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Could a well-designed customs reforms remove the tradeoff between revenue collection and trade facilitation?

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COULD A WELL-DESIGNED CUSTOMS REFORMS REMOVE THE TRADE-OFF

BETWEEN REVENUE COLLECTION AND TRADE FACILITATION?

Gael Raballand\*, Jean-François Marteau, Edmond Mjekiqi<sup>1</sup>, Thomas Cantens<sup>2</sup>,

**Abstract** 

This paper is based on first-hand experience from Customs reforms in Sub Saharan Africa

(SSA) and presents unpublished data on the impact of Customs reforms on revenues, trade

facilitation, private sector operators and frontline Customs officials' behaviors in Africa.

Customs agencies are usually one of the key revenue collection agencies in Africa. Customs

officials usually consider trade facilitation measures as a threat for revenue collection and

strive to increase control over private sector operators through systematic inspections and

checkpoints in order to increase public revenues (in theory). In reality, imports

undervaluation remains high as well as smuggling and transit diversion, which result in

endemic corruption and increased clearance time and uncertainty. Because many issues lie in

the internal weaknesses of Customs agencies, a revised approach to Customs reforms is

needed to ensure, first, internal control of the organization and then gradually relax controls

on operators and ensure formal trade facilitation. Without internal control and knowledge of

the magnitude of the malpractices in most Customs agencies in Africa, private sector

differentiation can not happen and therefore formal trade facilitation would remain inexistent,

while results in terms of revenue collection will probably be below what can be achieved.

**Keywords:** Customs, trade facilitation, Nigeria, Cameroon, public sector reform.

**JEL Classification:** F14, H11, H32.

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#### 1. Introduction

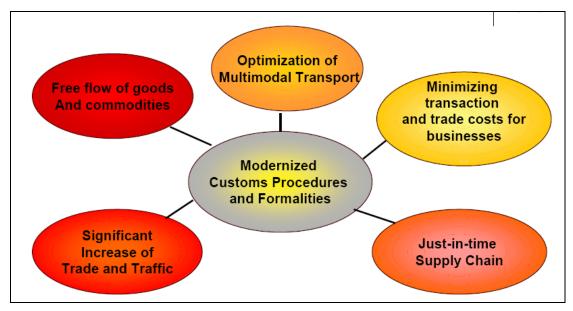
Customs and Ministry of Finance officials usually consider that a trade-off needs to be made between public revenues collection and trade facilitation measures. According to them, trade facilitation would lead to decreased public revenues. Indeed, Customs administrations in Africa are usually the most important revenue collection agencies and they are not willing to implement trade facilitation measures since they are not able to evaluate their impact and the risk of the decreasing of customs revenues which represent at least 1/3 of total budget revenues (see Annex 1).

However, economic growth will only be sustainable if trade expands. Taking into account the current trade-related constraints and the limitation of export growth by non-tariff barriers, there is an emerging consensus that without trade facilitation, trade expansion will not materialize. Efficient Customs procedures minimize transaction costs and lead to increased trade (see Figure 1). It is also worth noting that less rigid controls at borders does not necessarily mean less public revenues collected (Philippines, Eastern Europe and Western Balkans), and that facilitation-related investment (such as computerization of operations, risk management strategy implemented and links between several Customs IT systems) can also lead to a more efficient control<sup>3</sup>. Governments in Africa therefore have a theoretically strong incentive to increase trade facilitation.

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<sup>&</sup>lt;sup>3</sup> Geourjon (2004) demonstrates theoretically how the implementation of good risk management can increase revenues since most tariffs evasion depends on a limited number of fraud schemes and operators. That also explains why controls in most cases are ineffective.

Figure 1: Why are Modernized and Streamlined Customs Procedures Critical?



Source: Le (2005).

While in other parts of the World, focus is made on issues, such as fraud, terrorist threats and facilitation, in Africa, Customs officials are however mainly assigned the task to collect duties due to scarcity of other public revenues. In order to increase them, Customs officials strive to control more strictly private operators through systematic inspections, scanning and checkpoints en route where applicable. In theory, increased enforcement and controls should reduce incentives to trade and increase revenue.

In reality, these tools do not reach their objectives on revenue collection and law enforcement: imports undervaluation remains very high as well as smuggling and transit diversion, all of which result in/derive from endemic corruption<sup>4</sup>. Cantens (2007) demonstrates that in such environment, Customs usually "punish" the only private sector operators, who remain outside or less inside collusion practices.

