CHAPTER 6

Policy Recommendations to Reduce Dwell Time

This chapter presents the main traditional and nontraditional measures that should be undertaken to reduce dwell time, especially in an environment characterized by poor governance.

Figures Matter: What Should Be Measured by Whom and What Should Be the Target?

Dwell time figures are a major commercial instrument used to attract cargo and generate revenues. Therefore, the incentives for port authorities and container terminal operators are increasingly strong to lower the real figure. For this reason, at a time when ports are more and more in competition, the question of how to obtain independently verifiable dwell time data is increasingly critical to provide assurance that interventions are having the intended effect.

With the proliferation of off-dock container yards (ODCYs) in Sub-Saharan Africa, the number of containers is growing, and, in several countries, those that exit the port yard are then dropped from the dwell time statistics published by port authorities or container terminals. However, from a trade perspective, as long as a container has
not been cleared, dwell time continues to increase. Moreover, in some cases, there are pressures to start dwell time when the last container is discharged from a vessel, which can translate into a three- to four-day difference between dwell time for the first and last containers discharged.

Port authorities or container terminal operators generally have published data on dwell time, but it is becoming increasingly important to cross-check published data to understand the methodology used to compile them and judge their reliability. In this context, as the example of Douala demonstrates, the best and most reliable data are customs data. Donors need to obtain access to customs databases if they are going to address dwell time issues,1 because, unlike port authorities and terminal operators, customs agencies do not have a strong incentive to report shorter dwell times.

In this regard, with the assistance of the World Bank, the Dar es Salaam corridor is developing a transport observatory that will attempt to measure and report dwell time automatically, including dwell time for containers held at ODCYs.

Average or mean dwell time has usually been the main target indicator in Sub-Saharan Africa. It has the advantage of being easy to compute and easy to understand. However, because a quarter of shipments have extremely long dwell time, average or mean dwell time can hardly decrease in the short or medium term. Douala, for example, set an objective of seven days at the end of the 1990s but still experiences dwell times of more than 18 days, despite the improvements made by some shippers.

Despite its weaknesses, average or mean dwell time captures the share of problematic shipments and is a proxy for governance problems (with regard to customs auctions and abandoned cargo). Therefore, this indicator should not be dropped completely.

But a second indicator should be developed for efficient shippers in Sub-Saharan African ports: dwell time for the first quartile of shipments or the median dwell time. This indicator is more difficult to compute because it requires having access to shipment data, but it would be more reliable than average dwell time and would be helpful for assessing the impact of public policy interventions. In our case studies, mean time would be nine days in Dar es Salaam, 14 days in Douala, and three days in Durban; the first quartile target would be four days for Dar es Salaam and eight days for Douala.
The Importance of a Sensitization Campaign

The findings from firm surveys and political economy analysis indicate that most measures, starting with building more storage capacity, often do not have the expected positive impact on dwell time. A public information campaign is needed to disseminate findings on the main causes of long dwell times. In most cases, the perceived causes, such as lack of terminal capacity, do not hold, and structural issues need to be addressed. Even if investments were made, without structural changes, dwell time would probably remain the same.

The Usual Measures and Their Limits

The usual measures undertaken to reduce port dwell time are relatively limited in number and are summarized in table 6.1. These techniques have different impacts on different segments of the distribution function and thus affect shippers in different ways. An increase in prearrival processing would have less impact on cargo with long dwell time, for example. What

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measure</th>
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<tbody>
<tr>
<td><strong>Operational dwell time</strong></td>
<td></td>
</tr>
<tr>
<td>Transfer to ODCY</td>
<td>Transfer cargo to ODCY</td>
</tr>
<tr>
<td>Infrastructure investment</td>
<td>Invest in infrastructure (quays, berths)</td>
</tr>
<tr>
<td>Equipment investment</td>
<td>Invest in equipment (cranes, reachstackers, software)</td>
</tr>
<tr>
<td><strong>Transactional dwell time</strong></td>
<td></td>
</tr>
<tr>
<td>Prearrival processing</td>
<td>Submit documentation prior to arrival of vessel and decide on required clearance procedure</td>
</tr>
<tr>
<td>Document review</td>
<td>Reduce the additional documentation required when reviewing the declaration and supporting documentation</td>
</tr>
<tr>
<td>Inspection levels</td>
<td>Manage risk, lower the percentage of shipments subject to physical inspection, and improve sampling procedures for shipments subject to physical inspection</td>
</tr>
<tr>
<td>Post-clearance inspection</td>
<td>Delay inspection procedures until after the shipment has left the port, including post-clearance audit</td>
</tr>
<tr>
<td>Cargo auction</td>
<td>Reduce time before long-term cargo is auctioned</td>
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<tr>
<td><strong>Storage</strong></td>
<td></td>
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<tr>
<td>Free time</td>
<td>Reduce free time</td>
</tr>
<tr>
<td>Rates</td>
<td>Increase the level of charges for each period</td>
</tr>
<tr>
<td>Rate escalation</td>
<td>Increase the frequency of escalation of charges</td>
</tr>
</tbody>
</table>

Source: Authors.
matters most are measures that seek to change the incentives of key stakeholders, especially shippers.

