



MILLENNIUM CHALLENGE CORPORATION (MCC) CUSTOMS PROGRAM

Time Release Study

JORDAN CUSTOMS ADMINISTRATION MODERNIZATION PROGRAM

Submitted to:

USAID/Jordan

Submitted by:

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Report prepared by Interdisciplinary Research Consultants (IdRC), sub-contractor to ARD, Inc.

1.0 PROJECT BACKGROUND

The objective of the Jordan Customs Administration Modernization Program (CAMP) is to assist the Government of Jordan (GOJ) to achieve its trade facilitation goals by improving the efficiency and effectiveness of the customs system over the next two years. It will also assist Jordan to improve its scores on the Millennium Challenge Corporation (MCC) Trade Policy scorecard, thereby helping the country achieve MCC Compact Status. The main counterparts for the Program are the Jordan Customs Department (JC) and the Aqaba Special Economic Zone Authority (ASEZA) Customs. The Program is funded by the MCC, administered by the U.S. Agency for International Development (USAID), and closely monitored by The Ministry of Planning and International Cooperation (MOPIC).

The Customs Administration Modernization Program has four main components. These are:

- Implementation of the Border Management Task Force (BMTF) Recommendation #2 – establishment of a single window system for the border clearance of imports and exports;
- Upgrading and integration of Customs information and communications technology (ICT) infrastructure, including support for the implementation of ASYCUDA World;
- Capacity strengthening and training of Customs officials;
- Improvement of Customs' external communication and relations with the trade and ability to meet the private sector's legitimate need for Customs information.

One of the focal points in international trade is the country's borders and the performance of Customs and other border agencies, in particular their efficiency in clearing goods. In the modern business environment of just-in-time production and delivery, it has become ever more important for traders to be guaranteed fast and predictable release of goods. Since Customs is the foremost agency at the border and plays a prominent role in the release of goods, Customs should strive to reduce the complexity of clearance procedures and to limit information requirements to what is really necessary. Modern Customs administrations have recognized that streamlining and simplifying clearance procedures is of benefit to their importers, their exporters and their national economies.

Streamlining the clearance process while assuring compliance and appropriate duty collection requires efficient management of risk and simplified procedures. To ensure that procedures are applied in an effective manner, they have to be reviewed and updated at regular intervals. To determine the level of effectiveness of Customs operations and procedures, many Customs administrations conduct regular reviews and audits to assist them in streamlining their operations. One of the methods used for the review of clearance procedures is to measure the average time taken between the arrival of goods and their release. This helps Customs to identify both the problem areas and potential corrective actions to increase efficiency.

2.0 STUDY OBJECTIVE

The overall objective of this activity was to conduct a “Time-Release” study for Jordan Customs. The study was to be designed to measure the time required to release goods, defined as the time between the arrival of goods at the port/ airport/ land border until their release to the importer or a third party on his behalf. The main anticipated outcome of the study was the determination of where in the process of clearing goods any bottlenecks exist, the reasons for the delays, and possible solutions to speed up the process.

The specific objectives of the study were as follows:

- Use the World Customs Organization (WCO) Guide to Measure the Time Required for the Release of Goods, including checklists and sample forms contained in that document to quantify the average time for goods to clear through customs and identify problems or bottlenecks in the process.
- Work collaboratively with designated counterparts at Jordan Customs to complete the Time Release Study.
- Define scope and design of study based on the WCO Guide, including planning and methodology, duration, timing, geographical scope, types of goods, choice of traffic, choice of Customs offices; development and testing of survey form.
- Collect, record, and analyze data.
- Develop recommendations outlining corrective measures to resolve bottlenecks (that may include the use of automation and other sophisticated selectivity methods).

3.0 METHODOLOGY

To achieve the objective of this study, the following methodology was applied:

3.1 Identification of Target Population

Being a nationwide survey, the target population for this survey was initially defined as “all Customs transactions at all Jordan Customs Centers.” To define such population, the survey team worked with the Data Management Department at Jordan Customs to obtain the volumes of Customs transactions and their distribution among the various Customs centers for the years 2005 and 2006. Table 1 shows the overall statistics for those two years.

Table 1. Kingdom's Customs Transactions in 2005-2006

Center	2005	2006	Average	%
King Abdullah	22,451	24,929	23,690	2.5%
Aqaba	110,639	113,237	111,938	12.0%
Amman	99,167	104,410	101,789	10.9%
Omari	228,944	179,630	204,287	22.0%
Mdawara	26,860	17,322	22,091	2.4%
Airport	130,870	140,782	135,826	14.6%
Zarqa Free zone	101,538	114,712	108,125	11.6%
Karama	128,080	40,972	84,526	9.1%
King Hussein Bridge	5,053	5,551	5,302	0.6%
Jordan Valley	18,702	15,774	17,238	1.9%
Jaber	115,324	114,452	114,888	12.4%
Total	987,628	871,771	929,700	100.0%

As can be seen in the Table above, and Figure 1 below, the Customs Centers of Aqaba, Amman, Omari, Airport, Zarqa Free zone, and Jaber account for nearly 85% of the customs transactions in those two years. Therefore, it was decided to focus the study on those centers. However, Jordan Customs management requested that the King Abdullah Industrial City be also included. Therefore, the target population became all of the transactions at those seven centers.