As far as Customs modernization reforms are concerned, donors usually push for the following reforms: replace inefficient, costly and outdated manual systems and procedures

<sup>&</sup>lt;sup>4</sup> Additional controls also mean inefficient use of resources: 2-3 customs officers are, for instance, required to inspect physically a truck instead of only one or less than one for documentation check.

with modern approaches based on the harmonization and simplification of procedures, the adoption of risk management to reduce inefficient and costly physical inspections, implementation of modern ICT systems, increasing the level of transparency of rules and regulations and minimizing opportunities for corruption, which all go in the direction of trade facilitation and minimize transaction costs (Sheikh 2003, Keen 2003, de Wulf and Sokol 2005).

Barbone et al. (1999) explains that "computerization often becomes an end instead of a tool in many tax administration reforms", the same applies to Customs reform. For donors, it is difficult to find the right balance between computerization and institutional building/anti-corruption despite the fact that these projects usually aim at "increasing the level of transparency and minimizing opportunities for corruption". However, "institutional components in project design [are] biased towards organization, IT-related procedures and manpower upgrading, with insufficient attention to accountability and anti-corruption institution building" (Barbone 1999<sup>5</sup>).

One key reason is that these donor-funded reforms sometimes face strong opposition when dealing with anti-corruption measures, are then too risky and take for granted that Customs senior management knows exactly the reality of arrangements and corruption on the ground, which is usually not the case.

In an environment where records are often missing, integrity of some Customs brokers and frontline officials may be questionable but not provable, and these measures are extremely difficult to implement. Most heads of Customs administrations are then reluctant to implement them. In an environment, where political appointments can be numerous, control over practices on the ground by the head of customs can be very difficult (Klitgaard 1989); therefore, any trade facilitation measure can make more vulnerable the head of the customs agency due to the fact that it can open the door to more collusion and corruption<sup>6</sup>.

Based on three Customs reforms seen as good practices<sup>7</sup>, Hors (2001) highlighted some powerful elements for successful implementation of a Customs reform: (i) political

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<sup>&</sup>lt;sup>5</sup> Engelschak and Le (2004) confirmed this bias towards strategy and IT and the neglect of accountability, law enforcement and anti-corruption measures.

<sup>&</sup>lt;sup>6</sup> Information asymmetry and the incentive framework, as developed in Rotschild and Stiglitz (1976), Macho-Stadler and Pérez-Castrillo (2001) and Dixit (2002), may explain theoretically why Customs officials on the ground may prefer to collude with Customs brokers in a framework where information asymmetry prevails and accountability to the head of Customs is low.

<sup>&</sup>lt;sup>7</sup> Philippines, Bolivia and Pakistan.

will, at the highest level, (ii) a strategic approach to reform, (iii) a careful assessment of the institutional scene and balance of powers, with sensitive management of opposing and supportive forces, (iv) the selection and sequencing of practical remedial measures and the professional improvement of individual procedures, with a keen eye to the total procedural chain and precautionary securing of every improvement.

Because many issues lie in the internal weaknesses of Customs agencies, a revised approach to Customs reforms is needed to ensure, first, internal control of the organization and reduce information asymmetry between the head of Customs and practices on the ground and then gradually relax or segregate external controls and ensure formal trade facilitation by giving incentives for private sector compliance.

Section 2 presents the traditional Customs approach and the results of such policies. Section 3 explains why Customs policies have failed in terms of revenue collection and (formal) trade facilitation. Sections 4 presents an alternative approach for Customs reforms in Africa and Section 5 demonstrates the importance of donors' role to implement this way forward.

# 2. Traditional Customs Approach: A Desire to Better Control Private Sector Operators with... Limited Results

In order to reach revenue collection targets (often set under pressure from international organizations), Customs agencies have developed control tools over private sector operators. As far as domestic trade is concerned, in most African countries, goods are never directed to green channels (through which they would be immediately cleared), whereas 90% of goods are cleared through the green channel in developed countries. Most consignments go through documentation and even physical inspection. Controls are systematic and importers/Customs brokers profiling and selectivity usually do not exist (see Figure 2).