Off-Dock Storage
In recent years, ODCYs have been developed in the major ports in Sub-Saharan Africa. In Mombasa, the main strategy for overcoming the excess demand for storage has been to introduce a set of ODCYs (otherwise referred to as container freight stations or CFSs). This effort began in October 2007, with the introduction of two facilities. In Tema, the development of the current system of off-dock container yards began in 2007, with the opening of the Golden Jubilee Terminal under the control of the Ghana Ports and Harbours Authority (GPHA). This was followed by the opening of four private terminals. The ODCYs operate on a one-year license and pay a royalty to the GPHA. The shipping lines, in consultation with the GPHA, decide whether to transfer the containers to the ODCY.

Dar es Salaam developed a network of 10 ODCYs to provide overflow capacity for the container terminal. The introduction of the ODCYs increased the available storage capacity, reducing some of the bottlenecks associated with congestion. However, despite a more efficient arrangement for storing and clearing containers, dwell time has not dropped significantly. The new system creates space in the port yard. However, unless it is coupled with other measures—a reduction in customs clearance time, for instance—the system will not decrease total dwell time and could eventually increase it, if the CFS owner is allowed to charge additional storage fees.

Tariffs and Port Pricing
Pricing at a port and other links along the logistics chain can create incentives to delay cargo and prolong its stay in port. Key components of price and cost can affect behaviors and financial decisions of importers, exporters, and shipping agencies, including the following: (a) various types of port tariffs associated with specific services—vessel services, cargo handling, and storage, (b) financial costs to be paid to the banks to manage debt, (c) prices of storage services both inside and outside a port, and (d) other practices with financial consequences, such as customs auctions.

Port pricing is based on a mix of pricing strategies designed to reflect the demand for port services, the competition between ports, and the cost of providing the services. Demand-based pricing strategies are used when there is little competition; they measure demand according to the port user’s ability to pay and the benefits derived from using the port’s
resources. Prices based on competition involve a rate comparison between charges in competing ports (or possibly a comparison of user costs based on the quality of service) and generalized costs involving distance, time, and inventory costs (Arnold 1985).

One of the most straightforward incentives for importers to delay cargo shipment is berth and storage tariffs, which are lower than other opportunity costs. This situation is particularly relevant to small importers, who do not own a streamlined supply chain that connects to retailers or end customers and prefer to sell to buyers directly from the vessel. In such a case, there are two options. First, the importer can move the cargo to an intermediate storage area (outside a port) at a total cost of cargo-handling fees, customs duties, value added tax, and storage fees. Second, the importer can leave cargo in the port either on berth or in storage at a total cost of berth tariffs or port storage tariffs multiplied by the number of days, subtracting financial gain obtained from delaying the payments enumerated in the first alterative. When port tariffs are too cheap to incentivize prompt shipment from ports, as is often the case in Sub-Saharan Africa, importers will choose the second option.

An increase in rates combined with an increase in the frequency of their escalation would not affect the consignees who clear their cargo in the free time period but would encourage consignees experiencing delays due to coordination problems to reduce their dwell time. The impact would be more dramatic on those consignees who use the port to manage their inventory, especially those who have to locate a buyer for their cargo. However, the rate increase would increase the proportion of long-stay cargo that is abandoned.

The standard tariff for storing import containers in the terminal includes a free time period that corresponds to the minimum dwell time for a reasonably efficient consignee. This minimum dwell time is three to five days in ports with efficient operations and border control procedures, but seven to 10 days in ports with inefficient operations and procedures. Following the free period, a fixed daily charge is levied. The rate escalates at intervals in order to discourage consignees from using the terminal for long-term storage. A common interval is seven to 10 days (figure 6.1).

In Sub-Saharan Africa, a third component has been introduced to address the reluctance of consignees to pay for double handling. This is a long-stay charge levied at the end of the free time. It offsets any savings in handling costs that might be realized by keeping cargo in the terminal.

As long as the free time period is adequate, the terminal operator is not taking advantage of a monopoly position when setting the tariff. Instead,
it prices storage in the port container yard to compete with private storage outside the port. If the price is too high, the yard will be relatively empty. If it is too low, the yard will be congested. With a reasonable tariff, most of the revenue will be obtained from cargo that is removed during the seven to 10 days immediately following the free time period.