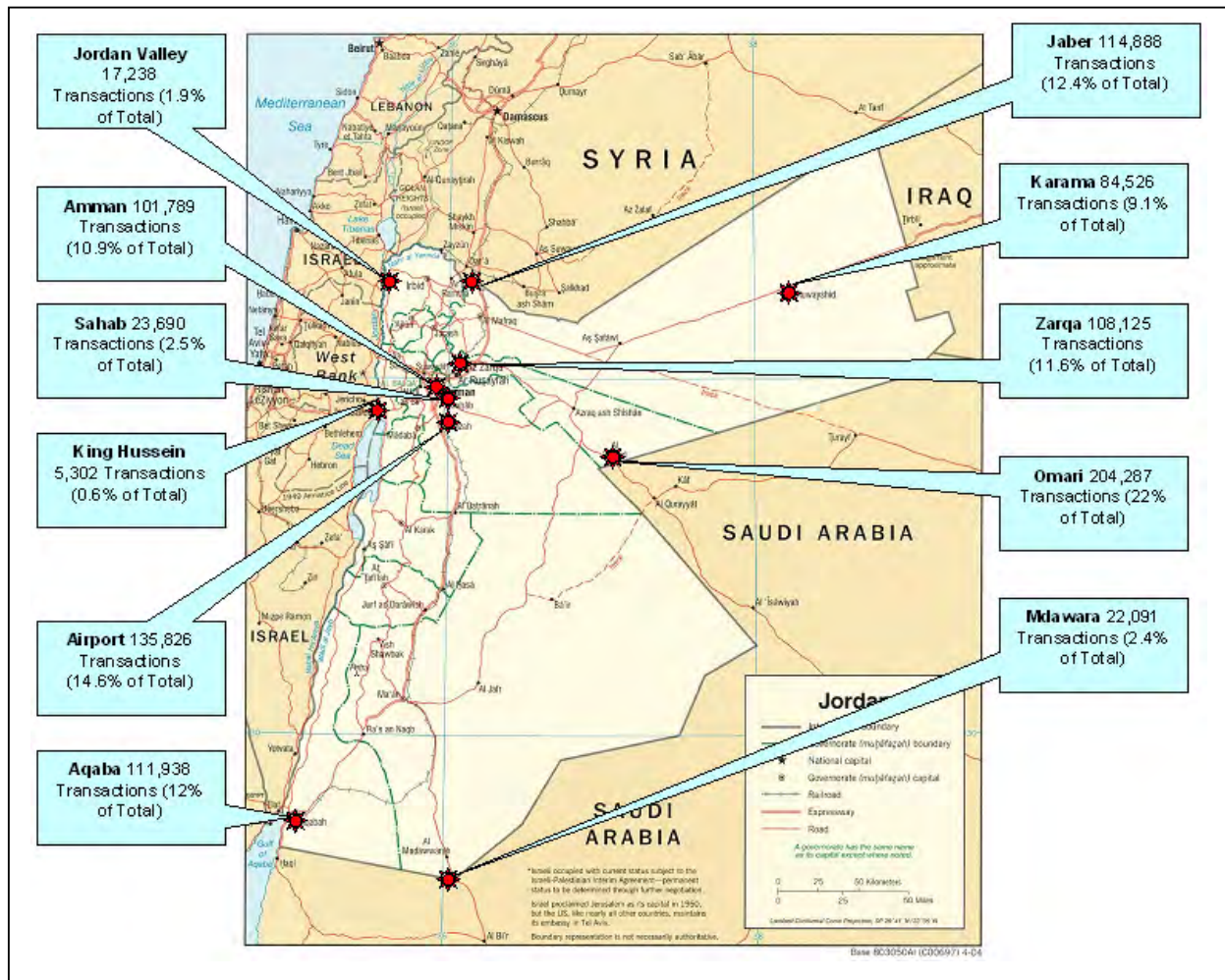


Figure 1. Distribution of Jordan's Customs Transactions in 2005-2006

3.2 Sample Definition and Sampling

As with any survey, time constraints usually prohibit the investigation of an entire population (in this case all the customs transactions identified above). For the purposes of this survey, the *sample unit* (i.e., the entity that represents one data point) was taken as one customs transaction.

The *study sample size* was defined as the minimum required number of sampling units that are needed to build sound statistical conclusions and inferences.

This was determined by Jordan Customs' desired level of statistical confidence and tolerance for statistical error. The minimum sample size required to draw inferences on the population was calculated using the following formulae:

$$SS = \frac{Z^2 \times p \times (1 - p)}{c^2}$$

where:

SS = sample size

Z = Z-value (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)

c = confidence interval, expressed as decimal (e.g., .07 = ±7)

The sample size would be further corrected to account for the Finite Population using the following formula

$$\text{New SS} = \frac{\text{SS}}{1 + \frac{\text{SS} - 1}{\text{Population}}}$$

Applying the above formulae to the population identified above using a 95% level of confidence with a ±5% confidence interval results in a minimum sample size requirement of 384. This sample of 384 was further stratified according to three criteria; geographic location, type of customs transaction, and lane. A description of those stratifications follows.

3.2.1 Geographic Stratification

The sample calculated as above was distributed over the study centers as the actual distribution of transactions in those centers as shown in Table 2 and Figure 2 below. This guaranteed that the proportional size of the sub-sample corresponded to the proportional size of transactions in each of the studied centers in relation to the overall size.

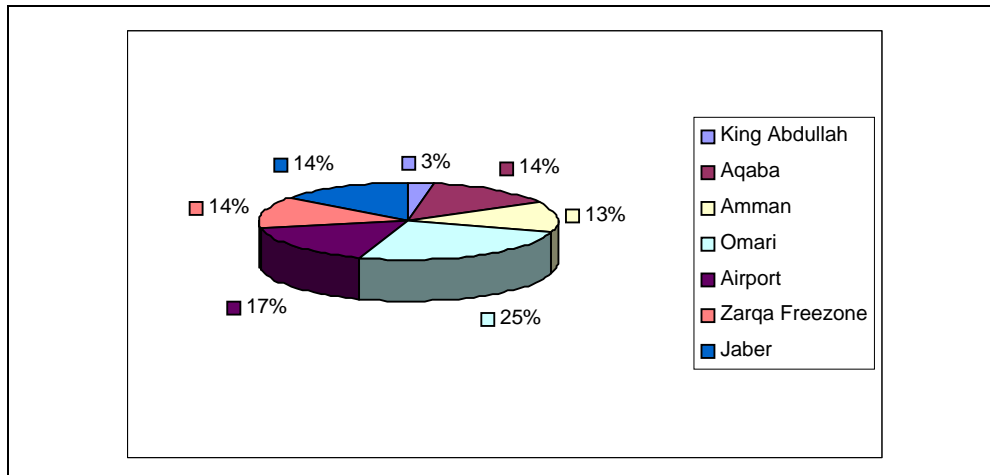


Figure 2. Geographic Distribution of Customs Transactions

Table 2. Geographic Distribution of Customs Transactions

Center	2005	2006	Average	%	Minimum Sample
King Abdullah	22,451	24,929	23,690	3.0%	11
Aqaba	110,639	113,237	111,938	14.0%	54
Amman	99,167	104,410	101,789	12.7%	49
Omari	228,944	179,630	204,287	25.5%	98
Airport	130,870	140,782	135,826	17.0%	65
Zarqa Free zone	101,538	114,712	108,125	13.5%	52
Jaber	115,324	114,452	114,888	14.4%	55
Total	808,933	792,152	800,543	100%	384

3.2.2 Customs Transaction Type Stratification

Upon investigating the specifics of customs transactions, it was found that there are twelve different categories of transactions as follows:

- Transfer to Centers
- Exit Manifest
- Other
- Perm Export
- Temp Export
- Temp Import
- Re-Import
- Bonded
- Furniture
- Summary
- Re Export
- Import
- Transit

Therefore, it was necessary to ensure that the sample resembles the actual distribution in terms of the types of transactions in each of the centers. Those calculations are shown in Table 3.