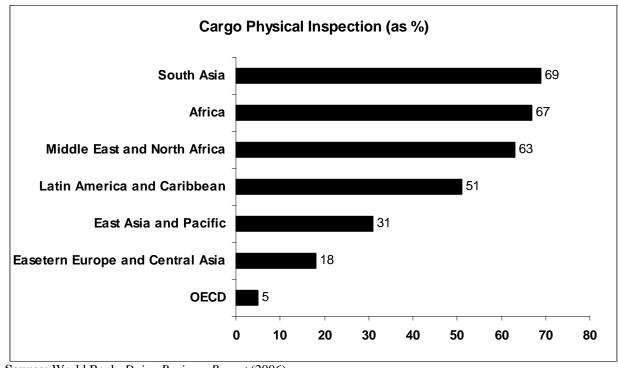


Figure 2: Rate of Cargo Physical Inspection per Region

**Source:** World Bank, *Doing Business Report* (2006).

Regarding transit trade<sup>8</sup>, controls are even more frequent and rigid. Although transit trade should be facilitated (provided that cargo is sealed and the risk of diversion into the transit country market covered by a guarantee), goods on transit face numerous controls such as mandatory Customs checkpoints, escorts, scanners or even real-time tracking systems, which create increased transaction costs, delays and unpredictability for imports to landlocked countries. In most cases, dwell time at the port of entry is longer for transit trade.

Distrust between Customs and private operators prevail, as it does between Customs agencies and the Ministries of Finance. Therefore, additional layers of controls are often put in place by Ministries of finance to control their Customs administration, such as preshipment inspection procedures, and quite often destination inspection procedures, carried out by international companies.<sup>9</sup>

<sup>8</sup> For more details on transit, see Arvis et al. 2007.

<sup>&</sup>lt;sup>9</sup> For detailed information on pre-shipment (PSI) procedures, see de Wulf and Sokol (2005) and Yang (2008). Johnson (2001) demonstrates with a principal-agent model that the consensus that PSI should be used as a deterrent to corruption and evasion in situations where "weak" institutions prevent full-fledged reforms is

Due to the importance and frequency of controls, undervaluation and smuggling (for domestic goods) and diversion (for transit goods) should be reduced to a minimum. Nevertheless, records do not confirm the efficiency of additional controls in most African countries: significant undervaluation prevails because of collusion.

Examples and challenges on the implementation of trade policy are numerous<sup>10</sup>: using mirror trade statistics, one can demonstrate that cars are valued at less than  $1/10^{th}$  in Benin of the declared value from the exporting countries (in order to reduce drastically the tax base). Moreover, importers with high value goods sometimes avoid controls such as scanners or physical inspections. Transit trade is usually slightly more secure but large scale diversion schemes do not seem to be tackled in most instances.

Moreover, smuggling does continue. We can take the well known example between Benin and Nigeria (Igue and Soule 1992). It remains difficult and complex to exactly assess smuggled flows. However, by cross-checking information, using various approaches and by using data from public officials and representatives from the private sector, it is possible for us to have an extent of the magnitude of smuggled flows from Benin to Nigeria.

Benin's official statistics do not capture an important part of imports which then leave Benin officially or unofficially <sup>11</sup> (see Table 1).

Table 1: Mirror Imports<sup>12</sup> as percent of total official imports of selected economies (2000-2005)

	2000	2001	2002	2003	2004	2005	
Benin	230.9	219.9	206.0	183.0	199.4	275.8	
Niger	104.1	120.6	119.6	100.7	111.0	91.1	
Nigeria	140.1	134.4	138.2	92.6	77.9	77.1	

Source: Derived from IMF Direction of Trade Statistics database.

flawed. In particular, under a fairly wide interpretation of "weak" institutions, the introduction of PSI will not be consistent with Customs undertaking ex-post reconciliation.

<sup>&</sup>lt;sup>10</sup> The tariff structure itself has usually little meaning in Customs in Africa since first the amount of duties paid is agreed on and then weight and value is adjusted accordingly.

<sup>&</sup>lt;sup>11</sup> It seems that smuggled imports entering Nigeria would mainly come from bordering ECOWAS countries (especially Benin). This discrepancy is not new: in the late 1980s, Yeats (1990) already noted the trade statistics discrepancy between Benin and Nigeria was extremely high.

<sup>&</sup>lt;sup>12</sup> Mirror statistics consist of comparing measures of a trade flow: for instance, the reported export flows from a country A to a country B and the reported import flows from country B from country A. It is a traditional tool to detect the causes of asymmetries in trade statistics, especially when goods supposedly imported to country A are changed into a transit for country C when arriving in country A.

While Benin's GDP growth and official imports fell over the period 2001-2005, the value of mirror imports rebounded dramatically in 2005 with an increase of 28%, representing almost three times the value of Benin reported imports statistics (amounting to 58% of Benin's GDP in 2005). In a context of GDP stagnation, such surge in import to Benin can only be explained if the bulk of it is intended for Nigeria's market. Benin's domestic capacity never could have absorbed this boom of imports.

