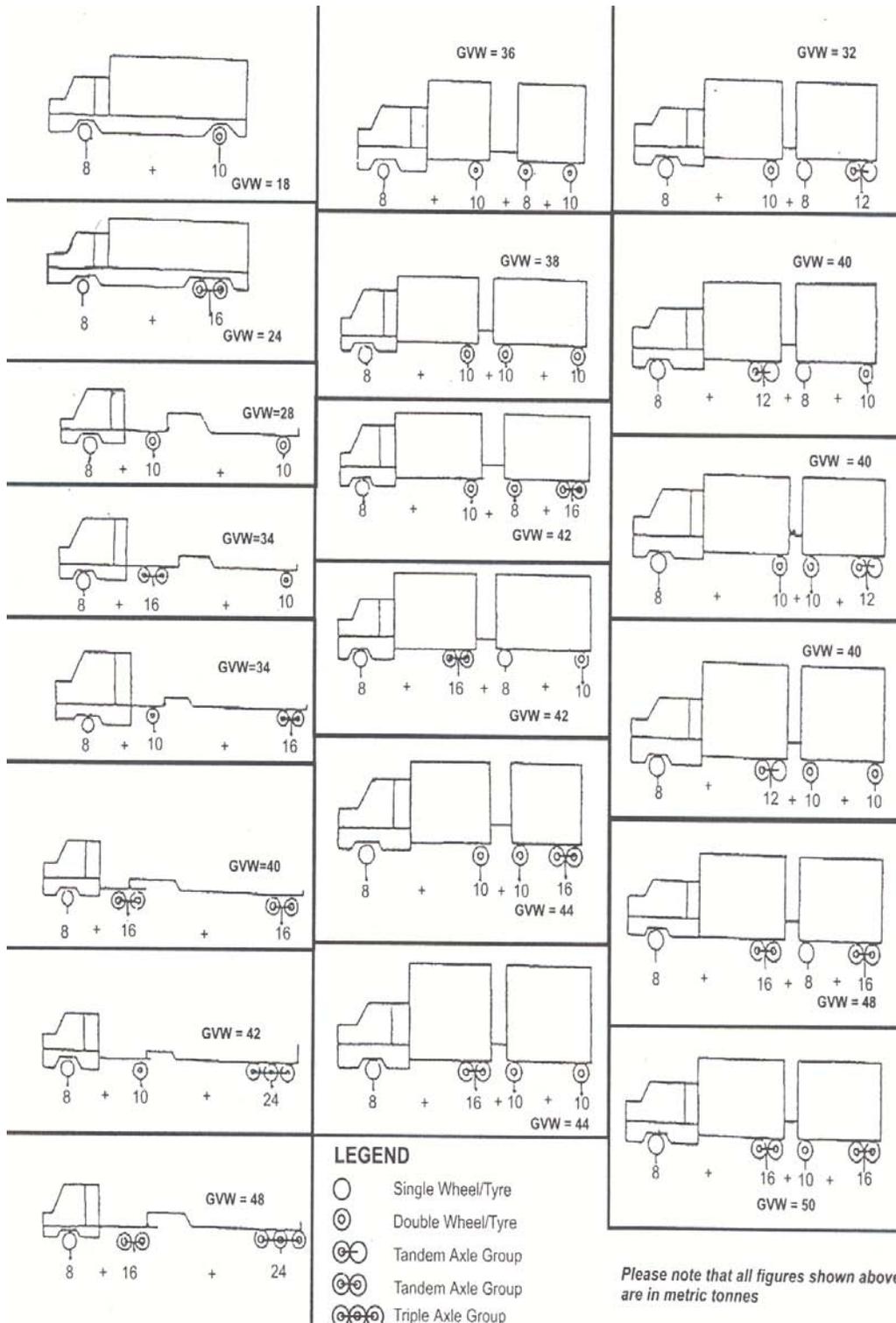
World Bank (2004) Project Appraisal Document for a Northern Corridor Transport Improvement Project. Report No: 28826. World Bank . Washington DC