Table 3. Distribution of Customs Transactions Types Among Various Centers

	Type of Transaction	Aqaba		Amman		Omari		Airport		Zarqa Free Zone		King Abdullah		Jaber	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%
Population	Transfer to Centers					120	0.1%								
	Exit Manifest					60,572	29.7%								
	Other	78	0.1%	4	0.0%		0.0%	2,857	2.1%			6	0.0%		
	Perm Export	5,645	5.0%	7,917	7.8%	31,941	15.6%	12,972	9.6%	444	0.4%	8,301	35.0%	10,719	9.3%
	Temp Export	27	0.0%	32	0.0%	1	0.0%	845	0.6%	7	0.0%	3	0.0%	4	0.0%
	Re Export	4,791	4.3%	7,351	7.2%	467	0.2%	11,076	8.2%	32	0.0%	1,012	4.3%	283	0.2%
	Import	37,301	33.3%	73,476	72.2%	159	0.1%	64,747	47.7%	60,067	55.6%	11,810	49.9%	5,031	4.4%
	Temp Import	2,782	2.5%	4,830	4.7%		0.0%	6,256	4.6%	1,259	1.2%	1,993	8.4%		
	Re-Import	21	0.0%	230	0.2%		0.0%	498	0.4%	9	0.0%	76	0.3%	30	0.0%
	Bonded	3,533	3.2%	4,407	4.3%		0.0%	619	0.5%	3,502	3.2%	26	0.1%		
	Furniture	196	0.2%	2,933	2.9%	31	0.0%	276	0.2%	32	0.0%			1	0.0%
	Summary	164	0.1%	537	0.5%	24,977	12.2%	17,728	13.1%	137	0.1%	1	0.0%		
	Transit	57,402	51.3%	73	0.1%	86,023	42.1%	17,954	13.2%	42,637	39.4%	465	2.0%	98,821	86.0%
	Total	111,938		101,789		204,287	1	135,826		108,125		23,690		114,888	
	Sample	Transfer					0	0.1%							
Exit Manifest						29	29.7%								
Other		0	0.1%	0	0.0%	0	0.0%	1	2.1%				0.0%		
Perm Export		3	5.0%	4	7.8%	15	15.6%	6	9.6%	0	0.4%	4	35.0%	5	9.3%
Temp Export		0	0.0%	0	0.0%	0	0.0%	0	0.6%	0	0.0%		0.0%	0	0.0%
Re Export		2	4.3%	4	7.2%	0	0.2%	5	8.2%	0	0.0%		4.3%	0	0.2%
Import		18	33.3%	35	72.2%	0	0.1%	31	47.7%	29	55.6%	5	49.9%	2	4.4%
Temp Import		1	2.5%	2	4.7%	0	0.0%	3	4.6%	1	1.2%	1	8.4%		
Re-Import		0	0.0%	0	0.2%	0	0.0%	0	0.4%	0	0.0%		0.3%	0	0.0%
Bonded		2	3.2%	2	4.3%	0	0.0%	0	0.5%	2	3.2%		0.1%		
Furniture		0	0.2%	1	2.9%	0	0.0%	0	0.2%	0	0.0%			0	0.0%
Summary		0	0.1%	0	0.5%	12	12.2%	8	13.1%	0	0.1%		0.0%		
Transit		28	51.3%	0	0.1%	41	42.1%	9	13.2%	21	39.4%	1	2.0%	47	86.0%
Total		54	100%	49	100%	98	100%	65	100%	52	100%	11	100%	55	100%

3.2.3 Customs Lane Stratification

The last criterion for stratifying the sample was the lane through which a customs transaction of any type is processed. There are three types of lanes; Green, Red, and Yellow. The breakdown of the population's allocations to lanes (for the different centers for the various types of transactions) was replicated for the sample as shown in Table 4 below.

Table 4. Customs Transactions Distribution by Lane

Type of Transaction	Code	King Abdullah				Aqaba				Amman				Omari				Airport				Zarqa Free zone				Jaber							
		Total	R	G	Y	Total	R	G	Y	Total	R	G	Y	Total	R	G	Y	Total	R	G	Y	Total	R	G	Y	Total	R	G	Y				
Transfer	DO 4																																
Exit Manifest	DO 5													29																			
Other	AR 9																	1			1												
Perm Export	EX 1	4	1	2	1	3		2	1	4	1	2	1	15	1	13	1	6	1	4	1					5		4	1				
Temp Export	EX 2																																
Re Export	EX 3					2	1		1	4	3		1					5	1	1	3												
Import	IM 4	5	2	1	2	18	9	4	5	35	18		17					31	11	10	10	29	20		9	2	2						
Temp Import	IM 5	1	1			1			1	2	1		1					3	1	2													
Re-Import	IM 6																					1	1										
Bonded	IM 7					2	2			2	2																						
Furniture	RD 4									1	1											1	1										
Summary	SD 0													12				8															
Transit	TR 8	1	1			28	11		17					41	12		29	9	2		7	21	4		17	47	4		43				
Total		11				54				49				98				65				52				55							

3.3 Survey Tool Design

The WCO standard survey tool for Time Release Studies was used; however, it was slightly modified in coordination with Jordan Customs to reflect actual conditions in the field. Generally, the WCO survey tool measures time requirements for the following 19 stages of a customs transaction process:

1. Arrival of Goods and Start of Unloading	11. Start of Inspection and End of Inspection
2. Start of Unloading and End of Unloading	12. Lab. Analysis
3. Lodgment of Declaration	13. Veterinary
4. Acceptance of Declaration	14. Agriculture
5. Request and Document Presentation	15. Medical/Health
6. Start Document Control	16. Assessment of Duty
7. End Document Control	17. Payment (if required before release)
8. Finding Inspector	18. Release
9. Unloading and Classifying	19. Removal from Customs Control
10. Finding Inspector again	

For each stage, the WCO survey tool captures the beginning and the end of the stage.

