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JORDAN FISCAL REFORM II

Jordan Customs Time Release Study
January 2011

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Program Title:	Jordan Fiscal Reform II Project
Sponsoring USAID Office:	USAID/Jordan Economic Growth Office
Contract Number:	EEM-I-00-07-00009-00 Order No. EEM-I-08-07-00009-00
Contractor:	Nathan Associates Inc
Date of Publication:	January 2011

Prepared By: Interdisciplinary Research Consultants (IdRC)

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACKNOWLEDGEMENTS

The Authors would like to extend their sincere gratitude to Jordan Customs for its cooperation and assistance in the implementation of the time release study.

In addition, the Authors extend appreciation to Aqaba container terminal, Royal Jordanian airlines and FRP II project personnel, (specifically Mohammad Al-said), for their full cooperation during the study.

ACRONYMS

ACT	Aqaba Container Terminal
AR9	Movement declaration of partially processed goods, (within Jordan)
C	Confidence Interval
EX1	Permanent Export
EX2	Temporary export for repair or processing
EX5	Re-export of cargo, not previously released for free circulation
FRP (II)	Fiscal Reform Project (II)
GoJ	Government of Jordan
IdRC	Interdisciplinary Research Consultants
IM4	Import for Local Consumption
IM5	Temporary import for processing and re-export
IM6	Re-importation of permanently exported goods, (Jordanian origin)
IM7	Import to a bonded warehouse
IMO	International Maritime Organization
JC	Jordan Customs
JD	Jordanian Dinar
JISM	Jordan Institution for Standards and Metrology
KPI	Key Performance Indicators
P	Percentage
PS4	Pre arrival import declaration for free circulation
RD4	Import declaration- personal effects of returning Jordanian citizens
RJ	Royal Jordanian
SD0	Passengers personal effects import declaration
SS	Sample Size
TR8	International Transit
TRS	Time Release Study
USAID	United States Agency for International Development
WCO	World Customs Organization
Z	Z-value

1.0 EXECUTIVE SUMMARY

International trade is a vital driver of wealth creation and consequently economic growth and development. Increasing volumes of trade, the fall in tariff levels, the availability of modern technology to significantly improve the management of cross-border trade and business just in time production delivery requirements have all combined to create a strong interest in improving trade facilitation.

Customs administrations are a critical component in the efficiency of international trade as they process every transaction to ensure compliance with national and regulatory requirements as well as international trading rules. Customs has the responsibility of revenue collection, protection of society and safeguarding the supply chain in addition to the need to enhance trade facilitation to promote investment and reduce poverty.

It is for those reasons, and as one of the activities of the Fiscal Reform Project (II) (FRP II), that Jordanian Customs decided to carry out a study of the time taken from the arrival of goods until its release. The component parts of the clearance procedures were also identified and measured so as to identify improvements that could maximize impact. As a result, the purpose of this consultancy was to conduct a Time Release Study (TRS) and to build the capacity of a team (of 6 officers) within Jordan Customs (JC) to enable them to periodically conduct TRS's using the World Customs Organization methodology. The consultancy would also help build Jordan Customs' capacity in data management and entry, data analyses, reporting, and comparative analyses against benchmark or baseline data for Monitoring and Evaluation purposes.

This study estimates the mean time difference between the arrival and release of import for local consumption (IM4), permanent export (EX1) and international transit (TR8). It also measures the time required for the key intervening processes in the clearance process i.e., lodgment of import declaration, assessment of duty payable and physical examination of the goods.

The overall time allocated for the time release process is found to be competitive with international averages. However, some delays and bottlenecks were evident and thus should be reviewed in order to reduce or eliminate delays as appropriate. The maximum time release period was recorded to be around 10 days in the Aqaba Customs Center for the Red Lane IM4 transactions followed by the time recorded in Airport Customs Center (around 5 days) for the same type of transaction. These delays in Aqaba and Airport Customs Centers were the most significant delays measured during the study. Although Jaber recorded a good time with regard to the EX1 transactions, it also recorded the next maximum time for the TR8 transactions after Aqaba and Airport with an average time for Red Lane of around one day.

Based on the results of the study, it was noted that for some stages, the time recorded among Centers differs significantly for the same stage. This was attributed to many factors such as the difference in the working hours among Centers in addition to differences in the staff number, types of goods, and the followed procedures. As a result, a detailed study for such Centers is required in order to investigate conditions and reasons behind faster clearance times so that best practices can be applied to other Centers which will in turn increase the efficiency of the work performed for all Customs Centers across Jordan.

Certain stages of the clearance process take 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 and remedy them so that significant reductions in the time release of goods can be realized by Jordan Customs. Several of the bottlenecks are believed to be solvable using simple managerial measures and procedures that can be reviewed in order to reduce or eliminate as appropriate including the introduction of random quality control provisions on receipt of declaration, improving coordination of Customs and other agency controls, and the introduction of enhanced Risk Analysis techniques by all agencies involved to better identify those declarations that require detailed examination.

2.0 PROJECT BACKGROUND

One of the focal points in international trade is a 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.

The objective of the five-year Jordanian Fiscal Reform Program (II) (FRP (II)) supported by USAID is to help Jordan maintain fiscal discipline and thereby facilitate macroeconomic stability and predictability in the budget system; promote a strategic approach to ensuring that resources are directed toward policy and strategy priorities; deliver value for money by ensuring that resources are used effectively; and ensure accountability in the use of public resources. The program focuses on building capacity in five chief areas including tax, public financial management, economic policy analysis, Customs and trade facilitation and results-oriented government.

The project which will be carried out by the Ministry of Finance and other public offices including the Ministry of Public Sector Development would also assist the Government of Jordan (GOJ) in achieving its trade facilitation goals by improving the efficiency and effectiveness of the Customs system through the capacity strengthening and training of Customs officials, the improvement of Customs' external communication and relations with trade, and the ability to meet the private sector's legitimate need for Customs information.

3.0 STUDY OBJECTIVE

The purpose of this consultancy is to measure the time required to release goods, which is defined as the time between the arrival of goods at the port/ airport/ land border until its release to the importer or a third party on his behalf. In addition, the consultancy trained a team of six officers within Jordan Customs to enable them to periodically conduct TRS's using the World Customs Organization methodology and to increase their capacity in the conduct of data management and entry, data analyses, reporting, and comparative analyses against benchmark or baseline data for Monitoring and Evaluation purposes. The main anticipated outcome of the Study is to address the problems identified, remove bottlenecks and improve on clearance procedures. In particular, the Study seeks to:

- 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).

Under the above objectives, the survey team reviewed the histories of the Customs transactions at the various Customs Centers in order to determine the target population. The population was then stratified based on criteria set by FRP and included import for local consumption (IM4), permanent export (EX1) and international transit (TR8) according to selection criteria as agreed with JC. Sample frames were also determined and the sample sized according to those frames was completed based on pre-set statistical indicators such as the level of significance and confidence interval.

4.0 METHODOLOGY

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

4.1 Identification of Target Population

The survey team reviewed the histories of the Customs transactions at the various Customs Centers in order to determine the target population. Table 1 below presents the overall statistics for the year 2009. To define the population, the survey team worked with the Data Management Department at Jordan Customs to obtain the volumes of Customs transactions and their distribution.

Table 1. Volume of Customs transactions in the year of 2009

Type of Transaction	Number of Transactions	%
TR8	438,786	41.69%
IM4	373,270	35.47%
EX1	127,609	12.12%
EX3	39,816	3.78%
IM5	29,303	2.78%
SD0	16,054	1.53%
IM7	12,286	1.17%
AR9	9,038	0.86%
RD4	3,730	0.35%
EX2	1,384	0.13%
IM6	1,193	0.11%
PS4	7	0.00%
Total	1,052,476	100.00%

The population had been stratified based on criteria set by the FRP which included category of Customs transactions, among other criteria. Given that IM4, EX1, and TR8 Customs transactions represent around 89% of the overall transaction volumes, they were considered the target population for the study.

Further stratification was also made based on the Customs Center. As can be seen from Table 2 below, the Customs Centers of Omari, Airport, Aqaba, Jaber, Amman, and Zarqa Free zone, account for nearly 73% of the Customs transactions for the previous year. As a result, the target population was focused on the aforementioned transactions at those six Centers.

Table 2. Volume of Customs transactions in the year of 2009 per center

Center	Number of transactions	% of TR8 transactions	% of IM4 transactions	% of EX1 transactions	% From the total number of transactions
Omari	167,803	29.2%	0.8%	28.6%	15.9%
Airport	163,930	4.0%	25.6%	10.9%	15.6%
Aqaba	151,546	18.8%	13.7%	4.5%	14.4%
Jaber	149,789	29.1%	2.3%	10.2%	14.2%
Amman	116,213	0.1%	23.6%	5.1%	11.0%
Zarqa	19,246	1.8%	2.6%	0.5%	1.8%
Total	768,527	83.0%	68.6%	59.8%	72.9%

4.2 Sample Definition and Sampling

Considering the volume of consignments and time constraints, it was not possible to capture all the transactions selected during the period of study. This called for a sampling strategy that took into account the relative ease or difficulty in the mechanics of drawing a representative sample whilst ensuring validity and reliability of the data. Therefore, 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:

Where:

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

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

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

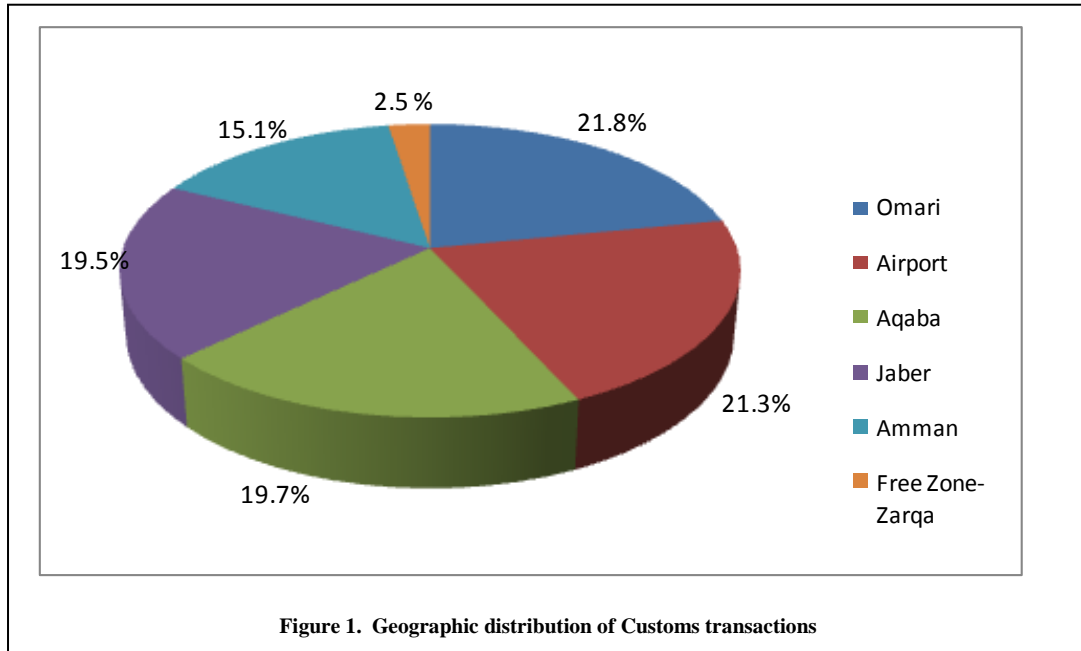
Applying the above formulae to the population identified above using a 95% level of confidence with a $\pm 5\%$ confidence interval results in a minimum sample size requirement of **385**. This sample of 385 was further stratified according to three criteria; geographic location, type of Customs transaction, and lane. A description of those stratifications follows.

4.2.1 Geographic Stratification

The sample calculated above was distributed over the Study Centers as the actual distribution of transactions in those Centers as shown in Table 3 and Figure 1 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.

Table 3. Geographic distribution of Customs transactions

Center	Total number of transactions	%	Minimum Sample
Omari	167,803	21.83%	84
Airport	163,930	21.33%	82
Aqaba	151,546	19.72%	76
Jaber	149,789	19.49%	75
Amman	116,213	15.12%	58
Zarqa Free Zone	19,246	2.50%	10
Total	768,527	100.00%	385



4.2.2 Customs Transaction Type Stratification

Upon investigating the specifics of Customs transactions and as stated earlier, the population had been stratified to include import for local consumption (IM4), permanent export (EX1) and international transit (TR8) given that they represent around 89% of the overall transaction volumes. Therefore, they resemble the actual distribution in terms of the types of transactions in each of the Centers. Those calculations are shown in Table 4.