The adjustment of storage tariffs in order to avoid congestion can take one of three forms: a reduction in free time, an increase in daily rates, and a reduction in the time between rate increases. An example of each form is shown in figure 6.2. Initially, the free time period is reduced from 10 days to five. Next, rates are doubled. Finally, the frequency of escalation is reduced from two weeks to one week. The resulting rise in charges as a function of days in storage is dramatic, as shown in figure 6.3.

In this regard, Durban is probably the best example in Sub-Saharan Africa. Transnet Port Terminals explained that to achieve its target dwell time of three days, one of the more practical and simple measures employed was to enforce terms and conditions related to the storage of cargo at ports. These conditions state that, within 72 hours of discharging each container from the vessel, the customer or the container operator must provide the terminal operator with delivery instructions for all containers discharged. All containers remaining after the 72-hour period has expired will incur storage charges, as shown in table 6.2. Charges for Durban are almost six times higher than for other ports in the country.

Uncleared cargo or cargo detained by customs for inspection is moved to a licensed container depot either by the carrier or by the terminal

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**Figure 6.1 Storage Charges, by Number of Days in Container Yard**

![Graph showing storage charges by number of days in container yard](image)

*Source:* Authors.

*Note:* TEU = 20-foot equivalent unit.
Figure 6.2  Tariff Adjustments, by Number of Days in Storage

![Chart showing tariff adjustments by number of days in storage.](chart1)

Source: Authors.

Figure 6.3  Cumulative Storage Charges, by Number of Days in Storage

![Chart showing cumulative storage charges by number of days in storage.](chart2)

Source: Authors.
Table 6.2  Storage Fees for Import Containers in Durban Port, 2011  

<table>
<thead>
<tr>
<th>Number of days in storage</th>
<th>6 meters per 20-foot equivalent unit</th>
<th>12 meters per 40-foot equivalent unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days 1–3</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Day 4</td>
<td>90</td>
<td>181</td>
</tr>
<tr>
<td>Day 5</td>
<td>237</td>
<td>475</td>
</tr>
<tr>
<td>Day 6</td>
<td>477</td>
<td>954</td>
</tr>
<tr>
<td>Day 7</td>
<td>716</td>
<td>1,432</td>
</tr>
<tr>
<td>Day 8</td>
<td>956</td>
<td>1,911</td>
</tr>
<tr>
<td>Day 9</td>
<td>1,195</td>
<td>2,389</td>
</tr>
<tr>
<td>Day 10</td>
<td>1,435</td>
<td>2,867</td>
</tr>
</tbody>
</table>

Source: Transnet Port Terminals.

operator. Licensed depots generally provide cheaper storage than the terminal. About 90 percent of cargo can and is generally cleared within three days, and less than 10 percent of cargo is moved to a bonded warehouse, where the average stay is estimated at around seven to eight days and less than 1 percent ends up as long-stay or abandoned cargo (that is, 28 days or more) that then goes to state auction. Free storage for transshipments is seven days, but given the small proportions, Transnet Port Terminals does not seem too concerned, unlike most cargo handlers.

Among major stakeholders, the introduction of the “penalty storage” fee after day three is probably the most important single event affecting dwell time at Durban port. Even though it took some months for the impact to materialize, Durban Container Terminal saw a continuous drop in dwell time and a reduction in the number of import containers in yard at any given time.

Such port storage charges lead to a virtuous circle for cargo dwell time (figure 6.4).

Durban was able to improve dwell time because systems were in place to allow for prompt clearance and release as well as pre-clearance. The length of dwell time before the increase in port tariffs was due to the low price of port storage, which was approximately US$10 per 20-foot equivalent unit (TEU) per day, often cheaper than taking delivery if commercial storage was required. For this to work, the terminal has to perceive itself as part of a logistics chain and not as a storage facility.

Other African ports have used the same approach, but with a smaller positive impact. In Mombasa, storage charges were doubled in February 2008 in order to address the problem of congestion in the container yard,
but the impact on dwell time was minimal. In October 2009, the free time for containers stored in the port terminal was reduced from seven to five days for domestic imports and from 15 to 11 days for transit imports. But the impact was modest. In Tema, storage rates and free time period were also adjusted in 2008. Free time was increased from five to seven days, but this had little impact on dwell time. In Dar es Salaam, the container terminal tariff was modified in August 2009. Free time was reduced from 10 calendar days to seven for imports, but remained at 15 calendar days for transit cargo. Storage charges were doubled. Subsequently, a late clearance fee was introduced to encourage consignees to clear cargo within the free time period. This was supposed to encourage importers to remove their cargo more rapidly, but the impact was marginal and difficult to determine. The increase in port tariffs and reduction in free time as well as the rationalization of charges for moving cargo to the ODCYs provided an incentive to reduce time spent in storage but had a relatively small impact on dwell time, in part because the contribution of storage charges to delivered cost is small, especially for transit cargo.