3.4 Pre-Testing the Survey Tool

The survey tool was pre-tested to identify any shortcomings in the design. A pre-test sample was identified and the survey conducted on this limited scale. Minor modifications were made following the pre-test and the data collection initiated immediately after that. The final English version of the survey tool is presented in Appendix I. (The survey was later translated to Arabic for the data collection purposes.)

3.5 Data Collection

Using the developed study sample, and the Customs Centers contact information provided by the Jordan Customs, four two-person IdRC enumerator crews commenced with the data collection process. The crews were rotated among the various locations to minimize data collection bias.

Based on the sample distribution illustrated earlier, the data collection crews chose transactions at random. The data collection process was done by accompanying the freight forwarding agents and recording the times of the beginnings and the ends of the various stages outlined above. Where possible, the data collection crews tried to be inconspicuous to the Customs officer in order to preserve the quality of the data. The teams worked in pairs, with one data logger measuring times and the other data enumerator filling out the survey tool.



3.6 Collation of Data

A data manager was responsible for reviewing and collating data as completed surveys arrived daily. The data manager built and produced a database of all the collected surveys in a manner that allowed easy manipulation for analyses. The Data Manager collated and screened the data upon arrival. In addition, the Data Manager met with the enumerators on a daily basis prior to leaving for the field to provide them with instructions on how to improve the process in a manner that controlled the quality and facilitated data entry. All data were computerized using MS Excel.

3.7 Data Analyses and Inferences

The IdRC team analyzed the collated data mainly via the calculation of average times for each stage of the various types of transactions in the various study areas. The data were categorized according to the lane that they were classified in (i.e., Green, Yellow, or Red). The average proportion of times for each of the 19 stages with respect to the entire processing times was then calculated. The analyses were conducted for each center, as presented in the following section

4.0 RESULTS AND FINDINGS

Table 5 presents the main findings of the study in terms of release time. As can be seen in the Table, an average release time (in minutes) was calculated for the surveyed transactions at each customs center. The averages are presented for each lane (i.e., Green, Yellow, and Red). It should be noted that analyses according to the type of transaction were not conducted due to the relatively small sizes of the sub-samples, which prohibits the establishment of statistically meaningful inferences and conclusions. The raw data are included in the annex, and a CD containing those data is attached to this report.

Table 5. Overall Average Time Release Results for the Various Customs Centers

Stage	Zarqa			Amman Customs			Airport			Aqaba			Abdullah			Jaber			Omari		
	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R
Arrival of Goods & Start of Unloading	N/A	N/A	N/A	0	0	0	9.76	10.33	9.5	0	0	0				N/A	N/A	N/A	N/A	N/A	N/A
Start of Unloading & End of Unloading	N/A	N/A	N/A	0	0	0	27.32	30.06	35.75	0	0	0				N/A	N/A	N/A	N/A	N/A	N/A
Arrival of Goods & End of Unloading	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.53	64.6	N/A	N/A	N/A
Arrival of Goods & Lodgment of Declaration	N/A	50.35	79.06	17	33.25	64.86	0	0	0	0	0	0	92.67	266	56.2	N/A	N/A	N/A	25.42	64.12	29.22
Lodgment of Declaration & Acceptance of Declaration	N/A	15.46	7.91	2.33	1.3	1.43	2.26	3.32	3.15	44.86	30.1	38.57	4.67	16	11.8	6.25	5.2	7.5	9.23	16.97	16.07
Request & Document Presentation	N/A	N/A	N/A	0	52	6	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Document Presentation & Start Document Control	N/A	3.48	20.63	0	0	0	0	0	0	0	0	0	0	13	4.33	N/A	N/A	N/A	N/A	N/A	N/A
Start Document Control & End Document Control	N/A	24.08	17.56	2	1.71	1.9	2.23	5.43	2.43	0	0	0	1.67	22.5	1.6	10	5.9	15	N/A	N/A	N/A
Finding of Inspector	N/A	2.88	10.31	0	2.91	2.79	N/A	1.69	2.05	60	60	65	3	0	2	N/A	15.31	7	4	4.43	4.57
Unloading and Classifying	N/A	30.00	36.11	0	10.91	15.25	N/A	19.85	19.41	N/A	100	75.56	8	0	9	N/A	N/A	N/A	N/A	43.33	31.1
Another Time Finding of Inspector	N/A	9.00	5.00	0	4.45	4.33	N/A	1.69	1.95	0	0	0	0	0	1.5	N/A	N/A	N/A	N/A	33.29	8.27
Start of Inspection & End of Inspection	N/A	21.85	27.83	0	12.64	15	N/A	21.69	21.48	70	51	202.5	5	0	8	N/A	37.36	42.5	4	8.93	8.43
Lab. Analysis	N/A												35	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Veterinary	N/A	16.67	13.29	3	2.05	2.17	2.38	2.57	2.55	10	51	327.22	3.5	0	2	N/A	N/A	N/A	N/A	N/A	N/A
Agriculture	N/A	N/A	N/A	0	0.00	7.5	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	5.54	3.5	7.5
Medical/Health	N/A	N/A	N/A	0	10.00	1.5	2.33	3.14	2.5	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Assessment of Duty	N/A	10.77	6.54	2.33	3	5.24	2.48	2.73	2.64	31.88	96.52	69.05	5	2.5	3.5	7.5	7.86	10.83	5.15	7.73	7.62
Payment (if required before release)	N/A	N/A	N/A	2	2	1.88	3.43	3.41	3.36	7.5	8.76	14	1	1.5	2.8	N/A	N/A	N/A	N/A	N/A	N/A
Release	N/A	15.77	16.35	2.33	1.5	1.84	4.3	2.59	2.86	8.6	18.44	12.39	2.33	3	3.6	8.75	5.94	7.5	7.62	8.23	8.07
Removal from Customs Control	N/A	22.52	15.00	17.67	7.5	15	28.48	25.09	26.9	29	88.63	78.35	14	12.5	11.2	8.75	30	9.17	14.92	23.93	23.07
Total time (min)	0	222.8	255.6	48.7	145.2	146.7	85.0	133.6	136.5	261.8	504.5	882.6	175.8	337.0	117.5	41.25	154.1	164.1	75.88	214.46	143.92

Figure 3 graphically depicts the numbers in the above Table. As can be seen in the Figure, the average release time in Aqaba is significantly higher than the other centers. With the exception of Yellow and Red lane transactions in Zarqa and Yellow lane transactions in King Abdulla/Sahab, the average time release times are comparable among the various centers.