Officially, 13% of Cotonou port traffic originates from or is destined to Nigeria. However, unofficially, 75% of the containers landed at Cotonou port are estimated to be headed for Nigeria and around the same percentage for bulk products. Based on current traffic and if we substract official imports data, 3.5 million tons would then end up in Nigeria through smuggling (since exports through Cotonou from Nigeria are negligible). If we assume at minimum 1400<sup>13</sup> USD for a ton of cargo, up to 5 billion USD of cargo would be smuggled to Nigeria from Cotonou only, which represents 1/6 of Nigeria's total imports.

Another way to illustrate this factor is that mirror data show that consumption in Benin for Nigeria's banned and high tariffs goods is significantly higher than in Nigeria. Based on mirror statistics, consumption of manufactured goods and miscellaneous manufactured articles (SITC 6 & 8) is four times higher in Benin compared to Nigeria! According to the same statistics, for the period of 2001 – 2005, consumption of manufactured goods and miscellaneous manufactured articles in Benin increased with an average of 14% annually, while GDP/capita has remained stagnant with an average of 1% for the same period. This case illustrate the paradox of more rigid controls: if Benin Customs increase the efficiency of their control, Nigerian importers will have no advantage to import goods transiting in Cotonou; the consequence would then be the decrease of revenues and income for Beninese. Therefore, undervaluation is a part of the economics of smuggling. The same does occur at the border between Cameroon and Chad: Kousseri inhabitants in Cameroon are the largest consumers of sugar (per capita) in Central Africa, sugar being stored in warehouses in the town (and smuggled for a significant part to Chad).

Therefore, despite drastic controls over the private sector, undervaluation remains endemic with lowered public revenues. Moreover, public resources are wasted: the ratio of

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<sup>&</sup>lt;sup>13</sup> According to Arnold (2006), the minimum value of a container is 20,000 USD for an average of 14 tons.

duties collected per staff is 2-3 times lower in most African countries than in Eastern Europe. Finally, total transport time and uncertainty are increased, which have spillover effects on inventories and then on growth.

# 3. Rationale for the Inefficiency of Controls and the Current Situation

"There are few public agencies in which the classic pre-conditions for institutional corruption are so conveniently presented as in a Customs administration. The potent mixture of administrative monopoly coupled with the exercise of wide discretion, particularly in a work environment that may lack proper systems of control and accountability, can easily lead to corruption <sup>14</sup>". WCO Secretary General 1998 (quoted in Sheikh 2003).

Most controls do not have the expected impact because of the frequent collusion between Customs brokers and some Customs officials (sometimes at the expense of importers). Many Customs brokers are former Customs officials and know how to reduce tariff duties through "facilitation" payments. Therefore, any control added is doomed to fail and used to extract bribes and share revenues between brokers and some Customs officials. From Table 2, we can demonstrate that brokers (as well as importers) capacity and practices vary widely: for a same level of activity, dwell time can be six times higher for a broker compared to a second one assuming that Customs' efficiency is probably relatively equivalent for both operators.

<sup>&</sup>lt;sup>14</sup> Like pointed out in Hors (2001), there is a need to differentiate the main types of corruption, which are mainly:

<sup>—</sup> *routine corruption*, in which private operators pay bribes to obtain a normal or hastened completion of customs operations;

<sup>—</sup> *fraudulent corruption*, in which the trader or agent seeks "blind eye" or active, collusive customs treatment in order to reduce fiscal obligations or enlarge external earnings;

<sup>—</sup> *criminal corruption*, in which criminal operators pay bribes to permit a totally illegal, lucrative operation (drug trafficking, abuse of export of promotion incentives, etc.).

Table 2: Average dwell time by brokers after having being cleared by Customs in Douala port

Customs brokers	Number of declarations	Average dwell time (in days)			
Broker 1	<b>25</b>	10			
Broker 2	12	10			
Broker 3	28	11			
Broker 4	73	16			
Broker 5	236	16			
Broker 6	85	17			
Broker 7	12	20			
Broker 8	65	24			
Broker 9	<mark>25</mark>	<mark>59</mark>			
Broker 10	57	61			

Source: Libom et al. (2008).