Table 4. Customs transaction type stratification

Customs Center	EX1	IM4	TR8
	No. of required sample	No. of required sample	No. of required sample
Omari	41	1	42
Airport	22	52	8
Aqaba	9	28	39
Amman	18	4	52
Jaber	10	46	2
Zarqa Free Zone	5	3	2
Total	106	134	145

4.2.3 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 and a breakdown of the population's allocations to lanes (for the different Centers for the various types of transactions) were considered in the analysis.

4.2.4 Sample Criteria

In addition to the stratification discussed above, the FRP has set criteria for the sample to be collected as agreed by JC. Those sample criteria are summarized as follows:

- All consignments should be of a homogeneous and consistent nature.
- The shipment should belong to an individual person.
- All shipments that belong to any official or governmental entities should be exempted.
- All consignments that require permits prior to import should have all the papers, permits, and Customs declaration.
- The shipment value must not be less than JD 6,000
- All personal imports should be exempted from the sample.

4.3 Statistical Relevance

Given the limited time of the Study and the type of Customs transactions found at each Center during the period of Study, in addition to the sample criteria set prior to the study's commencement, the percent of statistical relevance for the sample collected was found to be around 94% based on the actual number of declarations collected at each Center. Detailed calculations for the percent of statistical relevance are presented in Table 5 below.

Table 5. Statistical relevance calculations

Customs Center	Samples required	Samples Collected	% of Completion
Omari	84	85	100.0
Airport	82	79	95.9
Aqaba	76	89	100.0
Jaber	75	60	79.8
Amman	58	53	90.8
Zarqa Free zone	10	10	100.0
Total	385	376	94.4%

4.4 Survey Tool Design

In conducting the survey, a detailed questionnaire (data form) was developed in line with the WCO Guide. However, it was slightly modified in coordination with Jordan Customs to reflect actual conditions in the field. The WCO survey tool captures the beginning and the end of each of the following 19 stages of a Customs transaction process in a chronological sequence.

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	

4.5 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. The final version of the survey tool is presented in Appendix II. (The survey was translated to Arabic for data collection purposes).

4.6 Data Collection

Using the developed Study sample, and the Customs Centers contact information provided by the Jordan Customs, a field coordinator and three field trainers were provided to guide the 6 Customs data loggers on how to collect and collate data in the field. This was done in an on-the-job training approach where the experts were initially involved in the data collection process itself, and then gradually phased out and assumed a supervisory role to assure the quality of the data collected by the trainees.

Based on the sample distribution illustrated earlier, the Customs staff were trained on choosing transactions at random for assessment. The data collection process was carried out by accompanying the freight forwarding agents/ Customs brokers and recording the time of the beginnings and the ends of the various stages outlined above. The teams worked in pairs, with one data logger measuring times and the other data enumerator filling out the survey tool.

4.7 Collation of Data

A data manager was responsible for reviewing and collating data as completed surveys arrived. 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 continuous basis during the period of Study 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 Access Database.

4.8 Data Management System and Data Entry

A database was designed and created to enable the entry of field data in preparation for analysis. The system includes quality assurance measures to minimize the possibility of mis-entering of data and a training workshop was provided to the Customs staff on the coding of data and on the conducting of analyses in order to calculate the various proportions of times taken by the various stages including “customs controlled” stages versus those controlled by other governmental entities and stakeholders in order to calculate the times required for releasing a shipment in the context of WCO time release guidelines.

The data management system was designed in a manner that will allow such analyses, and will also incorporate the potential for future assessments and generation of trends in order to perform Monitoring and Evaluation on clearance times in the future.

4.9 Data Analyses and Inferences

The survey team analyzed the collected 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 Customs Center, type of transaction, and the lane that they were classified in (i.e., Green, Yellow, or Red). The average release time for each of the stages with respect to the entire times was then calculated. The analyses were conducted for each Center, as presented in the following section.

5.0 RESULTS AND FINDINGS

Table 6 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 (G), Yellow (Y), and Red(R)) in addition to the transaction type, i.e. EX1, IM4, and TR8 given that they represent around 89% of the total volume of transactions and thus will help the establishment of statistically meaningful inferences and conclusions.

The raw data and a CD containing those data are included in the annex and are attached to this report.

Table 6. Overall average for the time release results for the various Customs centers (minutes)¹

Stage	Zarqa Free Zone									Amman									Airport									
	EX1			IM4			TR8			EX1			IM4			TR8			EX1			IM4			TR8			
	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	
Arrival of Goods & Acceptance of Declaration																						2,040 minutes (4.0 days)						
First Inspection																	10.1	10.3										
Nuclear Inspection																												
Start and End Goods Weighting																												
X-RAY																												
Lodgment of Declaration & Acceptance of Declaration						9.0			3.5		19.0	5.7			24.7	45.8				52.4	9.0		73.4	19.0	46.7		17.0	22.5
Request & Document Presentation											18.0														8.0			
Document Presentation & Start Document Control																												
Start Document Control & End Document Control						4.0			3.5		2.7	8.4			7.6	8.9				6.1	7.6		14.4	13.2	24.0		11.8	24.5
Finding of Inspector											3.7					20.1									9.1			10.0

¹ G= Green Channel; Y= Yellow Channel; R= Red Channel

[illegible]

Table 6. Continued

Stage	Omari									Jaber									Aqaba									
	EX1			IM4			TR8			EX1			IM4			TR8			EX1			IM4			TR8			
	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	G	Y	R	
Arrival of Goods & Acceptance of Declaration																				2,208.0 minutes (4.6 days)								
First Inspection					5.7			5.2	9.2						11.5	21	20.7	65.8										
Nuclear Inspection															1.5	0.0	1.8	3.3										
Start and End Goods Weighting					1.0			1.7	1.0	7.6		31.0			1.0	1.0	0.7	55.8										
X-RAY					22.3			56.4	78.7						37.8		31.7	84.6										
Lodgment of Declaration & Acceptance of Declaration	43.4	9.0	13.1		25.7			23.0	94.3	6.0					7.5		17.5	3.7	28.5				12.5	26.7	28.9		10.2	9.8
Request & Document Presentation																								338.5				
Document Presentation & Start Document Control															3.0													
Start Document Control & End Document Control	1.5	2.3	2.7		3.1			3.3	5.7	5.4		3.0				2.0	1.4	44.4	5.3			3.5	4.9	14.5		5.8	9.6	

Finding of Inspector			1.4					2.7			5.0			11.3			11.5						15.9			16.3
Unloading and Classifying			6.7					10.0			5.0			17.5			32.5						35.9			12.0
Another Time Finding of Inspector			1.3					4.0			0.0			18.3			25.6						15.4			8.0
Start of Inspection & End of Inspection			5.4					21.4			15.0			20.0			18.6						38.7			158.7
Lab. Analysis																					0.0	10.0				
End of Lab Analysis and Release																					2.0	5.0				
Veterinary																										
Agriculture	0.0						3.7	1.0					147.5			195.0					146.8	695.8		105.7	313.3	
Medical/Health							8.0														864.0	421.0				
JISM																				138.5	181.6	446.7				
Other Agencies							18.0									173.5				400.0	456.0	273.3				
Assessment of Duty					2.4		6.3	4.5																		
Completion of Declaration	2.0	3.8	2.1		3.0		5.1	3.0	2.7	1.0		3.5	1.0	6.5	2.3	0.0		2.0	12.7	4.9			14.4	2.1		
Payment (if required before release)	2.3	1.5	2.1		1.7		2.0	2.2	3.3	0.0		1.0	1.0	5.1	27.4	7.3		15.0	10.1	8.2			35.5	61.2		
Issue of Certified Copies of the Declaration	1.7	2.0	1.3		1.9		1.7	0.7				4.5	8.0	6.7	8.8	8.0		10.0	11.8	8.1			8.9	5.8		
Release	16.7	11.5	9.3		25.6		30.1	13.3	8.3	4.0						11.0		10.0	11.2	10.5			63.3	22.4		

Electronic Follow up	7.0							2.4	1.0							24.6	40.7									
Custom Accompany																										
Removal from Customs Control	3.1	2.5	2.0		3.7			3.8	4.3					10.5		7.6	80.2	40.0				547.4		133.4	55.0	
Other Checking Procedures (Miscellaneous Time³)	9.0	5.3			4.3			16.0															6.0			
Total Average	86.7	37.9	47.4		100.4			186.7	257.0	33.3		64.0		296.4	34.0	124.3	873.7	100.1			2,799.6	3,935.9	5,126.8		2,591.3	2,882.3

³ Time allocated for other Customs checking procedures including: a) the assurance of containers presence in the Customs Yard, b) the assurance of Customs fastening (cargo sealing) for neighboring countries, c) the application of Customs fastening (cargo sealing) for Transit transactions, and d) the assurance of consignments exit from RJ warehouses to the Customs Yard.

Figure 3 graphically depicts the numbers in the above Table. As can be seen in the Figure, the overall time allocated for the time release process is found to be competitive. However, some delays and bottlenecks were shown and thus should be reviewed with a view for reduction or elimination as appropriate.

The average release time in Aqaba is significantly higher than the other Centers with regard to the IM4 transactions and the Yellow Lane TR8 transactions. Furthermore, it can be seen from the Figure that generally, the average time required to release the IM4 and TR8 in the six Centers is higher than that required for the EX1 transactions although it is not practical for the TR8 transactions to consume such a large portion of time in the release process as they contain goods that will not enter the Country directly. As a result, the Customs incurs extra time costs for the entire process. With regard to the Customs Lane stratification, in general, the time release for Yellow and Red Lane transactions is higher than the time release for Green transactions for most Centers. This is due to the fact that Green Lane transactions are less complex and require less inspection and duty assessment times with an exception in the Airport Center where most of the Yellow Lane transactions were converted to the Red Lane in the inspection stage, which increases the delay time for those transactions, as will be discussed in the following section. Nevertheless, the results of the EX1 transactions showed a converse conclusion given that most of the declarations collected were processed in the Green lane; thus, statically, they recorded greater time.

On the other hand, it is worth mentioning here that the Study team was not able to record the time required for some stages such as the time required to release from the Customs Control in the Airport and Zarqa Custom Centers due to the limited time of the Study, i.e. some of the Customs brokers left their goods for an undetermined period, exceeding in some cases the period of Study in those Centers. Additionally, the Study team could not find during the period of Study any EX1 declaration in Zarqa Center that met the sample criteria; thus, none of the EX1 declarations in Zarqa Customs Center were included in the analysis. Further, given that the EX1 transactions at all the Centers do not require going under the “First Inspection,” “Nuclear Inspection,” “Goods Weighting,” and “X-Ray” stages, the aforementioned stages were recorded solely for the IM4, and TR8 transactions.

In terms of the time allocated for the “Arrival of Goods and Acceptance of Declaration,” the time was measured only for the IM4 and TR8 transactions at Aqaba and Airport Customs Centers given the interlocation with other agencies that firstly receive the goods and upload them before they are processed by Customs; i.e., the Royal Jordanian and the Aqaba Container Terminal at the Airport and Aqaba Customs Centers, respectively. Based on the results, the time recorded was around 4.6 days in Aqaba Customs Center and around 4.0 days in Airport Center, which is considered a high time that should be investigated in a later detailed study. However, Customs departments at the remaining Centers start the process of release upon the arrival of goods, thus no time is noticed for this stage.