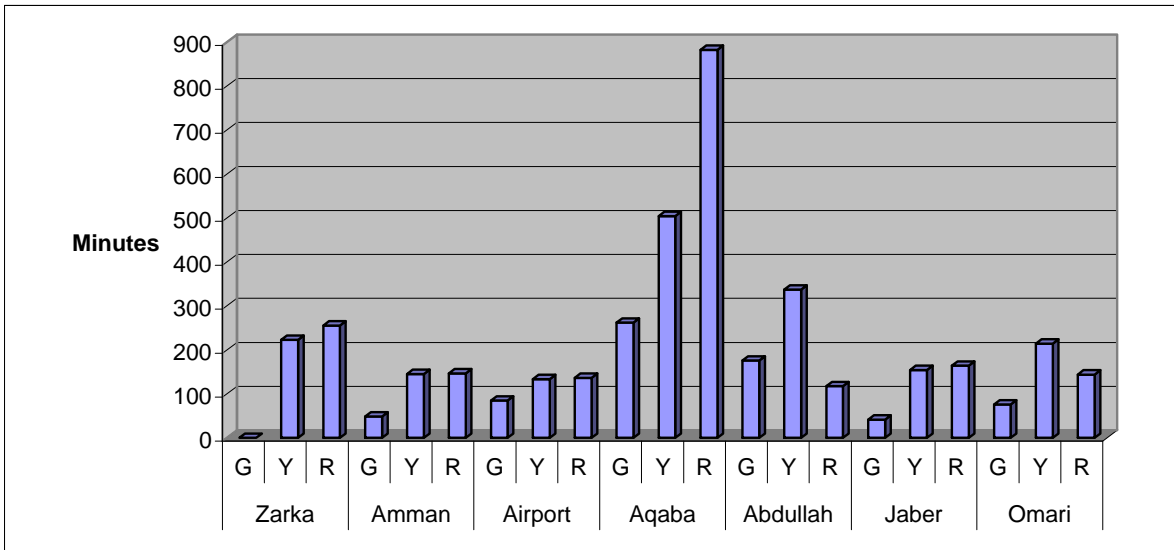


Figure 3. Average Release Times for Various Lanes in the Seven Customs Centers

In general, the time release for Yellow and Red lane transactions is higher than the time release for Green transactions for all the centers. This is due to the fact that Green Lane transactions are less complex and require less inspection and duty assessment times. Tables 6 through 9 present the detailed findings per each center showing the proportional contribution of each stage to that center's average time release for each lane separately. As can be seen in the Tables, certain stages consume significantly more time than other stages. It is those stages that are believed to be the bottlenecks and warrant further investigation on how to reduce the time needed to complete them. Section 5 of this report summarizes the field observations pertaining to those bottlenecks and presents suggested recommendations on how to reduce the proportional time contribution of those bottlenecks.

Table 6. Time Release Results for Zarqa and Amman Custom Centers

Zarqa Customs Center			Amman Customs Center			
Phase	Y	R	Phase	G	Y	R
Arrival of Goods & Start of Unloading	0.0%	0.0%	Arrival of Goods & Start of Unloading	0.0%	0.0%	0.0%
Start of Unloading & End of Unloading	0.0%	0.0%	Start of Unloading & End of Unloading	0.0%	0.0%	0.0%
Arrival of Goods & Lodgment of Declaration	22.6%	30.9%	Arrival of Goods & Lodgment of Declaration	34.9%	22.9%	44.2%
Lodgment of Declaration & Acceptance of Declaration	6.9%	3.1%	Lodgment of Declaration & Acceptance of Declaration	4.8%	0.9%	1.0%
Request & Document Presentation	0.0%	0.0%	Request & Document Presentation	0.0%	35.8%	4.1%
Document Presentation & Start Document Control	1.6%	8.1%	Document Presentation & Start Document Control	0.0%	0.0%	0.0%
Start Document Control & End Document Control	10.8%	6.9%	Start Document Control & End Document Control	4.1%	1.2%	1.3%
Finding of Inspector	1.3%	4.0%	Finding of Inspector	0.0%	2.0%	1.9%
Unloading and Classifying	13.5%	14.1%	Unloading and Classifying	0.0%	7.5%	10.4%
Another Time Finding of Inspector	4.0%	2.0%	Another Time Finding of Inspector	0.0%	3.1%	3.0%
Start of Inspection & End of Inspection	9.8%	10.9%	Start of Inspection & End of Inspection	0.0%	8.7%	10.2%
Laboratory Analysis	0.0%	0.0%	Laboratory Analysis	0.0%	0.0%	0.0%
Veterinary	7.5%	5.2%	Veterinary	6.2%	1.4%	1.5%
Agriculture	0.0%	0.0%	Agriculture	0.0%	0.0%	5.1%
Medical/Health	0.0%	0.0%	Medical/Health	0.0%	6.9%	1.0%
Assessment of Duty	4.8%	2.6%	Assessment of Duty	4.8%	2.1%	3.6%
Payment (if required before release)	0.0%	0.0%	Payment (if required before release)	4.1%	1.4%	1.3%
Release	7.1%	6.4%	Release	4.8%	1.0%	1.3%
Removal from Customs Control	10.1%	5.9%	Removal from Customs Control	36.3%	5.2%	10.2%
Total time (minutes)	222.8	255.6	Total time (minutes)	48.7	145.2	146.7