In Lomé, it is even worse. The port of Lomé operates in a competitive environment (competition from Tema and Cotonou for the hinterland

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**Figure 6.4  The Virtuous Circle of Cargo Dwell Time**

- **Port operator and customs aiming at reducing cargo dwell time (through escalation of port storage tariffs, expedited customs clearance, and compliance)**
- **Incentives for importers and brokers to start the process before ship arrival and be compliant**
- **Pressure on port operator and public agencies to increase productivity and reduce port tariffs**
- **Self-selection of Importers and brokers in favor of compliance and increased productivity and competitiveness**

*Source: Authors.*
countries) and has long opted for competitive pricing policies. After the free time period has expired, tariff bands are charged as follows: FCFA 678, FCFA 1,356, and FCFA 2,715 (equivalent to less than US$10), which are much lower than tariffs charged by other ports in the subregion. Lomé’s free time policy favors transiting cargo, with a free time period of only four days for domestic traffic and 21 days for transiting goods. The Port Authority of Lomé seems reluctant to use pricing to lower dwell time for fear of losing competitive advantage over other ports.

Tariff changes may have a limited impact on dwell time in an environment with poor governance due to three reasons: (a) the combination of taxes, duties, and escalating storage charges can cause shippers who have problems with cash flow or are unable to find a buyer to abandon their cargo after a month, (b) cargo staying longer than one month often does not pay the full storage charges; the consignee negotiates a significant discount (and probably a discount on other duties as well) as part of an agreement to remove the cargo; and (c) terminal operators, who obtain a significant increase in income from storage charges, do not necessarily want dwell time to decrease.

In conclusion, in Lomé port, low tariffs are a disincentive to reducing dwell time and should be discouraged (even though low tariffs probably explain why traffic has grown in the recent years). Moreover, a free time period of seven days seems reasonable in the African context (for domestic and transit cargo); a limit on the free time period should be coupled with an escalation of tariffs of several dozen dollars a day, but not to the extent seen in Durban, which is probably not replicable in many Sub-Saharan African countries.

**Experiences from Recent Successful Initiatives**

Two ports, Dar es Salaam and Durban, have achieved noticeable improvements in the last decade, based on (a) political impetus from the top of the state, (b) regular meetings of stakeholders at a decision-making level, (c) audit teams to reengineer processes, and (d) a comprehensive approach to changing the behavior of stakeholders. All of these components seem to be necessary ingredients of a durable reduction in dwell time.

**The Importance of Regular Meetings of Stakeholders at the Decision-Making Level**

The first example in Sub-Saharan Africa comes from Durban port. Average dwell time was around seven days in 2002 (and was reduced to
three days in 2004). Following recurrent mutual complaints between Transnet Port Terminals and private stakeholders on dwell time and its causes, an interim advisory board was created, co-chaired by a manager from Transnet and a chief executive officer from the private sector, with the mandate to identify the key measures that should be implemented to reduce dwell time. Over a period of three years, this committee met fortnightly. Its composition is described in figure 6.5.

An audit team was added to the group to provide an independent view on what should be done. This team was commissioned on an ad hoc basis to give technical advice on the measures to be taken. It was composed of a representative of a shipping line, a representative of the road freight association, a representative of Portnet, and a representative of an engineering firm.

The lessons from Durban show that the terminal operator first needs to reengineer its internal processes and procedures and then to agree on measures to change the behavior of private stakeholders, such as shipping lines, transporters, customs brokers, and so on.

It is also critical to resolve high-impact problems first and then to agree with port users on the problem to be resolved. In this regard, it is important to demonstrate that dwell time can be reduced. Durban stakeholders used a comprehensive “enabling block” approach (figure 6.6), which changed the incentives for crane operators, changed port tariffs, altered the opening hours of container yard operators, established a queuing system for trucks, and invested in software and equipment.

In Dar es Salaam in June 2008, a multistakeholder workshop on dwell time identified 205 issues and proposed actions to improve the performance of dwell time. The process was championed by high-level intervention by the president and prime minister, which resulted in the formation of a multistakeholder Port Decongestion Committee, which met fortnightly.