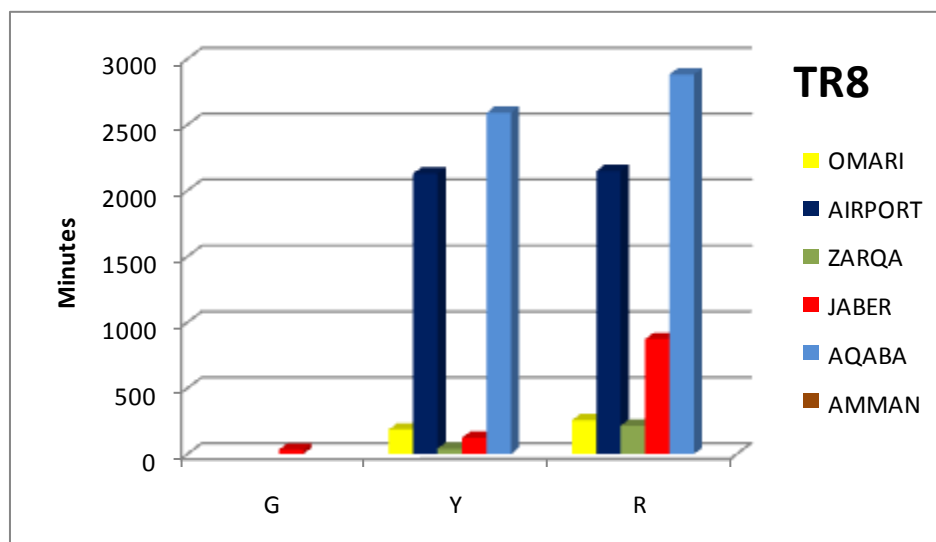
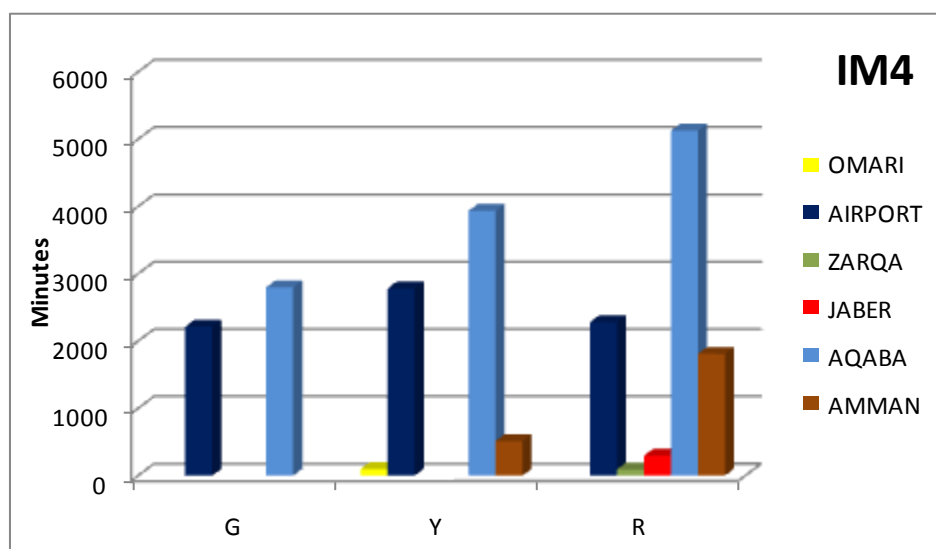
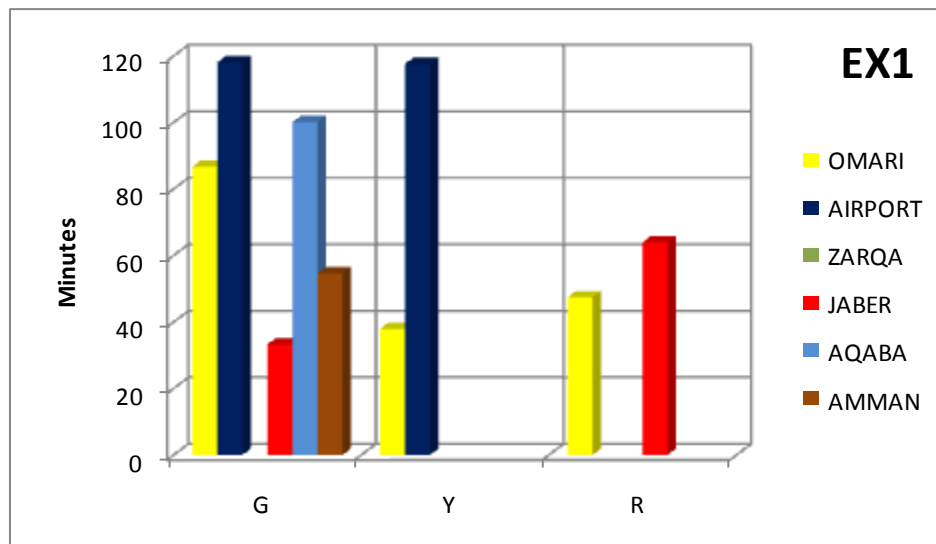


Figure3. Average release times in the six Customs centers (minutes)

Table 7 below presents the average time required for the declaration to be removed from the Customs Center. Detailed findings per each Center were presented showing the average time in days and working hours for each Center for each transaction type and Lane separately.

As can be seen from the Table and Figure 4 below, the maximum time for release was recorded in the Aqaba Customs Center for the IM4 transaction type which ranges from 5.83 days for the Green Lane and up to 10.70 days for the Red Lane for the same type of transaction. The next highest maximum time was recorded at the Airport Customs Center for the IM4 transaction with an average time of around 5 days.

With regard to the EX1 transactions, the best time was recorded in Omari and Jaber Customs Centers with an average time of 0.06 days. However, the worst time was measured in the Aqaba and Airport Customs Centers. Although Jaber recorded a good time in the EX1 transactions, it also recorded the next highest maximum time for the TR8 transactions after Aqaba and Airport with an average time for Red Lane of around one day.

Table 7. Average time to release from Customs control at the various centers (days)

Stage	EX1			IM4			TR8		
	G	Y	R	G	Y	R	G	Y	R
Omari	0.14	0.06	0.08		0.16			0.30	0.41
Jaber	0.04		0.07			0.34	0.04	0.14	1.00
Aqaba	0.21			5.83	8.20	10.70		5.40	6.00
Zarqa Free Zone						0.19		0.08	0.42
Amman	0.11				1.00	3.55			
Airport	0.23	0.23		4.34	5.46	4.47		4.18	4.21

According to Table 7 and the detailed results presented in Table 6 above, it was noted that for some stages, the time recorded among Centers differs significantly for the same stage. Although this should not be the case as all the Centers are expected to perform the work under similar job conditions, many factors play a role in causing such time differences. One such factor is the difference in the working hours among Centers. Other factors including the number of staff, types of goods, and the procedures followed contribute to the differences in the time allocated for the same stage at different Centers. For instance, the time measured in Omari Customs Center for the “Finding of Inspector” stage was significantly lower than that measured in other Centers for the same stage. That was true also for the “Start Document Control and End Document Control” stage in Zarqa Free Zone and Omari Customs Centers and to many other stages. Given these differences, a thorough study for such Centers is needed in order to investigate conditions and reasons behind differences in time recorded so that they can be generalized to other Centers, which will in turn increase the efficiency of the work performed for all Customs Centers across Jordan.

Section 5 of this report summarizes the field observations pertaining to the bottlenecks and presents suggested recommendations on how to reduce the proportional time contribution of those bottlenecks.

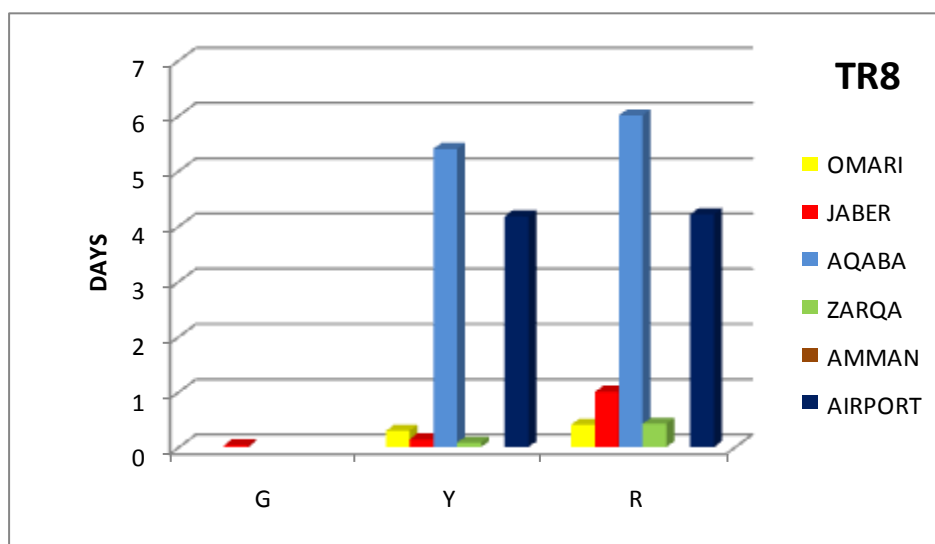
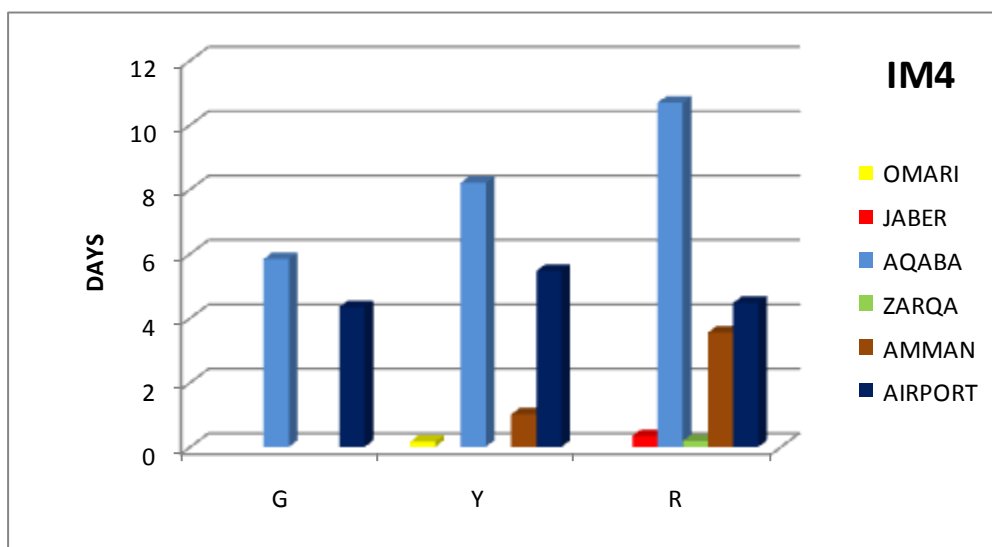
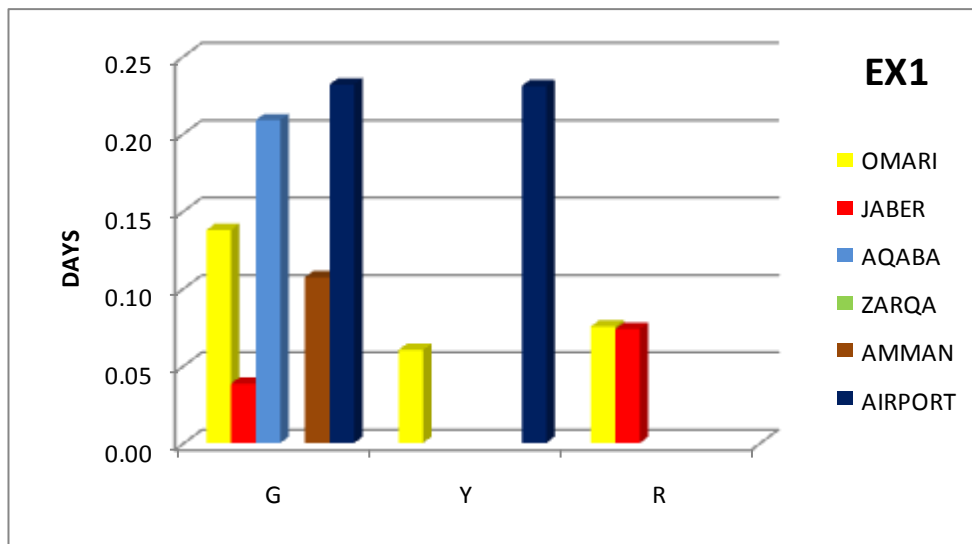


Figure 4. Average time to release from Customs control at the various centers (days)

6.0 BOTTLENECKS AND RECOMMENDATIONS

As can be seen from the results in the previous sections, certain stages of the trade transaction consume significantly more time than other stages (detailed results are shown in Appendix IV of this report). It is those stages that are believed to be the bottlenecks and warrant further investigation on how to reduce the time needed to complete and remedy them so as to produce 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.

6.1 Omari Customs Center

Despite the good time recorded in this Center, significant delays in the three Lanes were measured during the "Lodgment of Declaration" stage followed by the time required to the "Release from the Customs Control" stage for the three types of transactions, i.e., EX1, IM4, and TR8. As for the IM4 and TR8 transactions, the time required for the "X-Ray" stage was leading the delay in the overall time for some Yellow and Red Lane transactions. That increase in time was contributed to the large number of Customs brokers in addition to the increasing volume of declarations waiting in line. Thus, adding an extra lane for the "X-Ray" stage would overcome this bottleneck and decrease the delay time.

During the Study period and analysis, it was noticed that the Center did not incorporate the "Customs Accompany" stage for goods that exit the Center. However, the Customs trend is to minimize as much as possible the "Customs Accompany" stage and move toward the "Electronic Follow up" stage only for goods with high risks and/or goods with high Customs tariff fees such as tobacco and liquor, which could not be found during the period of Study.