Moreover, private contractors used for pre-shipment or destination inspection usually do not have the expected impact (Anson et al. 2005, Johnson 2001), especially in the medium and long-term, as their *raison d'être* is not to improve significantly the level of Customs efficiency and management, even if they theoretically have financial incentives (revenue usually based on a percentage of Customs revenues). If they were too successful, then their contracts may be put at risk as their activity would no longer be needed, or needed in a much scaled down format.

One of the main reasons why collusion prevails is the fact that Customs senior management have serious difficulties to manage effectively officials on the frontline, as (rather in a hypocritical way) the head of Customs administration is usually almost the only one accountable for the results of his structure, while agents in general do not have this obligation. Corruption opportunities arise from three preconditions: a discretionary interface between customs officers and private operators; the possibility for customs officers to operate within a network of accomplices; and a lack of efficient controls (Hors 2001). As an example, at the Idiroko border-post between Nigeria and Benin, collected revenues per staff

are extremely low (less than 10,000 USD per staff)<sup>15</sup>, more than ten times lower than the average figure in Nigeria, the head of Customs having difficulties from Abuja to know on the daily basis what are the flows actually transiting through the border-post. Like Hors (2001) pointed out, a re-engineering of procedures that leads to an important reduction of the opportunities of corruption, in the case of Nigeria removal of important bans, should be at the core of a reform strategy.

Furthermore, one of the peculiarities of Customs in Africa is that in order to create checks and balances, Customs director generals do not appoint the key senior officials in charge of tariffs duties collection; it is usually the onus of the Ministry of Finance, which means that the DG does not have much leverage on key subordinates. Poor organizational structure is also one key reason why undervaluation and smuggling continue. Indeed, because of distrust between Customs senior management and frontline officials, DG is usually reluctant to decentralize responsibilities, which create work overload for themselves, detrimental to real control of frontline officials. Faure-Grimaud et al. (2003) demonstrate with a principal-agent model that supervision (from the head of Customs in this case) with soft information is valuable whenever supervisors (a head of regional Customs office) and supervisees (frontline Customs officials) collude <sup>16</sup>. But soft information is sometimes not even available.

Therefore, without any estimate of the risk taken, any trade facilitation measure can weaken the DG customs due to the fact that it can open the door to more collusion and corruption and therefore, relaxed controls are extremely difficult to implement in such environment all the more as objective data lack. Conversely, in a system where undervaluation is very high, any DG or group of Customs officials can usually get the necessary revenue increase (or decrease) that it wishes by applying more (or less) pressure on shippers.

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<sup>&</sup>lt;sup>15</sup> Assuming 20,000 USD for a TEU value, Customs officials yearly collect less than 3.5 million USD; according to interviews with Customs officials, two trucks go through the border-post every day (which means a value of 80,000 USD). If we apply the average tariffs rate, 3.5 million USD are collected by 600 staff.

<sup>&</sup>lt;sup>16</sup> The principal-agent model is relevant to explain the importance of information asymmetry and the impact on the management of Customs administration on a daily basis.

# 4. One Way Forward: Empowering the Head of Customs to Implement a New System based on Reinforced Internal Controls

In an environment where integrity (including that of auditors and inspection companies' officials) is questionable and a lack of records pervasive, post-clearance audit<sup>17</sup>, which is the linchpin of trade facilitation measures in Customs modernization, is more likely to fail. Moreover, a lack of cooperation between Customs and tax administrations also diminishes the chances of successes of the post-clearance audit.

Like it is usually pointed out, there are no quick solutions to increase integrity and reduce collusion of customs officials with corrupt brokers. Building integrity requires long term commitment and leadership and is a shared responsibility for both the public and private sectors. It is worth noting that although inadequate official salary levels are often cited as a major cause of corruption, Hors (2001) tends to show that, once corruption sets in as a settled background, the resulting illegal benefits are such that even substantial increases in official salary levels may have no real effect on the level of much more profitable irregular practices.

Integrity is closely related to the adoption of effective and efficient systems and procedures, but these need to be managed from the top. With this end in view, heads of Customs in SSA increasingly think that restrictions of the leeway given to frontline customs officers should reduce collusion with the corrupt brokers. Recent examples can serve to demonstrate that Customs senior management may be right to favor interconnection of remote border-posts to the HQ because without a certain control and magnitude of the malpractices, trade facilitation can not occur.

Better Customs organization should derive from a revised comprehensive approach, which would be centered on the following principles<sup>18</sup>:

1. strengthen accountability of the Head of Customs (external audit or stronger scrutiny from the Parliament) and systematic external publication in the media of revenue collection and other Customs performance data,

<sup>&</sup>lt;sup>17</sup> Post-Clearance Audit is a Customs control measure by which Customs satisfy themselves as to the accuracy and authenticity of declarations through the examination of the relevant books, records, business systems and commercial data held by persons/companies directly or indirectly involved in international trade.