Moreover, stakeholders commissioned a committee of specialists to identify key measures to reduce dwell time. The setup and functioning of the Port Improvement Committee (PIC) is similar to the approach taken in Durban. For example, participation is at the chief executive level, both private and public sector agencies are represented, meetings are held fortnightly, and two subcommittees—one on dwell time and another on standard operating procedures—convene to tackle specific technical assignments on behalf of the PIC. The subcommittee on procedures undertakes audits on choke points in any area of port operations.

It took about one year to develop the strategy for increasing storage throughput and altering the behavior of the various participants. Out of
Figure 6.5 Institutional Structure of the Interim Advisory Board in Durban Port

Interim Advisory Board

Co-chaired by Transnet and the shipping lines

- Transnet Port Terminal
  - Port operator
- Transnet Freight Rail
  - Rail operator
- Container Liner Operators Forum (shipping lines)
- Shippers Council (cargo owners)
- National Ports Authority
- South African Association of Freight Forwarders (road haulers)
- Technical Task Team
- Freight forwarders
  - Landlord & marine services
- Operations audit team

Figure 6.6  Enabling Block Strategy to Reduce Dwell Time in Durban Port

EB 1  Organisational structure and facilitation
EB 2  Cosmos functionality
EB 3  Equipment maintenance, structure, deployment, procurement and contracts
EB 4  Housekeeping strategy and discipline
EB 5  Operational staffing levels, shift patterns and procedures
EB 6  Incentive schemes
EB 7  Training
EB 8  Operational strategies
EB 9  Rail interface
EB 10  Operational support and facilitation
EB 11  Third party
EB 12  Operational infrastructure

- Stacking strategy
- Dwell time
- Customer behaviour patterns, shipping agents, container lines

205 issues identified through stakeholder consultations, the PIC summarized 10 priority actions to reduce dwell time and improve productivity in the port. Reports by the PIC indicate that dwell time was reduced from 25 days to 15 in 2009 and then to 13 in 2010.

The following are the main measures credited for this reduction:

- Reducing the free storage period to 15 and seven days, respectively, for transit and local containers, complemented by two other measures: introducing a punitive tariff for containers kept in the port beyond the free period and reducing the period for customs auction of undocumented containers to 21 days
- Easing some customs procedures, for example, allowing partial submission of the manifest, reducing the percentage of physical inspections, extending operating hours for the Customs Service Center, and speeding up payment arrangements for customs duties and port charges
- Canceling the exclusivity clause of the Tanzania International Container Terminal Services (TICTS) contract to allow the Tanzania Ports Authority (TPA) to handle containers in competition with TICTS and, in addition, creating additional container-handling capacity inside the port (space and equipment)
- Launching public awareness campaigns through print media, radio, and television to encourage the early and accurate submission of customs documents
- Extending working hours in the port to 24 hours to include the collection and delivery of containers and synchronizing working hours with other relevant agencies
- Automating the operations of the TICTS and TPA.

Although there were noticeable improvements, it is difficult to determine what improvements were attributable to the 20 percent dropoff in cargo as a result of the global financial crisis and what was attributable to the reforms.

**Prearrival Declaration and Customs Auction Process**

The introduction of a procedure for submission and clearance of customs documents prior to arrival of the vessel reduces the distribution of dwell time. Most of the consignees who clear within the free time period would reduce their dwell time, as would those consignees who have delays due to coordination. Some of the latter would be able to clear goods within the free time period. Most of the consignees who store their containers in
the port while arranging to sell the goods would not be affected by this change. The same would apply to long-term cargo. In this regard, incentives to clear cargo before arrival are critical to reduce cargo dwell time.

The role of shipping agents and their interaction with the broker, consignee, and customs may also explain the relatively large delay upstream of the declaration itself. How customs, the shipping line, and the container operator manage the manifest information is a critical component of delay and the primary objective of a single window or port community system.

To reduce long-term cargo dwell time, customs auction practices need to be amended in many countries, and doing so should be at the core of any plan to tackle cargo dwell time. Auctions should be transparent, published in the press and online, and organized after a delay of four to six weeks.

Customs auction practices can indirectly incentivize importers to extend their port dwell time. Cargo owners or importers, who are often unable or unwilling to pay very high duty on their high-value goods, deliberately delay formal procedures to take advantage of customs auction practices. This becomes possible when the auction does not take place according to the procedure. Under the alternative (illegal) auction practice, the importer buys back his own goods at an artificially low price in return for paying a commission to the customs agency.

In Dar es Salaam, the current auction procedure still allows cargo to remain in the port or ODCY for at least a month and a half (one month in Durban, but three months in Douala). It can even be more problematic for government cargo, which is a major component of long-stay cargo in Dar es Salaam.