Finally, some delays are observed in the "Uploading and Classifying" stage due to the limited number of uploading companies, in addition to the crowded yards at the Customs Center, which can be resolved through proper expansion of the facilities.

6.2 Airport Customs Center

As with the previous Center, there were significant delays during the "Lodgment of Declaration" stage in the three lanes. It was noticed that in many cases, the Customs brokers wait to gather a certain number of declarations before starting the processing stage for all the transactions at once. As a result, the declarations that are submitted to the Customs broker first are unnecessarily delayed. It is believed that this bottleneck could be easily removed by improving the procedures followed by the Customs brokers. This could be done by setting a maximum number of declarations that a single Customs broker can submit at one time. This may cause the Customs 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 Customs broker and the time he starts the process. This way, as long as the Customs 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 Customs broker.

Additionally, the “Inspection” process was also 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. Reasons for such delays are twofold. Firstly, Royal Jordanian is responsible for the unloading of goods, and it was noticed that delays occurred in the uploading process for the Red Lane transactions and those that require sampling. The second reason relates to the goods uploading process itself, where goods are divided into different parts - the RJ uploads part of the shipment, and waits until the other part is reached from a different belt. In addition, there is a significant shortage in the number of inspectors processing transactions. Thus, 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 also 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.

With regard to the “Assessment of Duty”, it was noticed that the overall averages for Yellow Lane transactions were higher than those for Red Lane. This is attributed to the fact that the Customs employees convert most Yellow Lane transactions to the Red Lane in order to get a sample for the assessment process given that the RJ does not upload goods for the assessment stage except for Red Lane transactions. Such behavior is causing the overall time for such simple transactions to exceed that of the more complex Red Lane transactions.

Finally, despite the fact that the Airport Custom Center applies the single window concept for the EX1 transactions, some deficit points were shown with regard to the coordination with other agencies. For instance, the Board of Investment does not have a representative in the single window to process declarations concerned with the investment, which in turn consumes a large amount of time when going to the Board of Investment office itself for approval. Another stage found to be time consuming is the time allocated for the “Agricultural Department”. Therefore, improving the coordination between Customs and other agencies is necessary to overcome such bottlenecks.

6.3 Zarqa Free Zone Customs Center

Generally for this Center, the “Intervention with other Agencies” stage was found to be time consuming. Particularly, the time allocated for the Jordan Institution for Standards and Metrology (JISM) for the IM4 transactions. 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, improving the coordination between Customs and other agencies controls as stated earlier will be an important way to decrease transaction time.

With regard to the TR8 transactions, the only noticeable delay was recorded in the “Customs Accompany” stage for the goods exiting the Center.

6.4 Jaber Customs Center

The main bottlenecks at this Center were the “X-Ray” stage for the TR8 and IM4 transactions, the “Weighting of Goods” for the TR8 and EX1 transactions, and the time required for the “Removal from Customs” with regard to the TR8 transactions.

As stated earlier, the increase in “X-Ray” time was attributed to the large number of Customs brokers in addition to the increasing volume of declarations waiting in line for processing. Thus, allocating an additional lane for this purpose would solve this bottleneck and thus decrease the delay time.

In terms of the “Inspection” stage, a shortage of inspectors was considered the main obstacle at this Center. The same obstacle applied for the “First Inspection” and “Finding of Inspector” stages as well, due to the absence of inspectors at each Lane in addition to the small ramps and crowded yard at the Center. Moreover, it was noticed that a large number of the Yellow Lane transactions are converted to the Red Lane and thus are not processed properly as a result of the increase in the number of converted transactions and the decrease in the time allocated for each sample.

With regard to the “Weighting of Goods” stage, a significant time delay was recorded for the TR8 transactions coming from Omari Customs Center. This delay was due to the fact that all the TR8 transactions at Omari Center do not undergo a weighting process before leaving the Center, which leads to differences in weight. Given this issue, increasing the cooperation between the Centers and introducing random quality control provisions on receipt of declaration would create greater consistency and reduce overall delays.

Regarding the “Customs Accompany” stage, a major portion of the delay was observed to be caused by the absence of a special unit responsible for receiving and removing the electronic accompany device; thus, trucks drivers are forced to park their trucks on the side of the road in order to complete the process of removing the device, which, in turn, temporarily closes the entrance of the Center and causes delays for the trucks waiting to enter the.

While the “Removal from Customs stage” consumes a great deal of time in the TR8 Red Lane, removal of goods delays could be resolved by imposing a penalty system on transporters for delays. One of the proposed methods is to impose a taxation amount on the transporter for each extra-unnecessary hour waiting in the Customs Center, which in turn will motivate the transporter to speed up his work as well as increase Customs Revenues.

Finally, as with most of the other Centers, the “Intervention with other Agencies” stage consumes a great amount of time despite the application of the single window concept in the Center. The time is considered high due to the fact that the system is not applied properly, as other agencies do not have offices within the single window framework. This requires additional time to go to the offices of those agencies to complete the process. Therefore, improving coordination between Customs and other agencies is imperative to reducing transaction time.

6.5 Aqaba Customs Center

The results of the time recorded in Aqaba Customs Centers were extremely high compared to other Centers.

The major delays were observed in the “Inspection” stage of the TR8 transactions which 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 great potential for speeding up transactions. It was noted that there was no specialized equipments used nor proper infrastructure and services provided for such activities. Also, the high volume of transactions, shortage in the number of inspectors employed to cover the workload, and wide space allocated for the inspection process, as well as the lack of proper movement mechanisms within the yard, use of an inappropriate system of classifying containers, and practice of converting some Yellow Lane transactions to the Red Lane, all consume a large amount of time and significantly hamper the efficiency of the customs clearing process. Efficiency can be greatly improved if all of these issues are addressed properly.

Another stage that was seen to be time consuming is the “Unloading of Goods” prior to an inspection, particularly for the IM4 transactions. 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 the loading/unloading companies operating in the Customs Centers were noticed to be inefficient and/or under-staffed. It is recommended that the nature of the contracting mechanisms with those companies be re-visited, 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 for reducing the time consumed by this stage.

As with most other Centers, the “Removal from Customs Control” stage comprises a large weight of the total time allocated to release the declaration for many reasons. Some of those reasons are attributed to the transport companies which sometimes cause delays in removing goods from Customs control. Further, after the declaration has been completed, it was observed that an extra portion of time is needed to wait for the uploading ship.. In addition, on average, lodgment to release takes almost half the time it takes to remove goods from Customs control. This is due to the fact that agents take almost the same time it takes Customs to process the entries. 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 as well as to increase Customs Revenues.

Although the single window concept is applied for the IM4 and EX1 transactions, inconsistencies in the cooperation between other agencies such as the Jordan Institution for Standards and Metrology (JISM), and the Medical/Health and Agricultural Departments, contribute a large portion of time to the process.

Finally, an extensive time delay during the “Payment” stage in the T8 transactions was observed due to delays in the processing as Customs employees collect certain numbers of transactions (up to 50) and process them all together at the same time. This, in addition to occasional system breakdowns, prolongs the processing of entries by Customs.

6.6 Amman Customs Center

The yards in Amman Customs are generally crowded, the unloading ramps small, and there is no apparent queuing system for preparing for inspections. Introducing a proper queuing mechanism coupled with structural improvements in the yards will be critical factors in reducing the release time for shipments. In terms of loading/unloading, a number of loading/unloading companies operate in the Customs Center are inefficient and/or understaffed, and the employees do not have the commitment to accomplish the job within the established time limits.

Again, the “Removal from Customs Control” stage also appears to cause delays (especially for the Green Lane EX1 transactions). As mentioned earlier, this could be resolved by imposing strict penalties on the transport companies and/or owners for such delays and could generate additional income for Customs.

The time required for agriculture analyses seemed excessive. This was attributed to the time allocated to transport samples to the National Center for Agricultural Research, located outside the Customs Center, to obtain the Agriculture Department’s permission to allow certain goods. In order to avoid this delay, it is recommended to open an office for the agricultural department within the single window inside the Center. The same could be applied to the Jordan Institute for Standards and Metrology (JISM) and the Medical/Health Department, which do not have representatives within the single window and thus account for an increase in the time of the “Interlocation with other Agencies” stage.

ANNEXES

ANNEX A: TRADE TRANSACTION COST

Trade Transaction Cost at Aqaba Container Terminal

Trade Transaction Cost is a vital element in enhancing trade across the Country; in addition, trade-related transaction costs such as freight charges and other logistical expenses are a crucial determinant of the Country's ability to participate competitively in a global economy. Consequently, the Jordan Customs has requested the team of the Time Release Study to estimate the trade transaction cost for the imported containers of 20 ft capacity at Aqaba Container Terminal.

Accordingly, the Study team conducted a small data collection exercise with a total sample of 30 containers in order to estimate the total cost including the cost paid for the container terminal in terms of uploading and handling, transportation, and release for the imported containers of 20 ft capacity at Aqaba Container Terminal. The average cost for freight and other logistics was found to be around JD 484 per container.

It should be recognized that there will always be transaction costs and that they will generally be higher for international trade than for domestic transactions. More efficient procedures and lower transaction costs provide significant benefits to the economy in both static and dynamic ways by:

- Increasing trade in goods and services;
- Promoting competition, thus enhancing efficiency in the use of resources, encouraging technology transfer and the realization of productivity gains;
- Increasing the incentive for international investment, contributing to economic growth and higher living standards.

Trade facilitation can nevertheless bring benefits to the public sector through more efficient implementation of Customs and related regulations. This could involve, for example, a reduction in paperwork or in the numbers of Customs officials in ports of entry. Greater efficiency may also reduce possibilities for traders to avoid fees (including through arbitrary collection and possible corruption) and thus increase public revenue collected from Customs procedures and from tariffs.

The analysis sketched out above leads to several observations relating to the need for further research and reflection. First, more empirical research is clearly needed to understand the excessive cost associated with the delay in container uploading from the ship to the trucks; which in turn obligates the broker to pay JD's 10 for every extra hour of delay.

Next, some of the privatizing and uploading companies are monopolizing the process and requesting high cost reaches up to JD's 250 per container due to the absence of any fixed cost assigned by the ACT. In this light, new policies or approaches that would be effective for companies and governments must be investigated. Some other observations include the misunderstanding of the type of goods being transported in some containers, as many of the containers labeled (IMO) as carrying goods of high-risk nature are actually carrying other low-risk goods and thus a duplicated amount of cost is imposed for the storage of that high-risk type of goods.

The above and many other issues could be managed through exploiting economies of scale, i.e., greater efficiency can often be achieved by grouping trade transactions, especially for low-risk shipments; making use of information and communications technology through the integration of information systems for logistical, financial, fiscal data, etc.; as well as making use of global logistic supply chain services by involving international express carriers and similar services to draw full efficiency benefits from globalized production and marketing.