# ANNEX 1 AXLE LOAD REGULATIONS IN TANZANIA, UGANDA AND KENYA

## Tanzania Maximum Legal Axle Loads and Gross Vehicle Weights

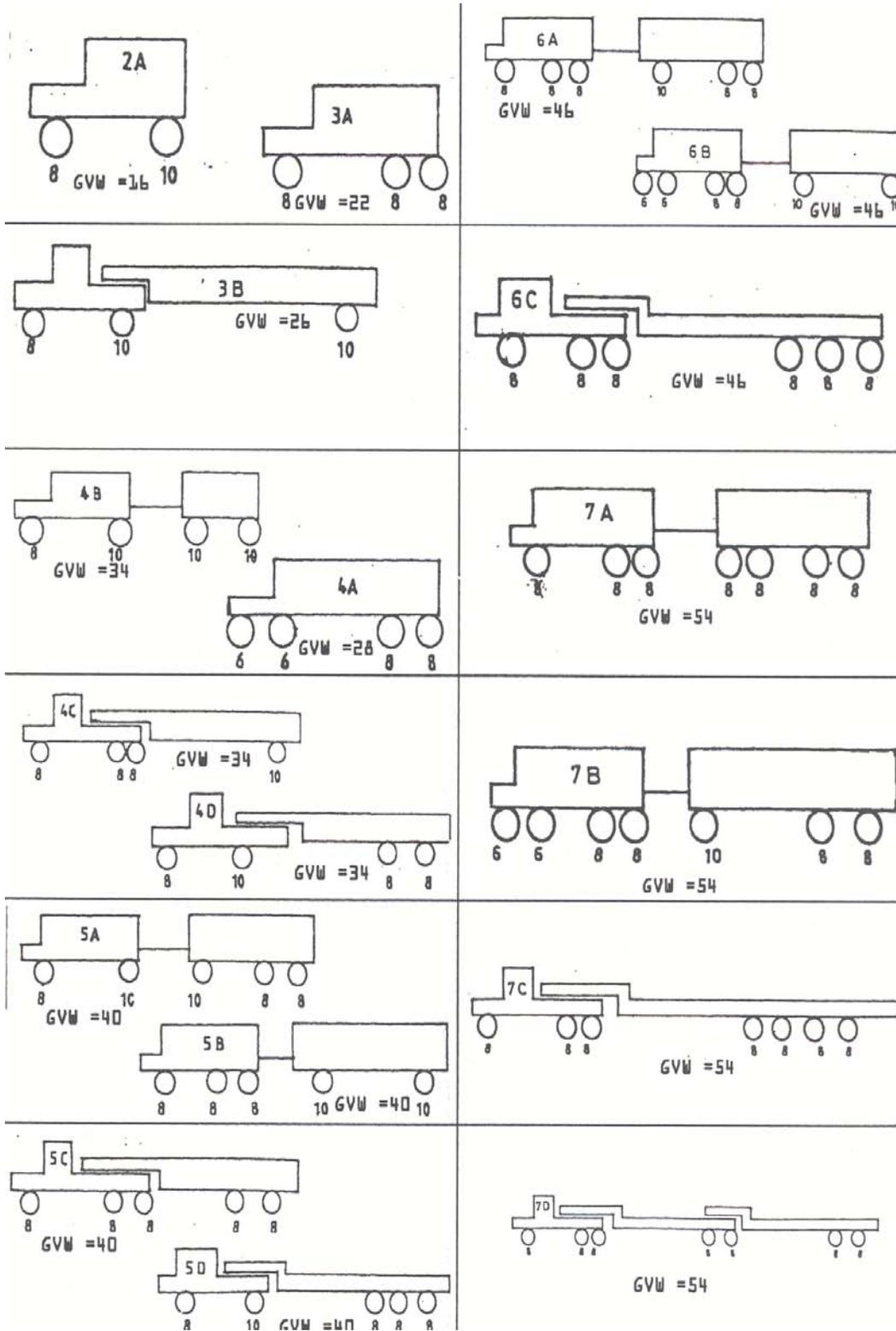


## Uganda Maximum Legal Axle Loads and Gross Vehicle Weights



*Please note that all figures shown above are in metric tonnes*

## Kenya Maximum Legal Axle Loads and Gross Vehicle Weights



Source : Kenya Transport Association

## ANNEX 2 RAIL VS. ROAD COMPARISON BENEFITS OF EDI SYSTEMS

Most recent analysis, (World Bank 2003) anticipate major changes in logistics patterns with the privatization of the railroad. The underlying assumption is that an efficient privatized railroad will divert a very substantial part of the freight traffic, including the fastest growing segment the movement of import and export containers. Furthermore, it is expected that the rail will be competitive for both the long distance transport to Uganda and for the service from Mombasa to Nairobi. It is expected that the railroad can recapture as much as 50% of the local traffic as can be seen from the following market share analysis.