Table 7. Time Release Results for Airport and Aqaba Custom Centers

Airport Customs Center				Aqaba Customs Center			
Phase	G	Y	R	Phase	G	Y	R
Arrival of Goods & Start of Unloading	11.5%	7.7%	7.0%	Arrival of Goods & Start of Unloading	0.0%	0.0%	0.0%
Start of Unloading & End of Unloading	32.1%	22.5%	26.2%	Start of Unloading & End of Unloading	0.0%	0.0%	0.0%
Arrival of Goods & Lodgment of Declaration	0.0%	0.0%	0.0%	Arrival of Goods & Lodgment of Declaration	0.0%	0.0%	0.0%
Lodgment of Declaration & Acceptance of Declaration	2.7%	2.5%	2.3%	Lodgment of Declaration & Acceptance of Declaration	17.1%	6.0%	4.4%
Request & Document Presentation	0.0%	0.0%	0.0%	Request & Document Presentation	0.0%	0.0%	0.0%
Document Presentation & Start Document Control	0.0%	0.0%	0.0%	Document Presentation & Start Document Control	0.0%	0.0%	0.0%
Start Document Control & End Document Control	2.6%	4.1%	1.8%	Start Document Control & End Document Control	0.0%	0.0%	0.0%
Finding of Inspector	0.0%	1.3%	1.5%	Finding of Inspector	22.9%	11.9%	7.4%
Unloading and Classifying	0.0%	14.9%	14.2%	Unloading and Classifying	0.0%	19.8%	8.6%
Another Time Finding of Inspector	0.0%	1.3%	1.4%	Another Time Finding of Inspector	0.0%	0.0%	0.0%
Start of Inspection & End of Inspection	0.0%	16.2%	15.7%	Start of Inspection & End of Inspection	26.7%	10.1%	22.9%
Laboratory Analysis	0.0%	0.0%	0.0%	Laboratory Analysis	0.0%	0.0%	0.0%
Veterinary	2.8%	1.9%	1.9%	Veterinary	3.8%	10.1%	37.1%
Agriculture	0.0%	0.0%	0.0%	Agriculture	0.0%	0.0%	0.0%
Medical/Health	2.7%	2.4%	1.8%	Medical/Health	0.0%	0.0%	0.0%
Assessment of Duty	2.9%	2.0%	1.9%	Assessment of Duty	12.2%	19.1%	7.8%
Payment (if required before release)	4.0%	2.6%	2.5%	Payment (if required before release)	2.9%	1.7%	1.6%
Release	5.1%	1.9%	2.1%	Release	3.3%	3.7%	1.4%
Removal from Customs Control	33.5%	18.8%	19.7%	Removal from Customs Control	11.1%	17.6%	8.9%
Total time (minutes)	85.0	133.6	136.5	Total time (minutes)	261.8	504.5	882.6

Table 8. Time Release Results for K.Abdullah and Jaber Custom Centers

K. Abdullah Customs Center				Jaber Customs Center			
Phase	G	Y	R	Phase	G	Y	R
Arrival of Goods & Start of Unloading	0.0%	0.0%	0.0%	Arrival of Goods & Start of Unloading	0.0%	0.0%	0.0%
Start of Unloading & End of Unloading	0.0%	0.0%	0.0%	Start of Unloading & End of Unloading	0.0%	0.0%	0.0%
Arrival of Goods & Lodgment of Declaration	52.7%	78.9%	47.8%	Arrival of Goods & End of Unloading	0.0%	30.2%	39.4%
Lodgment of Declaration & Acceptance of Declaration	2.7%	4.7%	10.0%	Arrival of Goods & Lodgment of Declaration	0.0%	0.0%	0.0%
Request & Document Presentation	0.0%	0.0%	0.0%	Lodgment of Declaration & Acceptance of Declaration	15.2%	3.4%	4.6%
Document Presentation & Start Document Control	0.0%	3.9%	3.7%	Request & Document Presentation	0.0%	0.0%	0.0%
Start Document Control & End Document Control	0.9%	6.7%	1.4%	Document Presentation & Start Document Control	0.0%	0.0%	0.0%
Finding of Inspector	1.7%	0.0%	1.7%	Start Document Control & End Document Control	24.2%	3.8%	9.1%
Unloading and Classifying	4.6%	0.0%	7.7%	Finding of Inspector	0.0%	9.9%	4.3%
Another Time Finding of Inspector	0.0%	0.0%	1.3%	Unloading and Classifying	0.0%	0.0%	0.0%
Start of Inspection & End of Inspection	2.8%	0.0%	6.8%	Another Time Finding of Inspector	0.0%	0.0%	0.0%
Laboratory Analysis	19.9%	0.0%	0.0%	Start of Inspection & End of Inspection	0.0%	24.2%	25.9%
Veterinary	2.0%	0.0%	1.7%	Laboratory Analysis	0.0%	0.0%	0.0%
Agriculture	0.0%	0.0%	0.0%	Veterinary	0.0%	0.0%	0.0%
Medical/Health	0.0%	0.0%	0.0%	Agriculture	0.0%	0.0%	0.0%
Assessment of Duty	2.8%	0.7%	3.0%	Medical/Health	0.0%	0.0%	0.0%
Payment (if required before release)	0.6%	0.4%	2.4%	Assessment of Duty	18.2%	5.1%	6.6%
Release	1.3%	0.9%	3.1%	Payment (if required before release)	0.0%	0.0%	0.0%
Removal from Customs Control	8.0%	3.7%	9.5%	Release	21.2%	3.9%	4.6%
Total time (minutes)	175.8	337.0	117.5	Removal from Customs Control	21.2%	19.5%	5.6%
				Total time (minutes)	41.3	154.1	164.1

Table 9. Time Release Results for Omari Custom Center

Omari Customs Center			
Phase	G	Y	R
Arrival of Goods & Start of Unloading	0.0%	0.0%	0.0%
Start of Unloading & End of Unloading	0.0%	0.0%	0.0%
Arrival of Goods & End of Unloading	0.0%	0.0%	0.0%
Arrival of Goods & Lodgment of Declaration	33.5%	29.9%	20.3%
Lodgment of Declaration & Acceptance of Declaration	12.2%	7.9%	11.2%
Request & Document Presentation	0.0%	0.0%	0.0%
Document Presentation & Start Document Control	0.0%	0.0%	0.0%
Start Document Control & End Document Control	0.0%	0.0%	0.0%
Finding of Inspector	5.3%	2.1%	3.2%
Unloading and Classifying	0.0%	20.2%	21.6%
Another Time Finding of Inspector	0.0%	15.5%	5.7%
Start of Inspection & End of Inspection	5.3%	4.2%	5.9%
Laboratory Analysis	0.0%	0.0%	0.0%
Veterinary	0.0%	0.0%	0.0%
Agriculture	7.3%	1.6%	5.2%
Medical/Health	0.0%	0.0%	0.0%
Assessment of Duty	6.8%	3.6%	5.3%
Payment (if required before release)	0.0%	0.0%	0.0%
Release	10.0%	3.8%	5.6%
Removal from Customs Control	19.7%	11.2%	16.0%
Total time (minutes)	75.9	214.5	143.9

5.0 BOTTLENECKS AND RECOMMENDATIONS

As can be seen from the results in the previous sections, there are certain stages in the different customs centers that account for relatively higher proportions of the release time than other stages. It is those stages that are believed to be the bottlenecks, and if remedied, would result in significant reductions in the time release of goods by Jordan Customs. Fortunately, several of the bottlenecks are believed to be solvable using simple managerial measures. This section summarizes the data enumerators' field observations on those particular bottlenecks and proposes recommendations to reduce the proportional times of those bottleneck stages. The results are presented for each center.