ANNEX B: Survey Tool

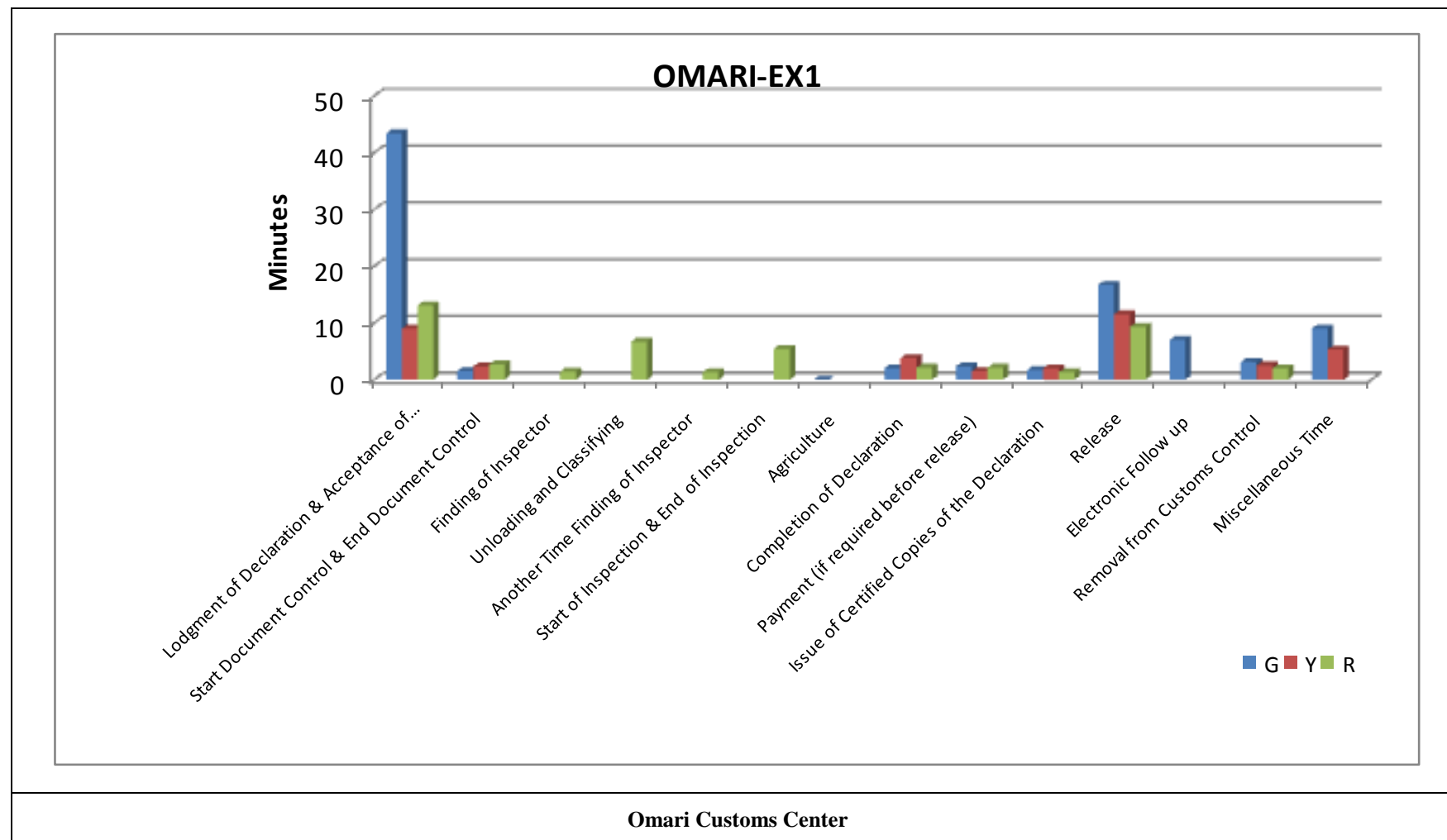
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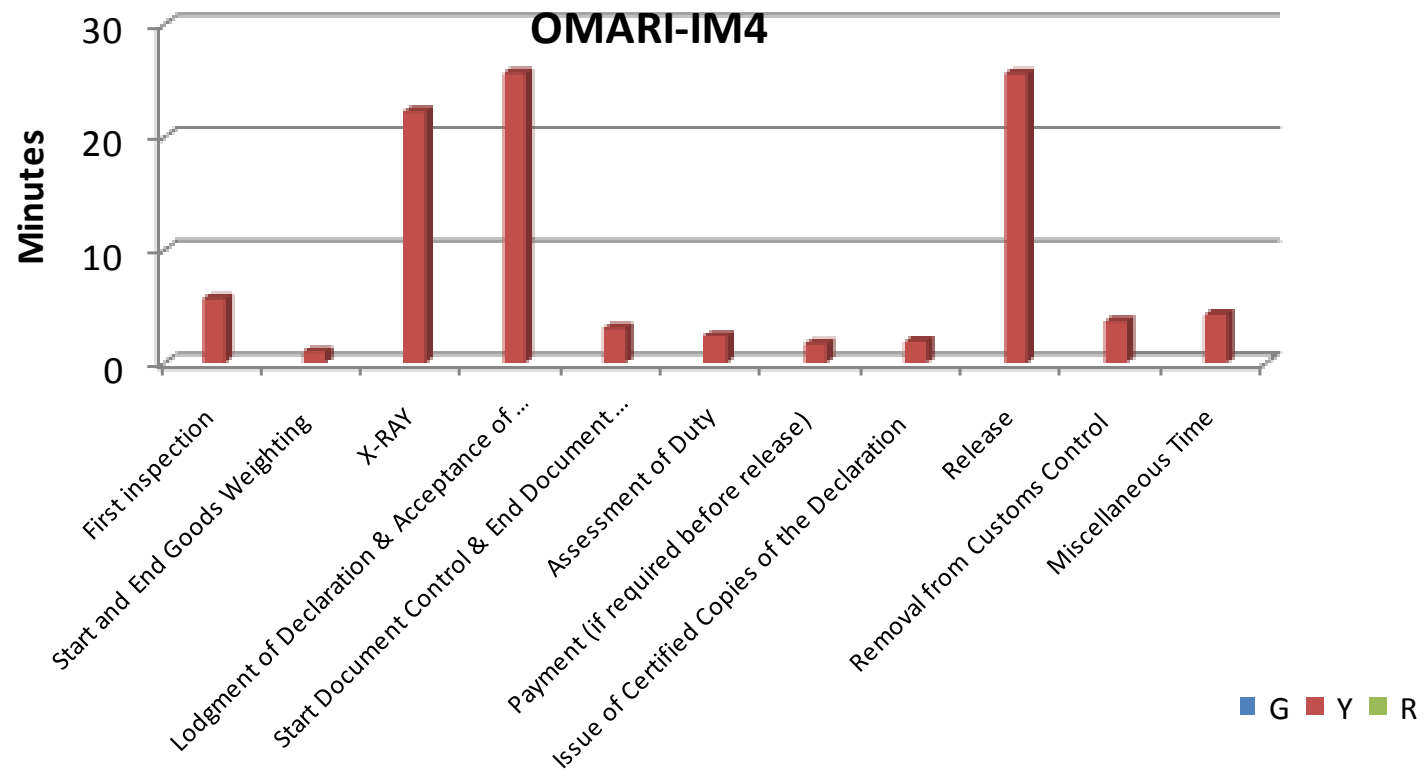
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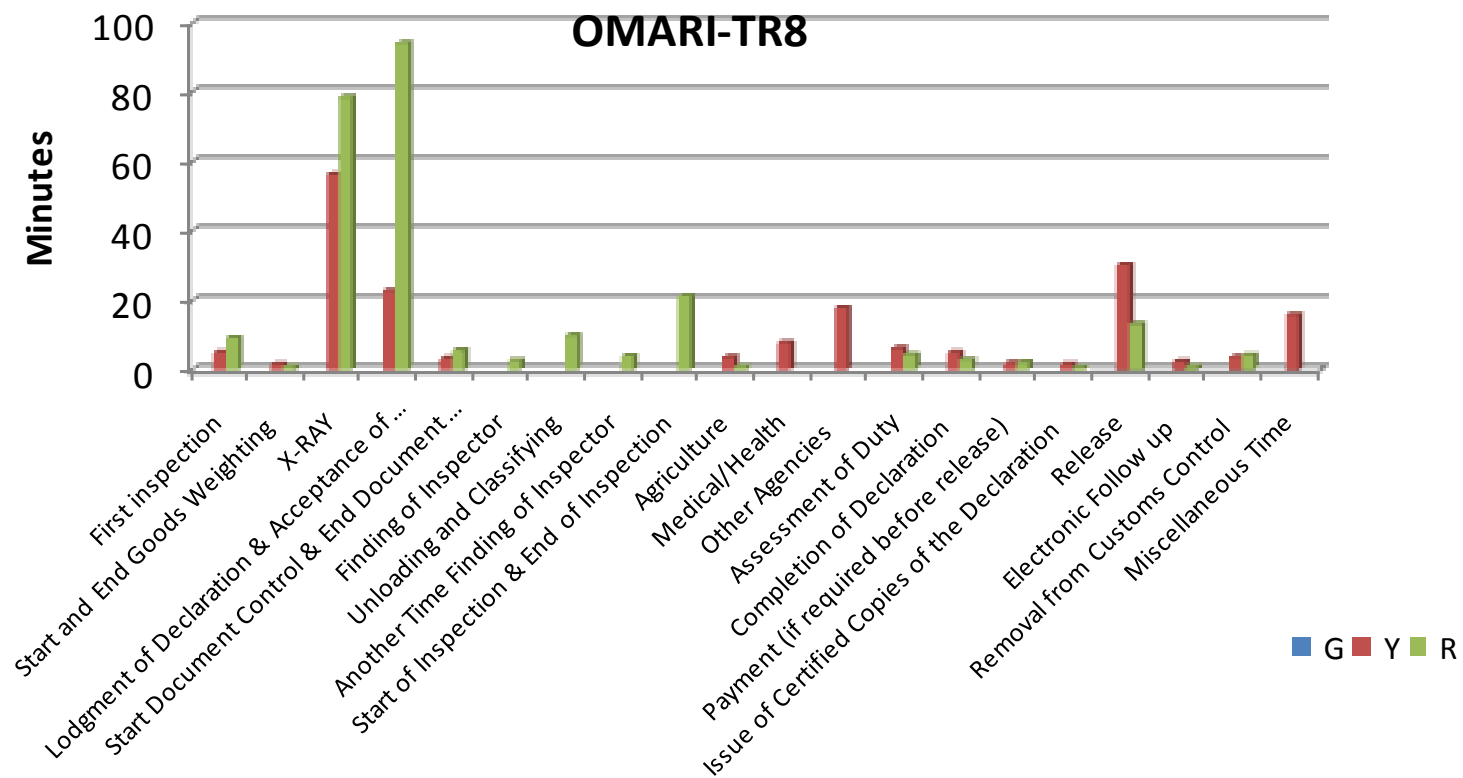
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ANNEX C: TIME RELEASE GRAPHICAL RESULTS