<sup>&</sup>lt;sup>18</sup> Change the organizational structure of the Customs agency may also be required in some cases.

- 2. reduce discretionary power for frontline officials by simplifying trade policy<sup>19</sup> and increasing automation<sup>20</sup>,
- 3. reduce information asymmetry between the principal (Head of Customs) and the agent (frontline Customs officer) by supporting intelligence, generating accurate information on economic activities/behaviors, developing relations with importers/exporters in order, in the medium term, to limit access to the Customs broker profession through quality thresholds.
- 4. design a new human resources policy<sup>21</sup> to change the incentive framework<sup>22</sup> for Customs frontline officials and monitoring of staff performance on a regular basis based on objective data<sup>23</sup>,

Cameroon Customs started to try to implement part of this strategy. Figure 2 is interesting in this regard since it does demonstrate that with the roll-out of a new IT system and new personnel; revenues collected can significantly increase, even in a context where trade and economic growth are limited. This type of strategy also has an important deterrent effect on Customs personnel and brokers because of its use and publication of data.

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<sup>&</sup>lt;sup>19</sup> Such as removal of import bans, reduction of tariff peaks, removal of tariff duties exemptions... and we should move away from a scrutiny on only average tariff rate. More complex regulation has two consequences: First, it reduces the observability of the action for the supervisor thus making it more difficult to find out whether the agent has complied with the regulation or not. Second, as complexity increases, the discretion of the supervisor may increase, leaving more scope for interpretation in whether the agent complied with the rule or not (Eskeland et al. 1999).

<sup>&</sup>lt;sup>20</sup> In this regard, connection to IT is critical at border-posts and in the main Port/clearance areas.

<sup>&</sup>lt;sup>21</sup> Monitoring of the staff performance is critical and should provide motivation to better perform. As an example, staff performance can be based on objective data on a scale from 1 to 5. Wage is then correlated to staff performance: in case of 5, staff wage is increased by additional 5-10 % or promoted; in case of 1, staff performance is under review and in case of same result the year later, staff is fired.

<sup>&</sup>lt;sup>22</sup> A framework more based on individual results could be envisaged. For the time being, in many African countries, there is a wide array of incentives, such as legal protocols for extra-time work, bonuses, percentage of fines not limited compared to the salary (with poor results on legal enforcement and revenue collection). Salaries and bonuses in Customs are usually the most attractive of the public sector and further increased of salaries usually does not bring much impact and would have an excessive cost.

<sup>&</sup>lt;sup>23</sup> As an example, Cameroon senior Customs officers monitor the following indicators for Customs control staff: share of physical controls per Customs station and officer, outcome of controls, cross-check with PSI data if containers needed to go through the scanner have gone though this procedure.

11.5 11 10.5 Millions CFA 10 9.5 9 8.5 2007-5 2007-6 2007-9 2007-11 2007-8 2007-12 2008-2 2008-3 2008-6 2007-1 2007-7 2007-10 Months

Figure 3: Average Customs Declared Amount at a Douala Port Station

Source: Cameroon Customs. – the new IT System was rolled out in January 2007.

In many countries, Customs staff is reluctant to use IT because they increase transparency and controls and therefore reduce the risk of collusion with the private sector. That is why, it is not so uncommon to find that less than ½ of transactions are actually recorded in the IT system.

A right balance should however be found between micro-management by the Customs DG and decentralization of responsibilities. Indeed, many responsibilities should be decentralized to his/her senior management like the director of revenue collection, director of law enforcement, director of administration But that is where some elements still need to change, as it is unfair to ask accountability of the DG Customs without giving him/her the possibility to appoint the senior management team.

### 5. What Should the Gain be? An Empirical Application to Cameroon

An empirical application has been attempted for the Cameroon component of a regional World Bank funded project, the CEMAC Transit and Transport Facilitation Project (World Bank 2007). Better Customs management increases efficiency of logistics chains along corridors and increase transit procedure reliability in order to reduce transport costs,

time and unpredictability the project's target corridors. In the medium term, the project would then contribute to higher transport quality and lower transportation tariffs.