### Market Share Analysis for Kenya Railways

Market Share				
	Current	Potential		
	FY 02/03	Low	Base	High
Wheat	51.30%	60.00%	75.00%	75.00%
Maize	16.37%	50.00%	50.00%	75.00%
Coffee	49.58%	60.00%	75.00%	75.00%
Sugar	16.84%	50.00%	65.00%	75.00%
Other grains	33.32%	40.00%	60.00%	75.00%
Vegetable oil	37.29%	50.00%	75.00%	75.00%
Fuel oil	5.49%	10.00%	15.00%	20.00%
Petroleum	52.20%	60.00%	80.00%	60.00%
LPG	74.10%	90.00%	90.00%	90.00%
Other Petrol. And Petrol. f	52.00%	60.00%	80.00%	60.00%
Salt	49.37%	60.00%	80.00%	75.00%
Cement	3.22%	22.00%	35.00%	50.00%
Flourspar	90.00%	90.00%	90.00%	90.00%
Fertilizer	10.72%	50.00%	50.00%	75.00%
Limestone	52.00%	60.00%	75.00%	80.00%
Metals	11.27%	20.00%	30.00%	50.00%
Paper	52.00%	60.00%	80.00%	80.00%
Containers	23.11%	60.00%	65.00%	75.00%
Miscellaneous/ Other	52.00%	60.00%	80.00%	80.00%

(source IFC 2004)

Indeed, it is expected that the concession will bring major benefits to the operations of the railroad:

- Reduced cost of transportation (labor cost itself will be halved).
- The quality of service (timeliness) will improve dramatically.
- The turnaround time will come down
- Wagons can be modified for higher axle-load (as the railroad can accommodate 15 tons per axle), which can enhance the capacity.

International experience suggest that those objectives can be met, including in similar environment in Africa. In Western Africa, there are examples of very successful railroad privatizations (e.g. Cameroon, Côte d'Ivoire, Senegal).

The field interviews show that this forecast is met with a lot of skepticism by the private sector. Indeed, international experience suggests that it might be very difficult for a railroad

to regain a market lost by two decades of poor service. Other successful concessions in Africa have operated in a very different environment from Kenya, where in effect competition between modes was limited. In Western Africa:

- The main business is transit for landlocked countries with a distance of 1000 km or more whereas in Kenya the main trading center to be served is Nairobi and it is only 500 kms from the port.
- The road infrastructure is poor and does not provide a full alternative to the rail network (no all weather paved roads).
- Unlike in Kenya, the trucking operators are small companies that do not offer high quality of service.

In a sense the nature of the rail vs. road competition in Kenya is closer to the situation in the EU where rail companies have lost market shares to efficient and competitive trucking companies. By contrast, the environment for Tanzania railways concession is closer to the other concession in Africa with longer distance, less efficient trucking companies, no concurrent paved network and a more dilapidated rail network.

For the case of Kenya, the present or projected cost structure of the railroad and the road support the view that the competition is likely to be intense with differences between transit traffic and Kenyan traffic.

#### ***Cost structure.***

The tariff structure by KRC includes several classes of products with different rates of ton per kilometer.

The bulk rate from Mombasa to Kenya is 2.53 Ksh.(3.16 cents) per ton kilometer and on the way back the rate is 30% cheaper. The average freight rate for all products and directions is 3.6 Ksh (4.5 cents).

According to the studies by the concession advisors, the privatization will reduce the cost of rail transport over time. With proper operation the long-term marginal cost can be brought down, provided that there is large increase in volumes. Presently the long-term marginal cost estimated by KRC is about 4 cents per ton kilometer. Therefore, there is not a huge margin of competitiveness compared to the road sector, especially as the latter is likely to improve its performance. In developed countries, the rail marginal cost is closer to 50-60% of the cost of road transport. The concession needs outstanding performance to bring the costs down to those levels, which is what is anticipated by the advisors to the transaction.