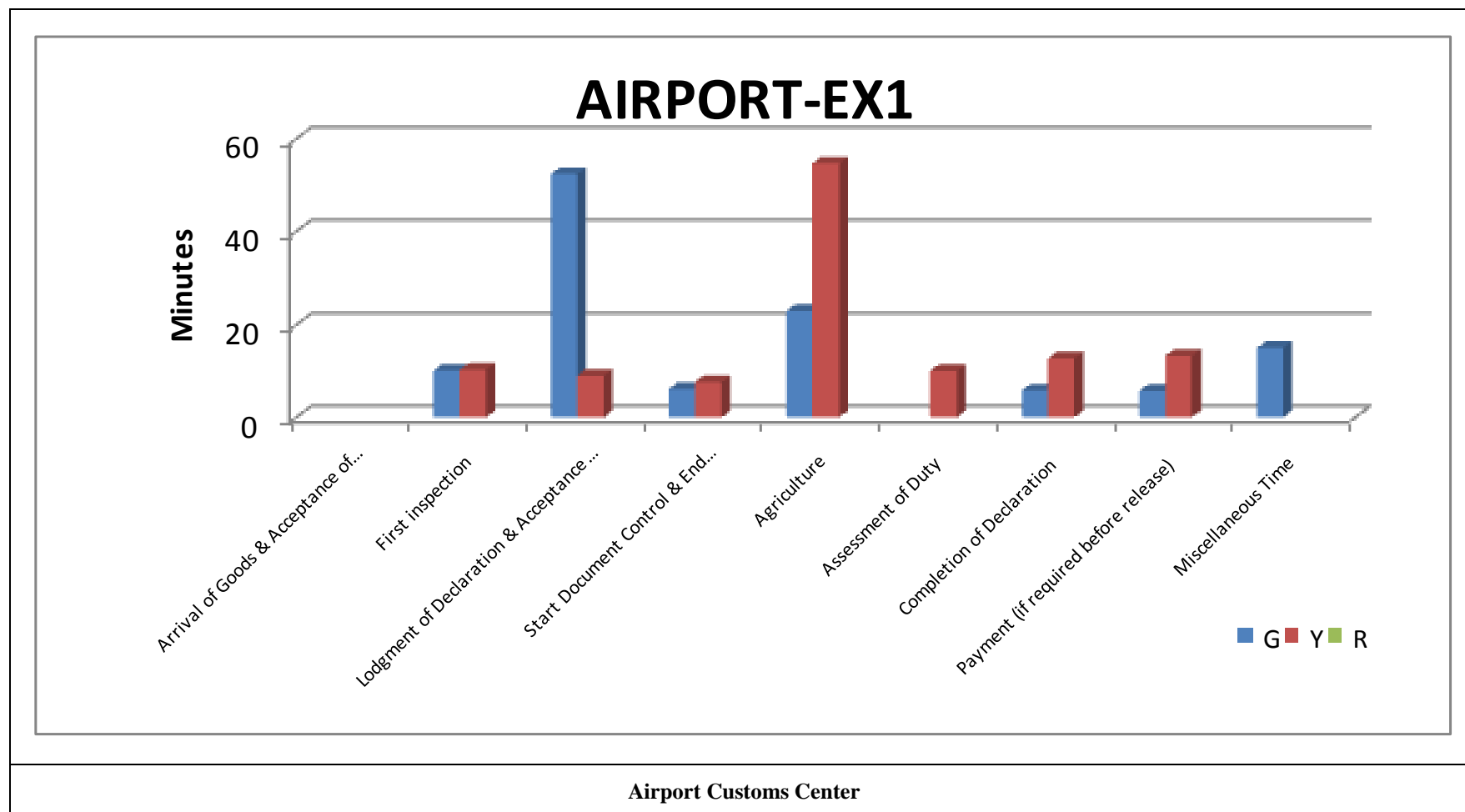


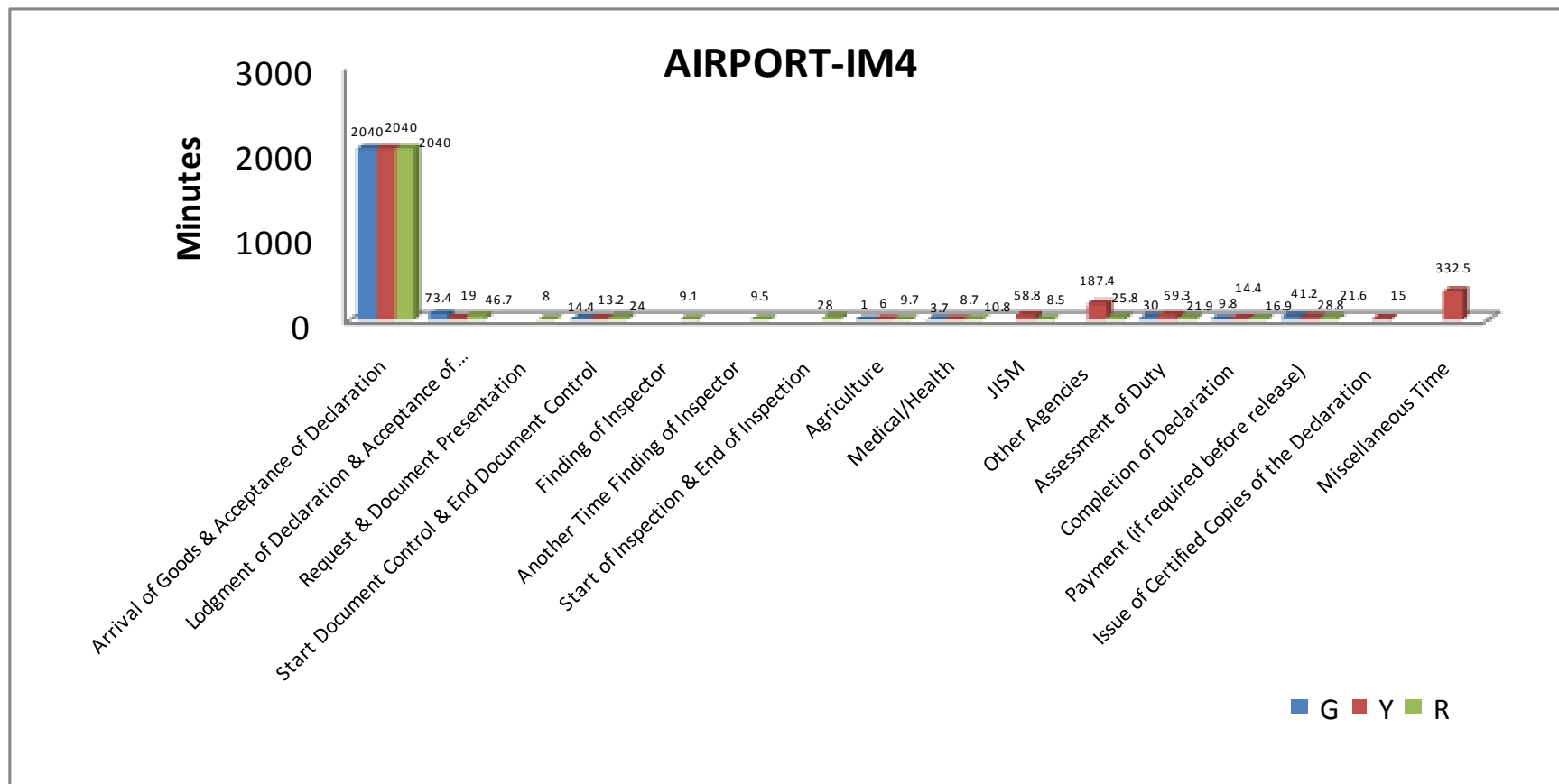


Omari Customs Center



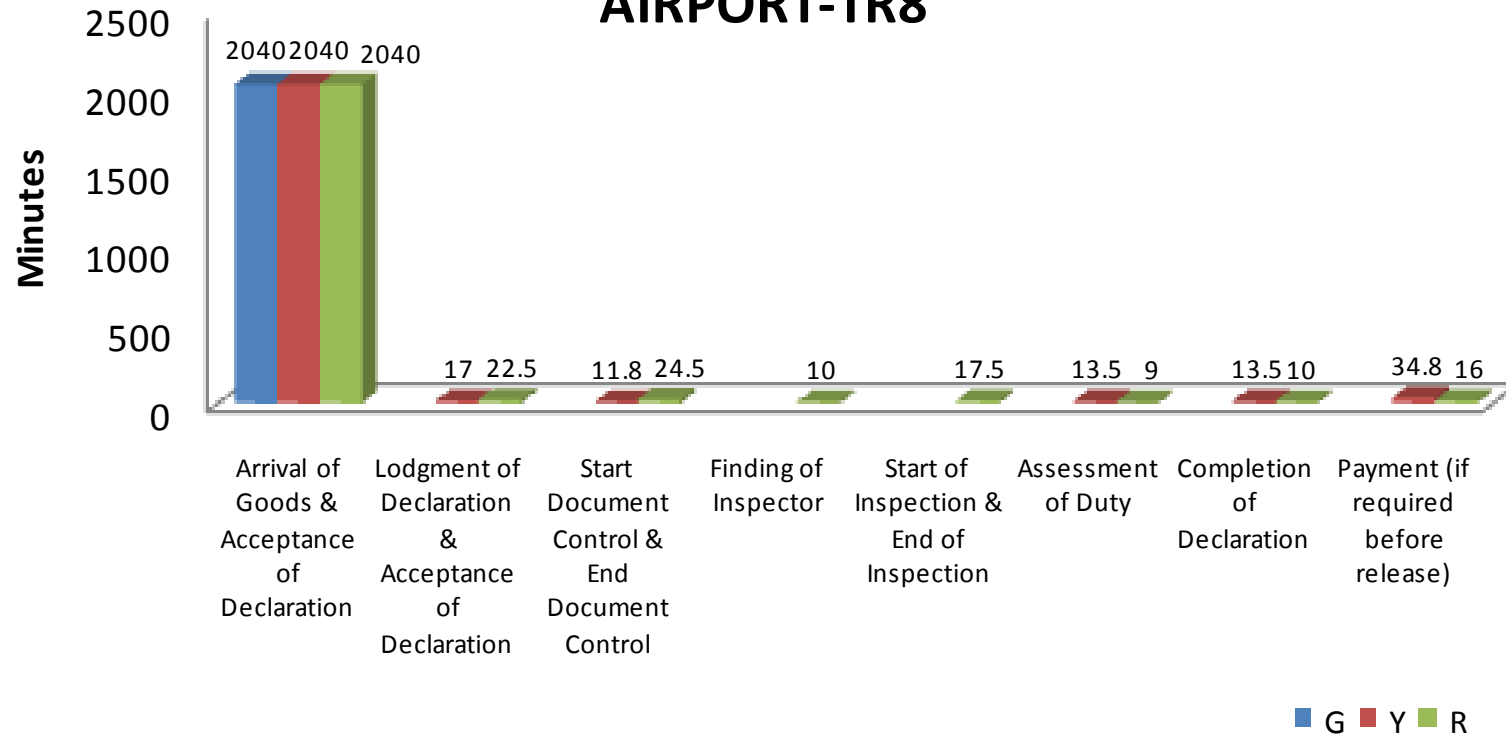
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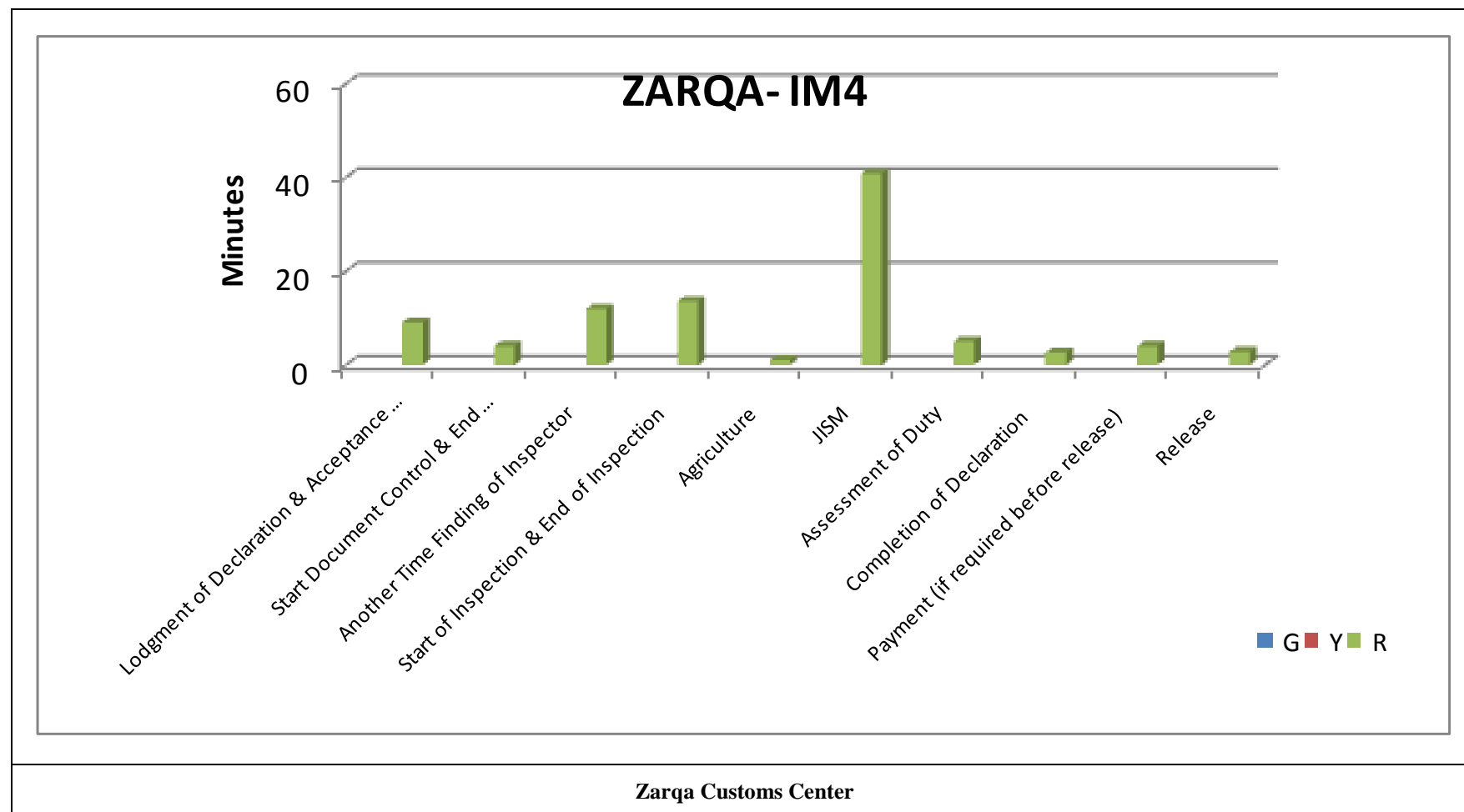