In this regard, Nigeria offers an even more compelling example (Raballand and Mjekiqi 2010). Abandoned cargo is relatively common in Lagos port. There are two types of cargo abandonment, both of which rely on the repurchase of abandoned goods at auction as a way to bypass normal import fees and procedures:9

- An importer abandons prohibited goods in the port and waits for them to be auctioned, at which point he or she bypasses the import regulation and gets the goods at a relatively low price.
- An importer makes a false declaration, including the undervaluation of declared goods. When caught, he or she abandons the consignment and purchases the goods through auction, which is cheaper than paying full import duties, penalties for making a false declaration, and incidental port charges.
The Nigeria Customs Service's liberal auction policy encourages low compliance with import procedures. Indeed, in Lagos port, auctioned goods rarely bring more than US$3,500 for a 40-foot container, even for high-value goods such as some textile products. In 2009, Nigeria Customs Service relaxed the conditions for releasing goods to reduce port congestion. As a customs official explained at the time, “Out of 50 containers that have been examined, only one importer came forward to take delivery of his cargo. In some terminals, no importer whose consignment falls into the category of overtime cargo has shown his face.” In the case of prohibited imports, the best option seems to be to let the cargo go to auction and repurchase it at a low price.

Customs auctions have a major impact on dwell time, leading to long dwell times for importers, who take this route to reduce paid tariff duties.

Information technology systems and changes in human resources policies are keys to customs modernization and thus have a major impact on cargo dwell time.

In the port of Durban, the customs modernization project made a significant contribution to improving competitiveness. The strategy of enhanced compliance recognized three key elements influencing customs operations: (a) some taxpayers and traders will always try to comply whether enforcement is effective or not, (b) the goal is to influence the undecided majority who will choose one way or the other based on how well the strategy is implemented, and (c) some taxpayers or traders—criminals—will not comply whether enforcement is effective or not.

Within that context, the strategy was based on the fundamental principles of making it easy for those trying to comply by improving services and making it hard for those not wanting to comply by improving enforcement. Therefore, measures were initiated to increase treatment differentiation and compliance.

The target for the South African Revenue Services (SARS) is to clear declarations processed through Electronic Data Interchange (EDI) within three hours. According to SARS, during the first quarter of 2011, the average time to release goods was three hours when processed through EDI and 10 hours when not processed through EDI (with 75 percent of declarations processed through EDI). At the port of Durban, with customs clearing cargo in less than one day and Transnet Port Terminals moving cargo efficiently from the terminal, there is no “transactional
dwell time” at the port of Durban, according to one stakeholder (or at least it is rather limited).

In this regard, contractualization between customs brokers and customs was developed. For instance, companies wishing to become an authorized economic operator needed to go through detailed interviews and be transparent regarding their economic activities and supply operations; they are randomly inspected from time to time. However, these companies benefit from a green channel, which means that as soon as the cargo is handled at the port, it can be removed. Contrary to most countries in Sub-Saharan Africa, pre-clearance is the rule, which explains why the target for customs clearance time is in hours and not in days like in other countries.

**Contracting in the Port and the Importance of Human Resources Policies**

In Durban, a key initiative to altering behavior was the introduction of the Container Terminal Operation Contract (CTOC) with key customers, mainly shipping lines. The CTOC establishes service-level agreements between Transnet Port Terminals and its customers regarding expected levels of performance. These bind the parties by contract to deliver specified targets such as level of service based on agreed performance indicators (that is, a dedicated berthing window, a guarantee of 28 gross crane-hours) on the part of the terminal operator and the observance of specific regulations on the part of private port users (that is, compliance with specific requirements such as providing accurate information). Failure to do so attracts sanctions.

Enforcement of CTOC agreements has been critical for success. Further incentives include a commitment to provide an agreed level of service to specific customers, while the customer commits to clearing cargo from the port within agreed time limits.

Human resources policies are at the core of the reform in South African customs, and Cameroon customs also adopted performance contracts. In 2007, Cameroon customs launched a reform and modernization initiative (Cantens et al. 2011). The reform began with the installation of ASYCUDA (Automated System for Customs Data), a customs clearance system that allows the administration not only to track the processing of each consignment, but also to measure a substantial number of criteria relevant to the reform, such as compliance with the deadline for recording the manifest by consignees. For almost two years, upper management
and frontline officers in Cameroon customs shared the same reality thanks to “figures” (performance indicators) that measured how the reforms initiated by the former were applied by the latter. But, while the initial quantification phase bore fruit, its impact later stalled. A possible solution was adopted, beginning in 2010, when Cameroon customs introduced a system of individual performance contracts to measure the actions and behaviors of customs officers operating at two of the seven Douala port bureaus, using indicators extracted from ASYCUDA. The outcomes are encouraging. After more than a year of implementation, the Cameroon customs bureaus in the experimental group showed better results than the control group on indicators related to reduction of corruption, collection of revenue, and facilitation of trade.