5.1 Zarqa Customs Center

Generally for this center, the "Arrival and Lodgment of Declaration" stage was found to be time consuming. The data enumerators indicated that declarations drafts are prepared in the Free Zone adjacent to the customs centers. It was noticed that a significant number of those declarations contain errors. Therefore, time is wasted reviewing and amending them. It is believed that better coordination and data quality control and assurance would significantly help reduce the time required for the completion of this stage.

Another stage that was seen to be time consuming is the unloading of goods prior to an inspection. This was a result of a combination of small and crowded yards, and inefficient loading/unloading companies. It is believed that expanding the yards would help resolve most of this delay. In terms of loading/unloading, a number of loading/unloading companies operate in the Customs Centers and were noticed to be inefficient and/or under-staffed. It is recommended that the nature of the contracting mechanisms with those companies be revisited, and that Key Performance Indicators (KPIs) be set for their services. Monitoring those KPIs and imposing penalties on non-compliance is also believed to have significant potential to reducing the time consumed by this stage.

The inspection process was also noticed to account for a significant portion of the time required for release. Although inspection is a sensitive stage that should not be jeopardized, the introduction of better equipment to assist officers in the inspection process is believed to have potential. A more detailed study on what type of equipment, and/or procedures are followed by inspectors would be needed.

Finally, and as with most centers, the transport companies sometimes cause delays in removing the goods from Customs control (this practice was noticed in most centers as will be seen in the following sections). Although this is not a delay attributable to Customs, this stage is considered one of the stages of time release according to the WCO standards. Therefore, imposing strict penalties on the transport companies and/or owners of the goods is believed to have a significant impact on reducing the time needed to complete this stage.

5.2 Amman Customs Center

As with the previous center, there were significant delays during the Lodgment of Declaration stage in the three lanes. The cause, however, is different from the previous case. It was noticed that in many cases, the brokers wait to gather a certain number of declarations before starting the processing for them all at once. Therefore, the declarations that are submitted to the broker first are unnecessarily delayed. This was seen to be very common practice in most of the centers that were included in the survey. It is believed that this bottleneck could be easily removed by improving the procedures followed by the brokers. This could be done by setting a maximum number of declarations that a single broker can submit at one time. This may cause the broker agencies to increase their staff allocations at the various Customs Centers across the Kingdom. One other option that could be implemented is to set a maximum time interval between the time the declaration is submitted to the broker and the time he starts the process. This way, as long as the broker does not exceed this time limit, he could start with the processing of as many declarations as

he desires. This option, however, would require an automated application to accurately document the time that the first declaration is submitted to the broker.

Delays were also observed at this center as a result of improper document presentation. This is mainly the responsibility of the broker/goods owner. It is believed that this could be avoided by improving the capacity and the efficiency of brokers. One proposed approach is to follow a point system, where after so many improper documentation presentations, a broker would have to undergo training by Customs. In addition to improving the efficiency of brokers and reducing release time, it is believed that such system could generate additional income for Customs.

Again, the Removal from Customs Control stage also appears to cause delays (especially for the Green lane goods. As mentioned earlier, this could be resolved by imposing strict penalties on the transport companies and/or owners for such delays.

Finally, the yards in Amman Customs are generally crowded, the unloading ramps were small, and there was no apparent queuing system for preparing for inspections. Introducing a proper queuing mechanism coupled with structural improvements in the yards are believed to be critical factors in reducing the release time.

5.3 Airport Customs Center

Things were relatively more organized at the airport customs center compared to the other centers; however, some bottlenecks were also noticed. The biggest bottleneck was the period for the start and the end of the unloading prior to the lodgment of the declaration. This is mainly attributed to the long waiting times prior to the beginning of unloading. The airport has an excellent electronic ticketing queuing system; however, there were excessive delays. Royal Jordanian is responsible for the unloading of goods, and it is believed that assigning more labor or improving the efficiency of their current unloading system could be effective in removing this bottleneck. It is highly recommended that Jordan Customs investigate with RJ possible ways to improve the efficiency of this process, since it is counted as part of the time release as per the WCO standards.

The inspection process was seen to be a bottleneck, which warrants further investigation of the current procedures and equipment used in order to identify possible ways to reduce this time.

As with the previous centers, the Removal from Customs Control stage also appears to cause delays. As mentioned earlier, this could be resolved by imposing strict penalties on the transport companies and/or owners for such delays.

5.4 Aqaba Customs Center

The biggest bottleneck was observed for the Finding an Inspector Stage. Unlike the other centers, inspectors walk around on pre-set schedules. It is recommended that the frequency of such "walk-throughs" be increased or more inspectors be assigned for this task.

The inspection process was also found to be a bottleneck, which warrants further investigation of the current procedures and equipment used in order to identify possible ways to reduce this time. This is especially true for the so-called "Unit Three", which is mainly responsible for the inspection of hazardous materials. It was noticed that there was no specialized equipment used for such activities. This issue is worth investigating. Also, the utilization of a Canine unit is can significantly improve the efficiency of this process. It is therefore recommended that the option of establishing a Canine unit, with Aqaba Customs center as a pilot site, be investigated. Inconsistencies in the allocations of goods to the various lanes, and extensive time consumed during the Assessment of Duties stage were also observed.

Finally, the removal from Customs Control, which depends on the transporter, was observed. Recommendations made earlier on this regard also apply here.