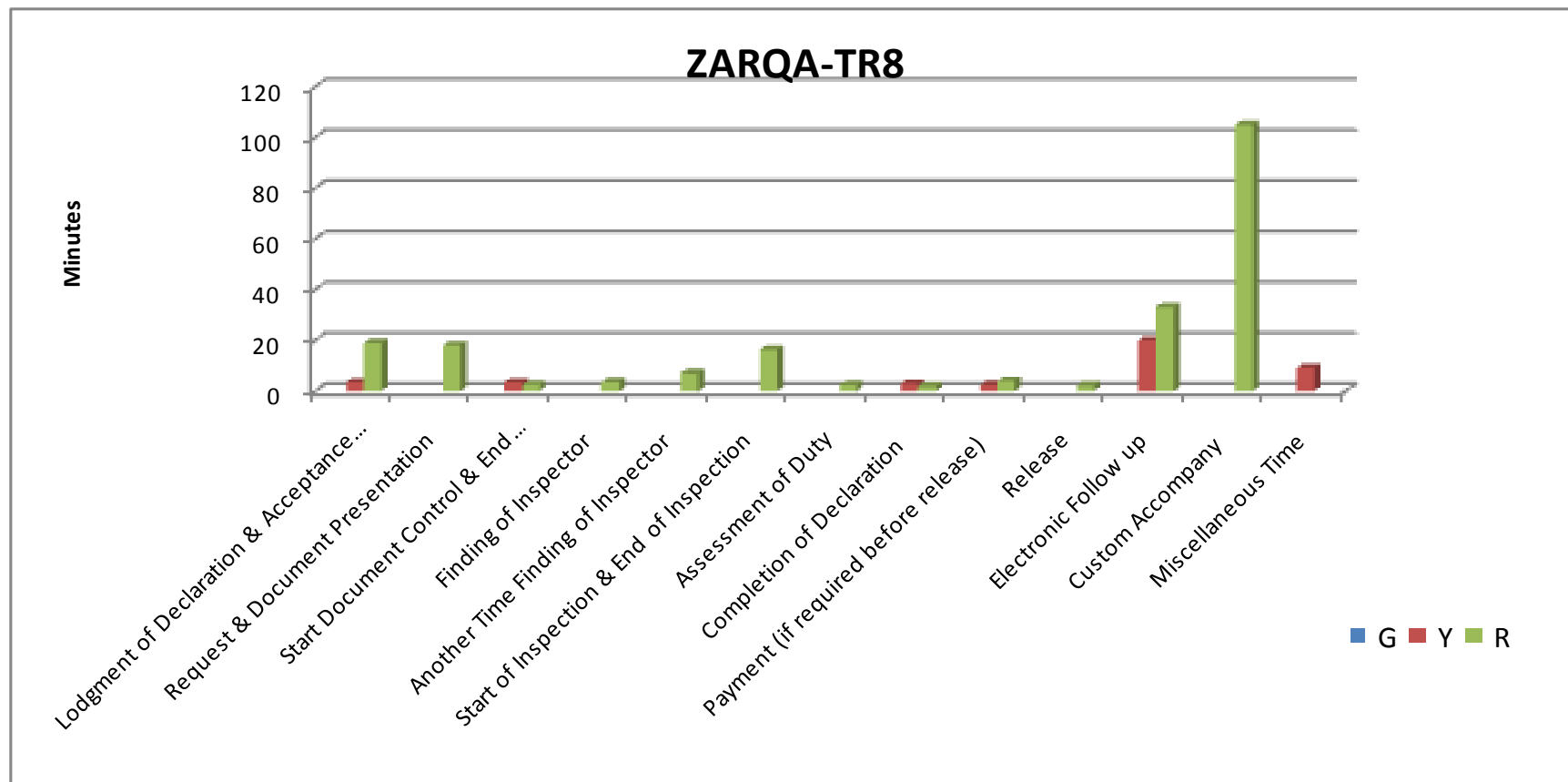
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AIRPORT-TR8