In Douala Port I, the duties and taxes assessed over the period increased by 6.2 percent in 2010 relative to 2009, while the number of imported containers fell by 3 percent. The tax yield of the declarations in Office Douala Port I rose by 3 percent over the contract period in 2010 compared to the same period in 2009. In Office Douala Port V, it rose by 23 percent.

The additional revenues generated during the experiment were an estimated US$23.3 million (which is about 3 percent of the national customs revenue target). The impact of the performance contracts on customs clearance time was equally important. The share of declarations assessed by inspectors on the day they were lodged in the system by brokers was multiplied by 1.3 in Office Douala Port I (it is now around 84 percent), by 1.2 in Office Douala Port V (77 percent), and by 0.9 in Office Douala Port VI (57 percent). The estimated gain in terms of clearance time is eight hours for Office Douala Port I and 14 hours for Office Douala Port V.

In Durban, while the process started off with both parties playing the blame game, the partnership between Portnet and its customers appears to be working well, as reflected in the recent Barloworld survey of 2010. At least, more than half of those in the automotive industry proclaim that the logistics capacity of South Africa’s ports has improved in the last two years, and they also think that the loading and docking capacity is now competitive and comparable to international practice. The industry also gives customs a vote of confidence by confirming that compliance processes are being dealt with more efficiently than in the past, that corruption has decreased, and that physical security of goods in the port has improved.

Such changes are obviously challenging, but necessary. Without them, Sub-Saharan African countries will continue to remain largely dependent
on exporting raw materials and will not be able to increase value added or create sustainable growth. And a country like Cameroon has shown that it is possible, which should encourage more Sub-Saharan African countries.

**How Could Donors Help to Reduce Dwell Time?**

Above all, donors should highlight the need to improve performance in this area and should help to energize the demand side of the equation—that is, the general public who stands to lose greatly in terms of net welfare loss from the perpetuation of the problem. They should be more transparent on the difference between most ports in Sub-Saharan Africa and the rest of the world, explaining the direct and indirect consequences of poor performance for consumer prices in Sub-Saharan Africa.

In conclusion, donors should help to reduce dwell time by (a) providing technical assistance to benchmark ports using reliable data;16 (b) providing technical and independent expertise to identify key constraints, ensuring that local efforts are not captured by vested interests, and verifying that the measures being pursued are indeed welfare enhancing; and (c) refraining from supporting investment infrastructure without first trying to support structural reforms to change the behavior of stakeholders.

The last point is probably the most critical because the widespread assumption that an increase in port infrastructure will necessarily translate into reduced dwell time does not hold in the medium to long term, especially with regard to the physical expansion of port premises. Using the example of Durban, we demonstrate that a reduction in dwell time from a week to four days more than doubles the capacity of the container terminal without any investment in physical extensions: when container movements are speeded up, higher throughput is possible, making investments in larger port storage areas unnecessary.

Significant change is needed, including among donors and development partners. Given the current level of dwell time in Sub-Saharan Africa, one of the worst options (yet one that appears “natural” or “logical”) is to invest in additional storage and off-dock yards. Indeed, if dwell time is not reduced, after a couple of years, new extensions costing millions of U.S. dollars will be required that would not have been necessary if dwell time had been reduced. Structural factors, such as rents through customs clearance, customs broker inefficiency, and poor handling need to be tackled before investing in physical extensions of storage.

Local populations pay twice for long dwell times: as taxpayers, because most physical extensions and infrastructure are public investments, and
as consumers, because inefficiencies and rents in the port are charged to the final user of these services. Such investments in infrastructure tend to strengthen rents and do not tackle structural issues, creating unintended consequences. A typical example is the construction by public operators in landlocked countries of off-dock container yards in port cities, which de facto relieve congestion in the transit port, but would be unnecessary if transit processes were tackled correctly. They only give agents from these landlocked countries an opportunity to charge rents on transit cargo. Such infrastructure, which was built in the 1970s and 1980s and abandoned in the 1990s, has come back in fashion to address congestion in some key ports.

The solution to decrease dwell time in Sub-Saharan Africa for the most part relies on the challenging task of breaking the private sector’s collusion and the status quo between public authorities, logistics operators, and some shippers. When facing a capacity shortage, the best option is to reduce dwell time first and only then to consider expanding capacity.

Notes

1. In Dar es Salaam, since goods cannot be permitted to leave a customs-controlled area (port or container freight station) without customs release, the period taken to obtain a customs release gives a fair indication of actual dwell time and is more reliable than port data alone.