5.5 King Abdullah/Sahab Customs Center

The most significant delays at this center were observed in the three lanes during the Lodgment of Declaration stage. As was described earlier, this is mainly attributed to brokers waiting to gather a certain number of declarations before starting the process. The impact of this behavior was that the overall averages for Green and Yellow lane transactions were higher than those for Red lane transactions. The fact that Green and Yellow lane transactions take less time than Red for Customs inspection and processing triggers brokers to delay longer and collect even more declarations for Green and Yellow lane transactions. Such behavior is causing the overall time for such simple transactions to exceed that of the more complex Red lane transactions. This finding reinforces the need for the proposed “cap” on the number of declarations or the time the broker is allowed to start the entry process after receipt of his first declaration, which would significantly speed up the process.

The time required for laboratory analyses of food and industrial materials seemed excessive. Locating a lab on the premises of the Customs Center should significantly reduce this time

5.6 Jaber Customs Center

The main bottlenecks at this center were during the Unloading process, the Document Control process, and the Removal of Goods process. A significant portion of goods transported through Jaber are fruits and vegetables, which consume longer times in loading/unloading. One solution could be the allocation of a lane just for those types of goods. Other delays were mainly due to discrepancies between the declarations and the actual goods, which could be resolved with the broker training program mentioned earlier. Finally, removal of goods delays could be resolved by imposing a penalty system on transporters for delays.

It was noticed that ongoing construction also caused some delays. It is believed that those should be eliminated once the construction process is completed.

5.7 Omari Customs Center

Generally, the ramps at Omari were observed to be too small, and the Customs yards too crowded. Those issues could be resolved through proper expansion of the facilities. As with most centers, significant delay in the three lanes was measured during the Lodgment of Declaration stage. As with King Abdullah/Sahab, such behavior was leading the overall times for some Green and Yellow lane transactions to exceed that of Red lane transactions. Again, this is mainly attributed to brokers waiting to gather a certain number of declarations before starting the process. The fact that there is only one exit gate causes delays in the removal of goods. There are on-going plans for a Gate Control System, which is expected to reduce such delays.

Finally, delays of up to one day have been observed to be caused by the time taken by the Public Security Directorate to return passports to drivers.

ANNEXES

ANNEX I: SURVEY TOOL

الجزء الاول			
مكتب الجمارك	2	المنطقة	1
<input type="checkbox"/> سكة حديد <input type="checkbox"/> بحر <input type="checkbox"/> جوا <input type="checkbox"/> طريق <input type="checkbox"/> نهر <input type="checkbox"/> أخرى	4	طريقة النقل	3
رقم وثيقة النقل	6	<input type="checkbox"/> فاتورة نقل بحري <input type="checkbox"/> فاتورة نقل جوي	5
رقم البيان الجمركي	7	نوع الوثيقة	
رمز المصروح	8	<input type="checkbox"/> منافست <input type="checkbox"/> مذكرة إرسال <input type="checkbox"/> مذكرة ودیعة <input type="checkbox"/> وثائق مدمجة	9
مخلص		<input type="checkbox"/> ملف متعدد الاشكال	
مندوب		<input type="checkbox"/>	
صاحب البضائع		اسم ورقم ضريبي للمصروح	
نوع البيان الجمركي	10	الاسم <input type="text"/> الرقم الضريبي <input type="text"/>	
الوضع الجمركي	12	غير خاضع للرسوم <input type="checkbox"/> خاضع للرسوم <input type="checkbox"/> معلق الرسوم/مغفي / إعانة <input type="checkbox"/>	11
غير خاضع للرسوم		HS عنوان التعرفة <input type="text"/> تصنيف البضائع <input type="text"/> القيمة <input type="text"/> عالية <input type="checkbox"/> متوسطة <input type="checkbox"/> منخفضة <input type="checkbox"/> الوزن <input type="text"/> المصدر <input type="text"/>	
الجزء الثاني			
بداية التفريغ	14	وصول البضائع	13
الايصال الى المخزن	16	انتهاء التفريغ	15
الجزء الثالث			
قبول البيان	18	تسجيل البيان	17
استكمال الوثائق إن دعة الحاجة	20	الوثائق المرفقة	19
وقت الطلب	22	طلب وثائق	21
تدقيق الوثائق	24	وقت تقديم الوثائق	23

25	الوقت	التاريخ	26	الوقت	التاريخ	نهاية التدقيق
الجزء الرابع						
27	مسرب أخضر <input type="checkbox"/>	مسرب أصفر <input type="checkbox"/>		مسرب أحمر <input type="checkbox"/>		
28	معاينة فعلية	نعم <input type="checkbox"/>	لا <input type="checkbox"/>	كيفية المعاينة	عشوائي <input type="checkbox"/>	
29	انتهت	بدأت	بحث عن المعايين	جرد كامل <input type="checkbox"/>		
30	انتهت	بدأت	تفريغ و فرز	عشوائي <input type="checkbox"/>	اختبار المعاينة على اساس	
	انتهت	بدأت	بحث عن المعايين مرة أخرى	تحليل مخاطر <input type="checkbox"/>		
31	الوقت	التاريخ	32	الوقت	التاريخ	نهاية المعاينة
33	مختبر للتحليل	نعم <input type="checkbox"/>	لا <input type="checkbox"/>	34	الوقت	التاريخ
35	الوقت	التاريخ	نهاية التحليل	36	الوقت	التاريخ
الجزء الخامس						
37	تداخل مع الجهات الأخرى	نعم <input type="checkbox"/>	لا <input type="checkbox"/>			
38	الوقت	التاريخ	39	الوقت	التاريخ	انتهت
40	الوقت	التاريخ	41	الوقت	التاريخ	انتهت
42	الوقت	التاريخ	43	الوقت	التاريخ	انتهت
44	الوقت	التاريخ	45	الوقت	التاريخ	انتهت
الجزء السادس						
46	الوقت	التاريخ	47	الوقت	التاريخ	انتهى
48	طريقة الدفع	شيك <input type="checkbox"/>	نقد <input type="checkbox"/>	49	الوقت	التاريخ
	تحويل الكتروني(فيزا)	امر بنكي <input type="checkbox"/>	أخرى(حدد) <input type="checkbox"/>	الوقت	التاريخ	انتهى
				تاريخ الاستحقاق		
50	الوقت	التاريخ	51	الوقت	التاريخ	انتهى
	الوقت	التاريخ		الوقت	التاريخ	انتهى

ANNEX II: RAW DATA CD

ANNEX III: GRAPHICAL DISTRIBUTION OF TIMES