#### **Volume and costs projections for the railroad concession**

	year 1	year 2	year 3	year 4	year 5	year 10	year 15	year 20	year 25
Million tons	2.9	3.3	3.8	4.2	4.7	5.0	5.4	5.8	5.8
2003 base 100	142	164	187	210	233	249	267	286	286
Projected cost per ton*kilometer									
Short term marginal cost	2.8	2.6	2.4	2.2	2.1	1.9	1.9	1.8	1.8

Long term marginal cost	3.0	2.7	2.5	2.4	2.2	2.2	2.1	2.1	2.1
Long term marginal cost (including concession fee)	5.0	4.5	4.1	3.8	3.6	3.6	3.4	3.3	3.3
freight rate	4.5	4.6	4.7	4.8	4.9	5.0	5.0	5.0	5.0

Costs are in US

Source: IFC 2004 and authors' calculation.

Another indication that the cost structures are close is the local rail transport rates for containers. It amounts to a traction cost of 100 Ksh per kilometer for a loaded 40' or two 20', and 50Ksh for empty containers. It is the equivalent of a traction cost by road of 100 Ksh per running kilometer or 150 Ksh per loaded km (with no back load), which is not much cheaper than the road rates.

### **Competition on the Nairobi route.**

The transportation service for the inland container depot is paid to the KPA<sup>43</sup> at the following rates.

#### **Railway charges from Mombasa to Nairobi (US \$)**

Destination	20 Foot Container		40 Foot Container		20 Foot Heavy Container
	Full	Empty	Full	Empty	Full
<b>To Nairobi</b>	390	340	750	700	700
<b>To Mombasa</b>	210	50	400	100	320

The road transporters charge around 750 US\$ from Mombasa to Nairobi for the transport of an average 20' container. However the road transporter delivers the container directly to the client and returns the empty container at no additional charge. However, in the case of rail transport, the consignee has to:

- arrange for transport from Embakasi (ICD) (130 USD)
- pay handling charges at the ICD (40 USD)
- pay for the return of the container (50 USD)

Therefore the price advantage of the multimodal solution is only 140 US\$. This difference is not enough to shift freight traffic to rail, given the present reliability of rail operations. The reliability may improve dramatically if and when, the concessionaire is able to move efficient block trains from Mombasa to Embakasi. However it may be insufficient to alter the balance as:

- the consignee will have to support an additional break of load on a relatively short journey (one day and less than 500 km)
- the road sector has also margin for improvement, especially as its operation will be facilitated in the context of existing projects.

<sup>43</sup> The KPA has an arrangement with the KRC whereby the importer only pays to one agency for the transport of the containers. The KPA settles these transport costs with the KRC. This system was designed to simplify transactions for the importers

Axle-load regulations entrust the rail companies with a small captive market of heavy 20' containers. Indeed there is a significant variance of container loads of 20' container in East Africa. Certain containerized commodities like sugar are especially heavy (up to 25 tons in a 20'). Forwarders/hauliers can arrange to transport two 20' containers when one of them is not heavier than 17ton-20 ton maximum. Heavier containers have to be transported as an isolated load, which essentially doubles the cost of transportation. In this case, transport by train is less constrained (15t per axle) and is more economical.

***Competition on Transit routes.***

The difference in rates between road transport and rail transport for containers in transit to landlocked countries is small.

**road transport rates for 20' container**

Kigali road up to 15 ton	2500 USD
Kampala by road (light container)	1350 USD
Kampala by rail	1100 USD

*(Source interviews)*

The rail rates are proportional to the distance so the charges for Mombasa-Kampala is twice as much as Mombasa- Nairobi however the same is not true for road transport. Surprisingly, when expressed in per km terms, the road charges are comparatively cheaper, despite the fact that the utilization of vehicles is poorer for transit than for national operations (convoys, waiting time at the border). This might, in fact, reflects a stronger competition from rail, which should be expected in the context of longer distances and lesser advantage of road in terms of timeliness.