Unreliability and unpredictability increase transportation costs. In an uncertain environment, transport companies strive to cope with these problems by investing in costly information systems or employing additional people in charge of smoothing transactions. Transport operators invest in costly communication systems such as satellite phones, tracking systems and finally charge the exporter/importer accordingly. Fafchamps (2004) demonstrated empirically in nine African countries that the incidence of delayed deliveries has a strong positive effect on inventory holdings. Based on large firm-level surveys, he finds that firms hedge delivery risk by building up inventories, notably inputs. In Africa, firms hold, on average, the equivalent of three months of input needs. A strong correlation exists between late deliveries and inventories. Firms experiencing late deliveries hold, on average, 133 to 198 percent more inventories of inputs and 130 to 147 percent more total inventories. 1 out of 4 firms surveyed declares experiencing late deliveries. In economics where the cost of funds is high, this strategy is costly and considerably limits economic efficiency.

Streamlined Customs procedures have potentially the highest impact in terms of transport time reduction. Along the Douala-N'djaména corridor, 60% of total transport time is spent in port (data show similar results for the Douala-Bangui corridor for Central Africa, and from Kenya and Tanzania to the Great Lakes landlocked countries in East Africa).

Table 3: Breakdown of Transport Time along the Douala-N'djaména Corridor

Port dwell time	Road Transport	Clearance	TOTAL transport
(for goods in	(including handling	at	time
transit	in Ngaoundéré)	destination	
24 days	12 days	4 days	40 days
(60%)	(30%)	(10%)	(100%)

Sources: Comité Fal for port dwell time, surveys of operators for road transport and clearance time.

Moreover, the same long dwell time and high uncertainty impacts all domestic imports of the transit country, and impact of a reduction on domestic trade is probably even higher as trade volumes are much higher.

During the project preparation, target reductions in dwell/transit time were used for the calculations. Baseline data and expected indicators at the end of the project are presented in Table 4. The impact of the Customs reform as imagined by Cameroon Customs management based on internal control processes and automation can be summarized by more than two days of reduced dwell time and more than one day of reduced uncertainty.

 Table 4:
 Comparison between Baseline and Expected Indicators

	Baseli	ne <sup>24</sup>	Expected	<b>Expected at the end of the Project</b>			
	Time	Uncertainty	Time	Uncertainty			
	(in days)	(in days)	(in days)	(in days)			
Community-based							
system in Douala	11	5	8.8	4			

Derived from our model (Arvis et al. 2007), we collected data for two key parameters: fixed costs for a truck in the region and the value of time for containerized cargo and found out that at the current traffic level, almost 20 million USD<sup>25</sup> could be saved annually in reduced transport time and uncertainty.

## 6. Conclusions and Donors' Role to Implement this Way Forward

Comparing with the experience of Customs administration in Western Europe in the past fifty years, modernization in African Customs should quite follow an opposite sequencing of reforms. In Western Europe, Customs administrations designed indicators

<sup>25</sup> Fixed costs for a truck are estimated at US\$130 per day for a company operating along the corridors in Central Africa. Value of time for containerized cargo: in our estimates, we use US\$30 per day per TEU. It has been estimated in Arnold, J. (2005) that the average value of a TEU is close to US\$40,000, which is equivalent to US\$20-30 per TEU per day.

<sup>&</sup>lt;sup>24</sup> Standard deviation data were obtained from samples of major freight forwarders in Douala, as well as from Comité Fal data in Douala.

policies because of budget constraints and considered them as the final step of reform. African Customs should probably begin their reform with indicators collection (among other measures on reducing discretionary power for Customs frontline officials). African Customs officers have a very good knowledge of what good policies and procedures should look like: trade facilitation and risk analysis is not conceptually difficult to understand for Customs officers. The main problem lies in the possibility to implement them and it is an area where indicators pave the way for starting to implement some of them.

This must also be an internal process. Even if software about indicators does exist, building indicators should be a time of internal thinking and consensus-building among Customs officers in order to be perceived as a contract signed among agents. Nobody would refuse an indicator arguing this indicator will make bribery impossible. In an environment of endemic corruption, opening the dialogue on how to monitor Customs work is fully accepted, as is to be accountable on an objective measure because officers are likely to the first victims of monitoring based on non-objective criteria (Cantens 2007). Therefore, reform monitoring may not create much resistance on the ground as long as the impetus is given by Customs senior management.

Assistance from outside the organization is however needed. Donors must help to make public these policies undertaken by senior management of Customs. Indicators policies may be among the best means to increase accountability of senior management vis-à-vis political authorities and civil society. The role of donors here is not so much financial as one of an honest broker or that of a witness of what is happening, with ways to relay positive (or negative) feedback at the highest levels of government.