2. These were authorized by Kenya Ports Authority, with containers allocated to these facilities through direct nomination on the shipping line manifest.

3. The introduction of ODCY was part of several reforms introduced by the Port Decongestion Committee. Initially, the allocation to individual ODCYs was made based on a daily poll to determine which ODCY had sufficient empty space to receive a full load of import containers. Two restrictions were placed on this procedure. First, customs did not allow transit containers, which account for between 30 and 37 percent of the total traffic, to leave the container terminal. Second, individual consignees had the right to designate a specific OCDY on the bill of lading.

4. The transfer of containers to a container freight station is done at a cost to the importer and is a concern.

5. The guarantee given to importers is that a CFS is not entitled to charge for storage after the importer has presented the customs release and requested to take possession of the container. The guarantee is used to limit this practice in Dar es Salaam, for instance. CFSs could also sabotage legitimate plans to increase port-handling capacity because they would lose market share.
6. In addition to the port storage tariff, shipping lines apply a container demurrage charge. This varies not only by line but also by consignee, with larger shippers receiving the most favorable rates. It is important to distinguish between port dues and port tariffs. Port dues are charges for general port services and facilities, whereas specific tariffs are for specific and clearly identified services (UNCTAD 1985). Cost-based pricing has been the traditional approach to pricing. A price is fixed on the basis of the costs incurred in providing the services or facilities. Three categories of costs are involved: fixed costs, which cannot be avoided whether or not the service or facility is used; variable cost of a service or facility, which is avoided if the service or facility is not used; and marginal cost of a service or facility, which is the extra cost incurred in providing a given service or facility for an additional time to the period originally intended. Variable and marginal costs take into consideration demand for port services and facilities. This is because these costs change in the short term and involve output, for instance, number of ships berthed, number of tons handled, and so forth (UNCTAD 1985). Key financial objectives of port management include (a) to be financially self-sufficient, (b) to earn a reasonable rate of return on assets, and (c) to provide adequate funds for investment in new facilities. Increasingly sophisticated organizational structure and increased demand for diverse functions have complicated the task of tariff formulation. Responsibility for tariff formulation has been transferred from the accounting department to standing committees or senior management, which then coordinates the inputs from various departments.

7. The free time for transit cargo is 21 days. The revised storage rates were initially US$12–US$14 per TEU per day.

8. Peter Masi, executive director, Dar es Salaam Corridor Committee.

9. The following section is extracted from Raballand and Mjekiqi (2010).

10. Section 31 (subsections 1–9) of the Nigerian customs regulation deals with “goods uncleared and missing goods” and recommends that the Board of Customs “may sell them” without specific mention of any price. Although there are guidelines, they appear to be subject to the discretionary powers of the comptroller general of customs, who exerts a delegated power on behalf of the chairman of the board (the minister of finance). These auction regulations apply only to overtime goods, not to seized goods.

11. SARS identified its top 20 clients for accreditation, which accords benefits such as green line, fewer inspections, and post-clearance audit, among others. These companies account for approximately 70–80 percent of total cargo.

12. Better relations with shipping companies have beneficial effects on reliability and responsiveness of ports (Song and Panayides 2008).

13. During the pilot stage, performance contracts were launched in two of the seven offices in the port of Douala that collect 76 percent of the port’s
revenue. Office Douala Port I handles imports of goods in containers for home use, with the exception of vehicles, has 10 to 11 inspectors, and collects 60 percent of revenue. Office Douala Port V handles imports of vehicles, including in containers, has five to seven inspectors, and collects 16 percent of revenue. Like any other contract, the performance contracts formalize an agreement between two parties, specifying mutual obligations regarding results. The contracts went beyond revenue targets, which are fixed annually for the government by customs. For each objective, a comprehensive review was conducted to determine which parameters would be taken into account. Once these parameters were defined, the performance contract set a minimum or maximum threshold. This threshold is a median calculated on the basis of the declarations processed by the offices over the previous three years: 2007, 2008, and 2009. The sample covered 74,591 declarations for Office Douala Port I and 63,761 for Office Douala Port V.

14. The results compared the period under contracts from February to November 2010 to the same period in 2009. December and January were excluded because of seasonal concerns: economic activity increases during the Christmas period and so does the pressure on customs bureaus to achieve the annual revenue targets, which gives rise to specific procedures and low activity following Christmas.

15. The estimated revenue added during the pilot (all other things being equal) is equal to the revenues actually collected during the experiment minus the number of declarations during the experiment multiplied by the average taxes and duties of 2009.

16. In this regard, donors should disseminate a simple definition of dwell time from the time the container is discharged from a vessel to the time it is ready for collection by the importer.

References