It is likely that, in the future, the truckers and at least the most competitive of them will be in position to match a more aggressive price policy by the concessionaire. The reactivity of the hauliers will be enhanced when the expected transit facilitation measures are put in place (see above the projection of trucking cost structures. As seen earlier, the cost structure of hauliers is today very handicapped by the excessive transit time. The transit time to Kampala can be easily halved by more efficient transit procedures, which will also help match anticipated improvement of the railway turnaround time.

As for national destinations in Kenya, the rail is more competitive for heavy 20' containers. Unfortunately, the statistics available for the mission were not enough to check this specialization and furthermore determine to which extent the rail is confined to this niche market. If confirmed, this could have serious consequence for the concession. However, the fact that almost all 40' containers (on average lighter than two 20') are transported by road supports this view of specialization. The following table shows the modal split between 20' and 40 'containers where 92% of all 40'containers were transported by road in 2002. .

**Road and Rail Split for Containers**

	20'	40'
Road	77%	92%
Rail	23%	8%

*(Source KPA)*

### ANNEX 3 LOGISTICS FRIENDLINESS INDEX

#### Overall Logistics Perception Index (2004). (1 worst - 7 best)

Rank	Country	Score	Rank	Country	Score	Rank	Country	SCORE
1	Belgium	6.8	24	Vietnam	5.6	47	Ukraine	4.0
2	Switzerland	6.7	25	Estonia	5.5	48	Israel	4.0
3	Hong Kong	6.7	26	USA	5.5	49	Kazakhstan	4.0
4	Austria	6.6	27	Slovak Republic	5.4	50	China	3.9
5	New Zealand	6.5	28	Singapore	5.4	51	Brazil	3.8
6	Norway	6.4	29	Hungary	5.3	52	Uzbekistan	3.8
7	Denmark	6.3	30	Finland	5.2	53	Azerbaijan	3.6
8	Italy	6.3	31	Czech Republic	5.2	54	Serbia Montenegro	3.6
9	Sweden	6.2	32	Romania	5.1	55	Mexico	3.6
10	Spain	6.2	33	Lithuania	5.0	56	India	3.6
11	Netherlands	6.1	34	Latvia	4.9	57	Egypt	3.6
12	United Kingdom	6.1	35	South Africa	4.9	58	Chile	3.6
13	Australia	6.1	36	Croatia	4.9	59	Russia	3.5
14	Germany	6.0	37	Philippines	4.9	60	Colombia	3.5
15	Portugal	6.0	38	Turkey	4.7	61	Jordan	3.5
16	Japan	6.0	39	Indonesia	4.6	62	Belarus	3.3
17	Poland	6.0	40	Thailand	4.5	63	Costa Rica	3.3
18	Ireland	5.9	41	Argentina	4.5	64	Moldova	3.0
19	France	5.9	42	Malaysia	4.4	65	Armenia	2.9
20	Taiwan	5.6	43	Bulgaria	4.4	66	Morocco	2.7
21	Greece	5.6	44	Peru	4.4	67	Nigeria	2.7
22	South Korea	5.6	45	Slovenia	4.4	68	Zambia	2.6
23	Canada	5.6	46	Venezuela	4.0	69	Ghana	2.5
					⇒	<b>70</b>	<b>Kenya</b>	<b>2.5</b>

Source: Turku School of Economics and Business Administration

#### The Logistics Perception Index

Logistics Perception Index (LPI) is a set of valid dimensions, which measure perceptions on logistics environment of countries. The data for the LPI is gathered from managerial level personnel of international freight forwarding firms worldwide. The target group has been selected because freight forwarding firms are in the nexus of valuable trade related operational information. The perceptions may therefore be considered to represent the views of a large range of both logistics providers and logistics buyers. To date LPI is therefore the most comprehensive, albeit qualitative, of the logistical performance at the macro level. The index includes six dimensions reflecting transportation costs (international and national) and

quality of services as well as an overall logistics index. Countries are scored against a one to seven scale.

The survey is executed by and the index compiled by the Turku School of Economics and Business Administration (TSEBA) in Finland. This initiative by TSEBA was initially an input to World Bank Trade and Transport Facilitation Projects in Central Europe and the Baltics. The third survey was delivered in 2004. The World Bank and TSEBA plan to extend the geographical base of the survey and publish the index on a yearly basis.