Importers must also be involved. Freight forwarders are often regulated professions only allowed to clear goods. They usually have no incentive in simplifying procedures. Based on this, Customs brokers and some Customs officers usually forge alliances at the expense of importers. It is the onus of Customs to break it and start dialogue with the ones, who actually pay duties and bear the cost of collusion. With this end in view, Single Window concept, which is being developing in Africa is a real opportunity to increase transparency and increase information-sharing between civil servants, Customs brokers and importers/exporters and then attribute the share of one's responsibility.

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Annex 1: International Trade Taxes and Transactions for African Countries
(in percent of tax revenue)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Benin 2/										25.7	24.6	25.3	24.9	26.1
Botswana 2/	41.0	34.5	31.3	37.7	37.2									
Burkina Faso														
2/													17.9	16.1
Burundi	28.2	25.4	31.1	30.3	22.6	18.5	32.8	23.4						
Cameroon	29.5	29.2	28.5											
Central														
African														
Republic 2/													32.5	
Congo, Dem.														
Rep. of	33.5	36.2	49.9	35.4	33.5	34.4	37.6	29.9	24.7	34.7	35.7			
Congo, Rep.														
of	32.3	41.0	37.6	40.3	40.3	33.9	27.8	19.3	24.3	24.3	23.0	24.5		
Côte d'Ivoire			67.6	64.3	59.3	55.6	55.4	51.0	45.4	47.0	50.2	54.1	55.9	50.9
Ethiopia 2/	25.9	32.6	41.2	43.5	39.2	40.0	37.9	38.4		51.1	50.8			
Gambia, The														
Ghana 2/	36.8	34.6								46.0	42.0	40.9	38.4	
Guinea	52.8													
Kenya 2/	15.9	10.3	11.9	15.5	17.1	17.1	17.6	16.8	17.6	20.6	15.2	3.3	14.0	11.7
Lesotho 3/	62.2	68.0	66.3	64.1	64.7	65.7	61.1	62.8	58.2	60.5	57.1	48.4	54.2	57.9
Madagascar	51.4	51.2	47.8	56.5	54.6	56.1			53.5	50.0	45.3	50.5	50.2	48.1
Mali 2/									16.1	15.0	16.0	16.7	17.2	17.4
Mauritius 3/											26.6	24.5	24.7	23.1
Namibia 2/	33.8	32.3	28.9	32.0	32.8	30.6	32.8	34.0	40.4	32.4	27.9	34.7		
Rwanda	36.3													
Senegal 2/					48.3	45.1	42.8	37.7	33.7	38.1				
Seychelles 3/											39.0	31.6	25.8	25.3
Sierra Leone														
2/	35.9	36.4	41.0	43.9	52.1	48.1	56.6	53.9	56.2	54.3	54.0	53.8	52.0	
South Africa														
3/					4.0	2.6	2.6	2.7	3.0	2.9	2.8	2.4	3.4	4.0
Swaziland 2/								51.6	54.7	55.0	52.8	51.6		
Togo 2/	•••	•••	•••	•••		•••	•••	•••	•••	•••	•••		21.8	22.9

Uganda 2/							10.3	35.6	35.6	35.6	31.8	30.7		
Zambia 2/	17.3	41.2	38.7	42.0	12.9	13.6	17.2	17.1		13.8	12.6	12.3	11.9	13.6
Zimbabwe	20.8	22.7	21.9	21.6	23.7	22.9								
Unweighted														
average 4/	34.6	35.4	38.8	40.6	36.1	34.6	33.3	33.9	35.6	35.7	33.7	31.6	29.6	26.4

Sources: Government Finance Statistics (IMF); International Financial Statistics (IMF); and World Economic Outlook (IMF).

- 1/ Consolidated Central Government.
- 2/ Budgetary Central Government.
- 3/ General Government.
- 4/ For each revenue classification, only countries for which data are available are included in the calculation. Taxes on international trade include import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes.

# **Annex 2:** List of Internal Monitoring Indicators in Cameroon Customs

- Time spent to assess a declaration after it is lodged,
- Time spent to be cleared from lodging,
- Time spent to be cleared after Customs assessment,
- Time spent through scanner,
- Time spent for payment after declaration assessment,
- Number of declarations not assessed per official,
- Share of manifest declared 24-hour before ship arrival,
- Quantity of goods imported and exported,
- Amounts registered, cleared and paid,
- Amounts of duties by official,
- Amounts of duties by official making a post clearance control