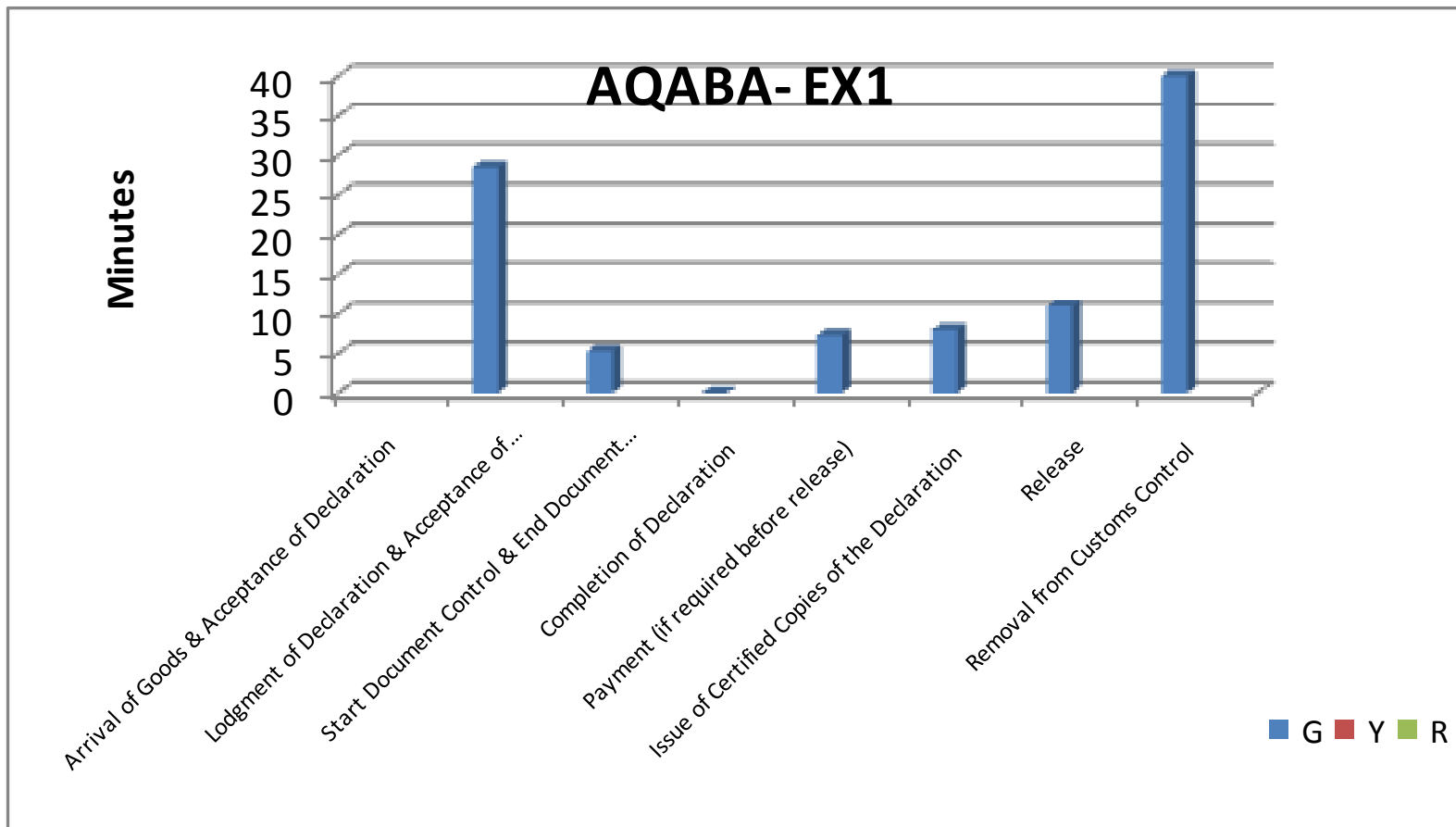


Airport Customs Center

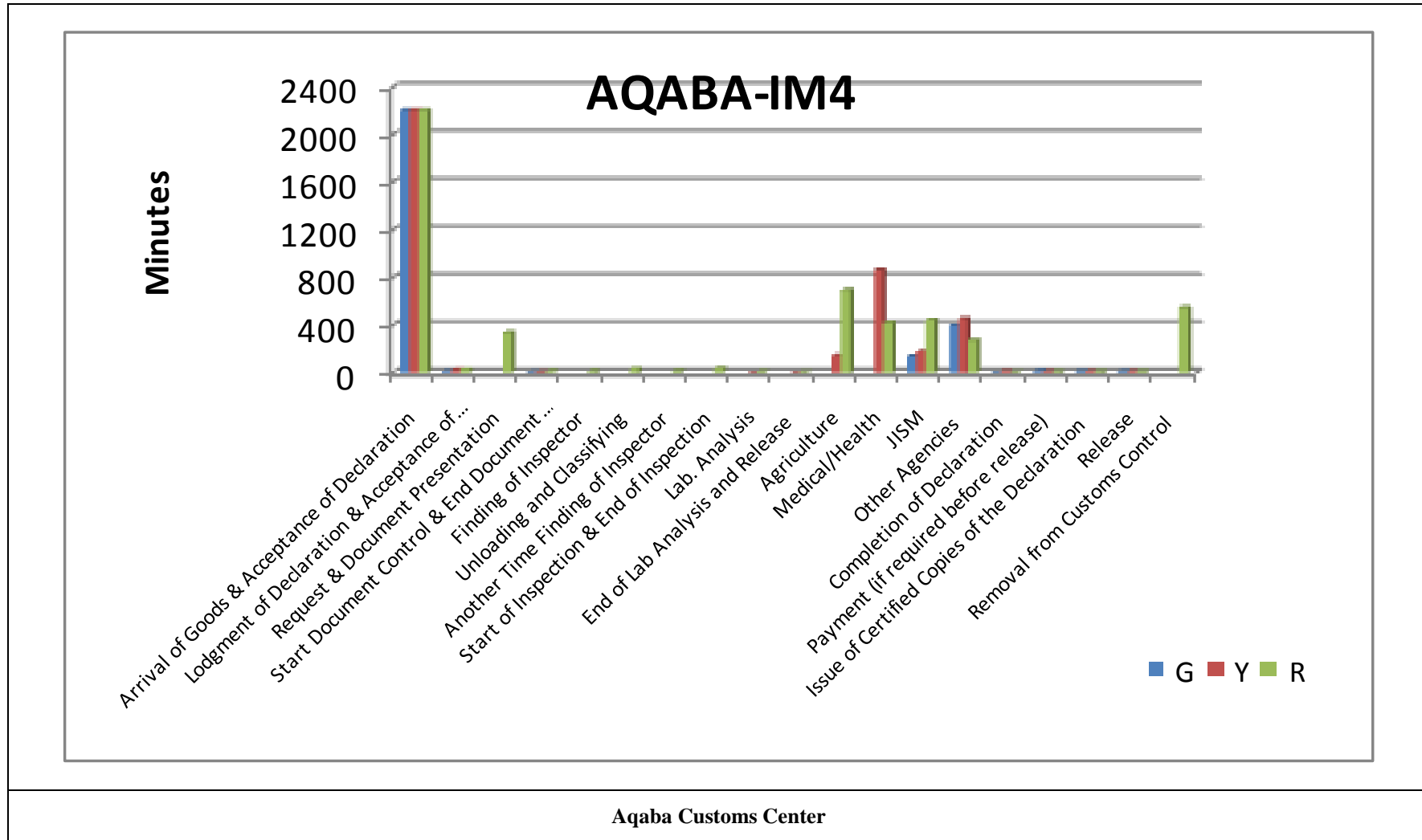


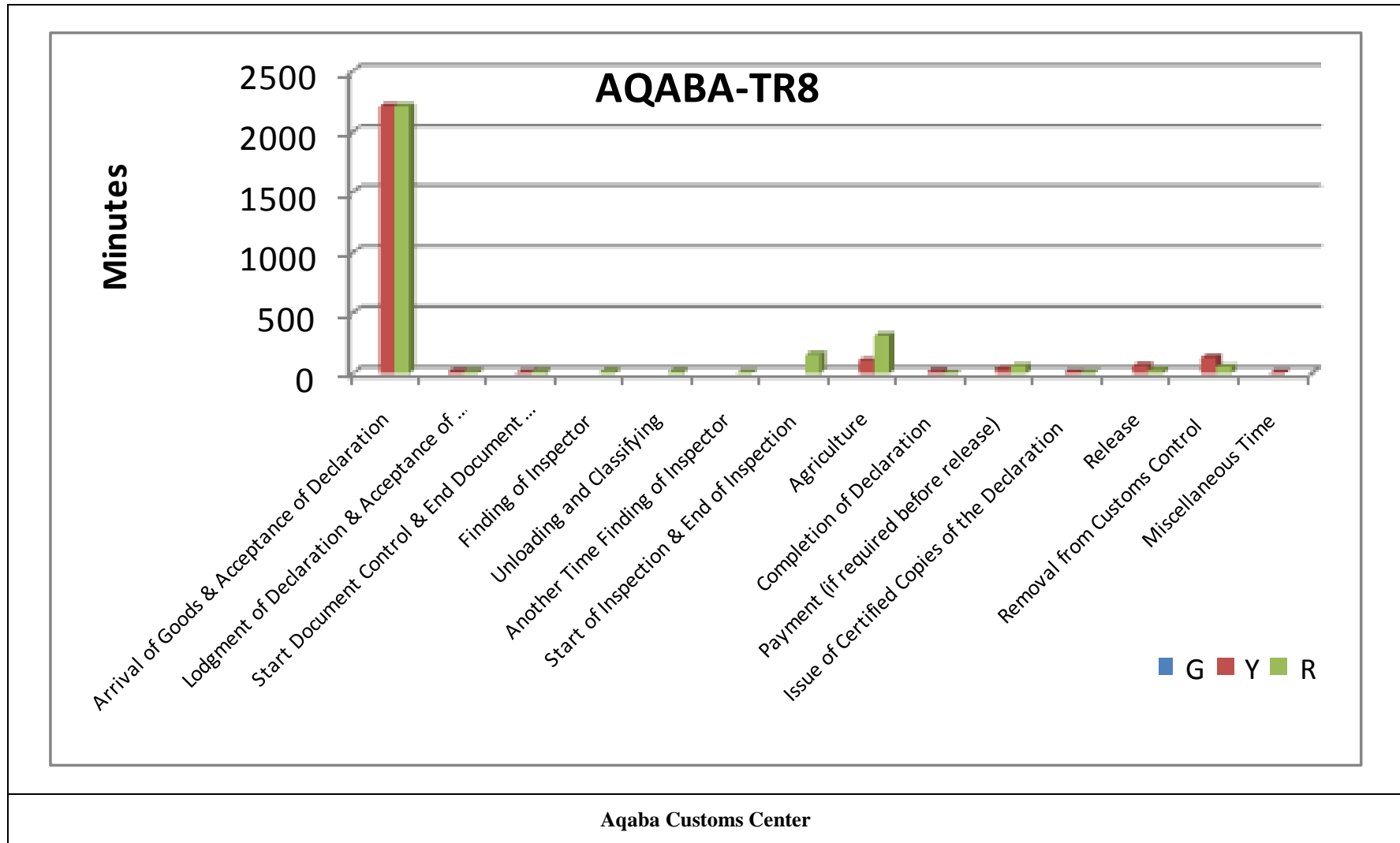


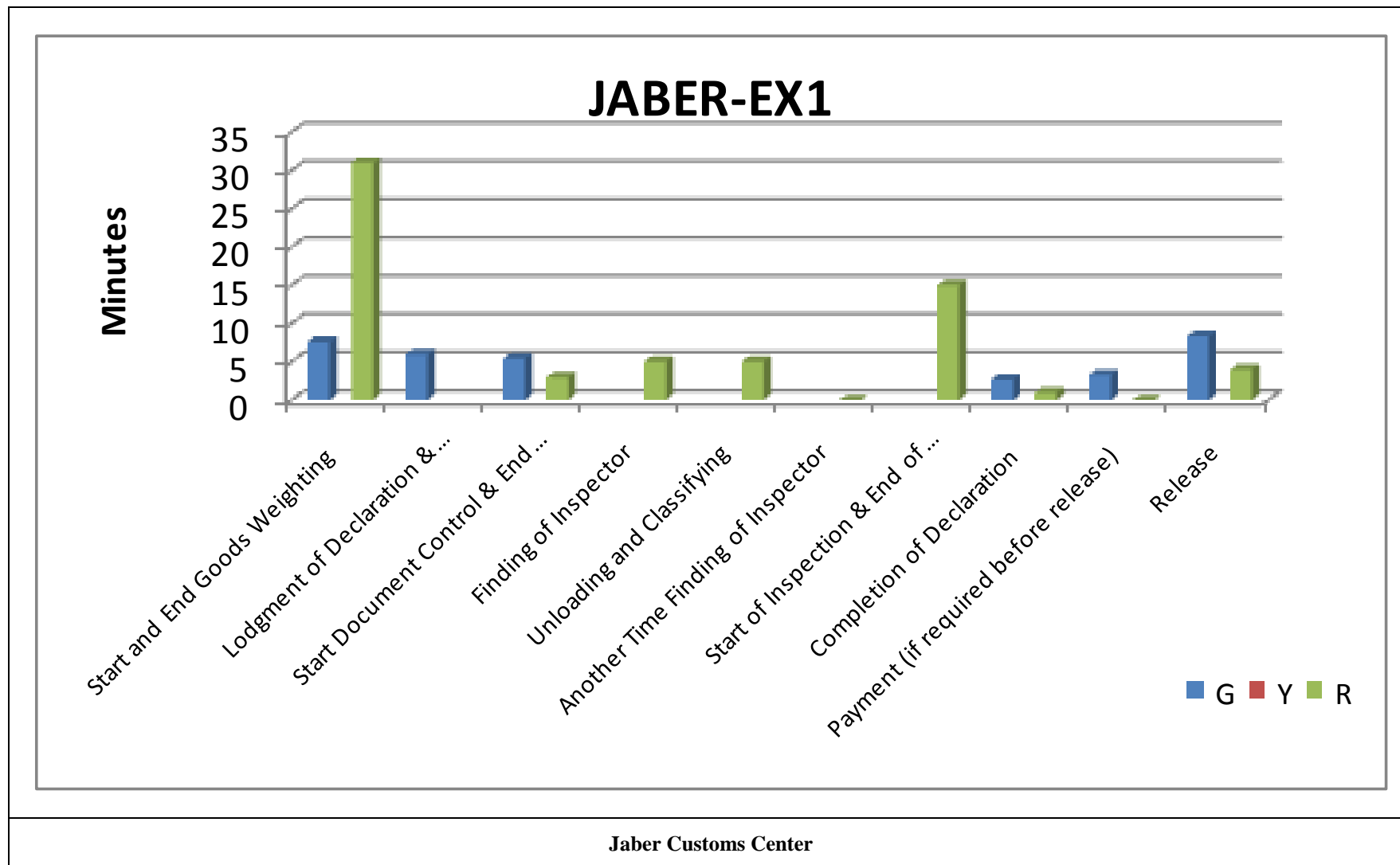
Zarqa Customs Center

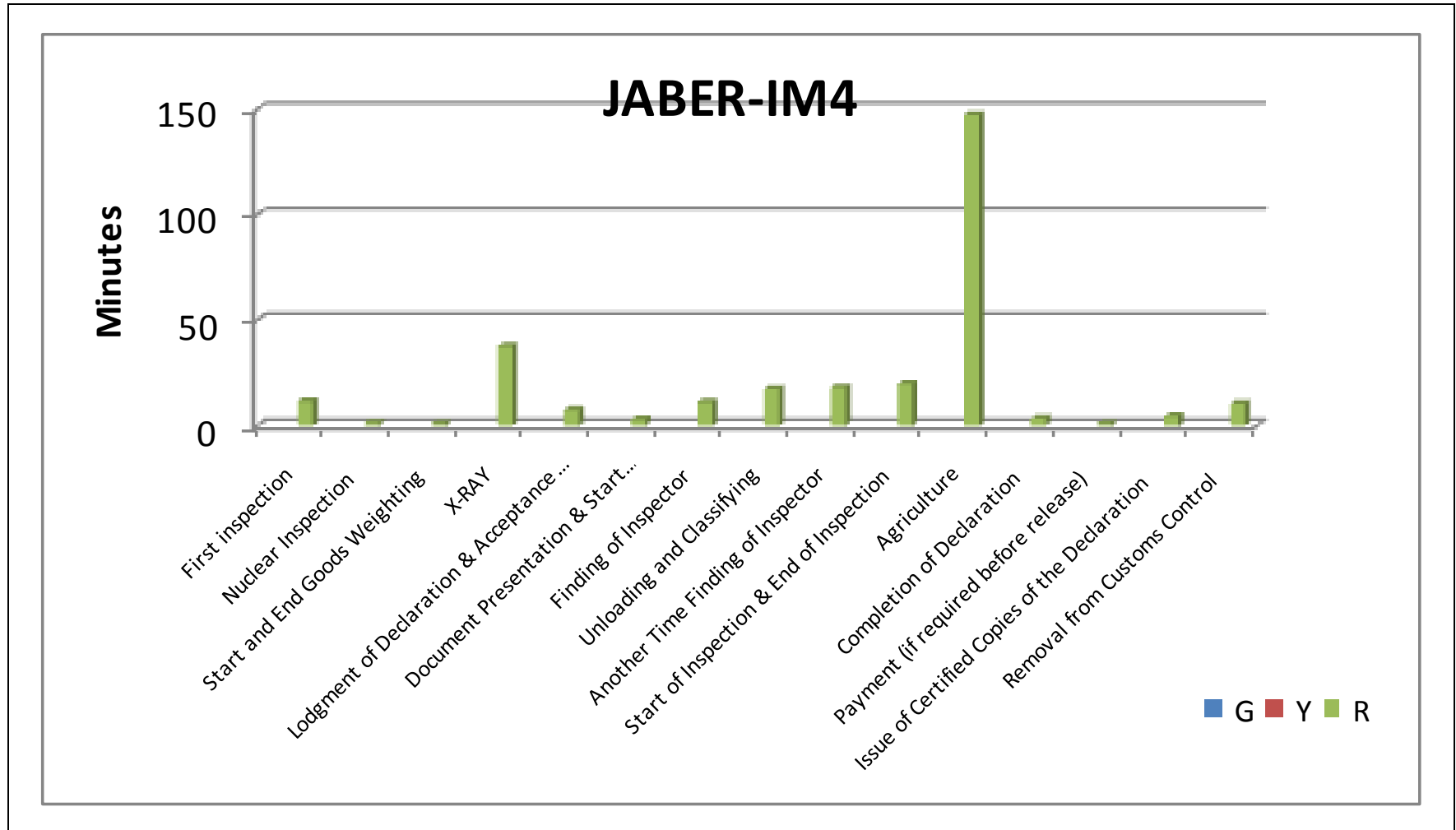


Aqaba Customs Center

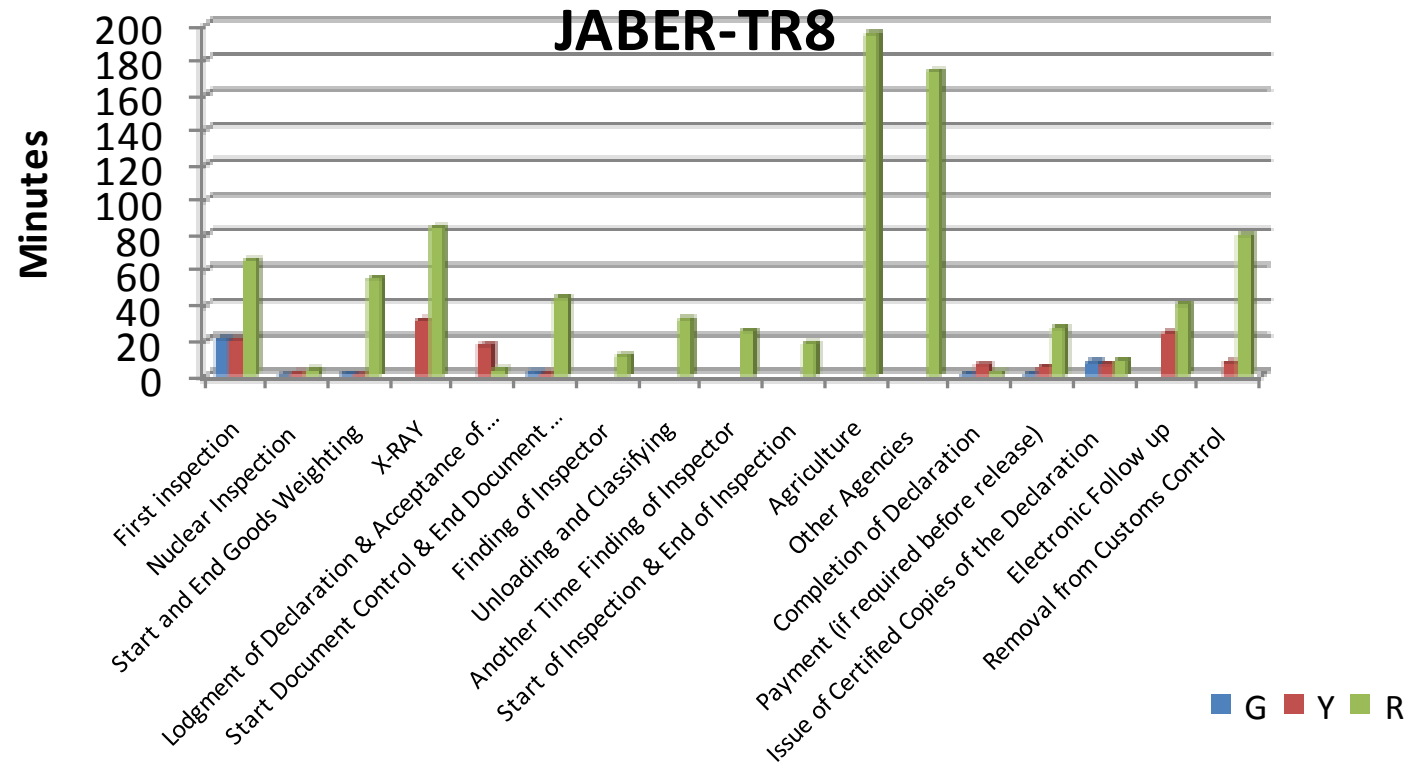




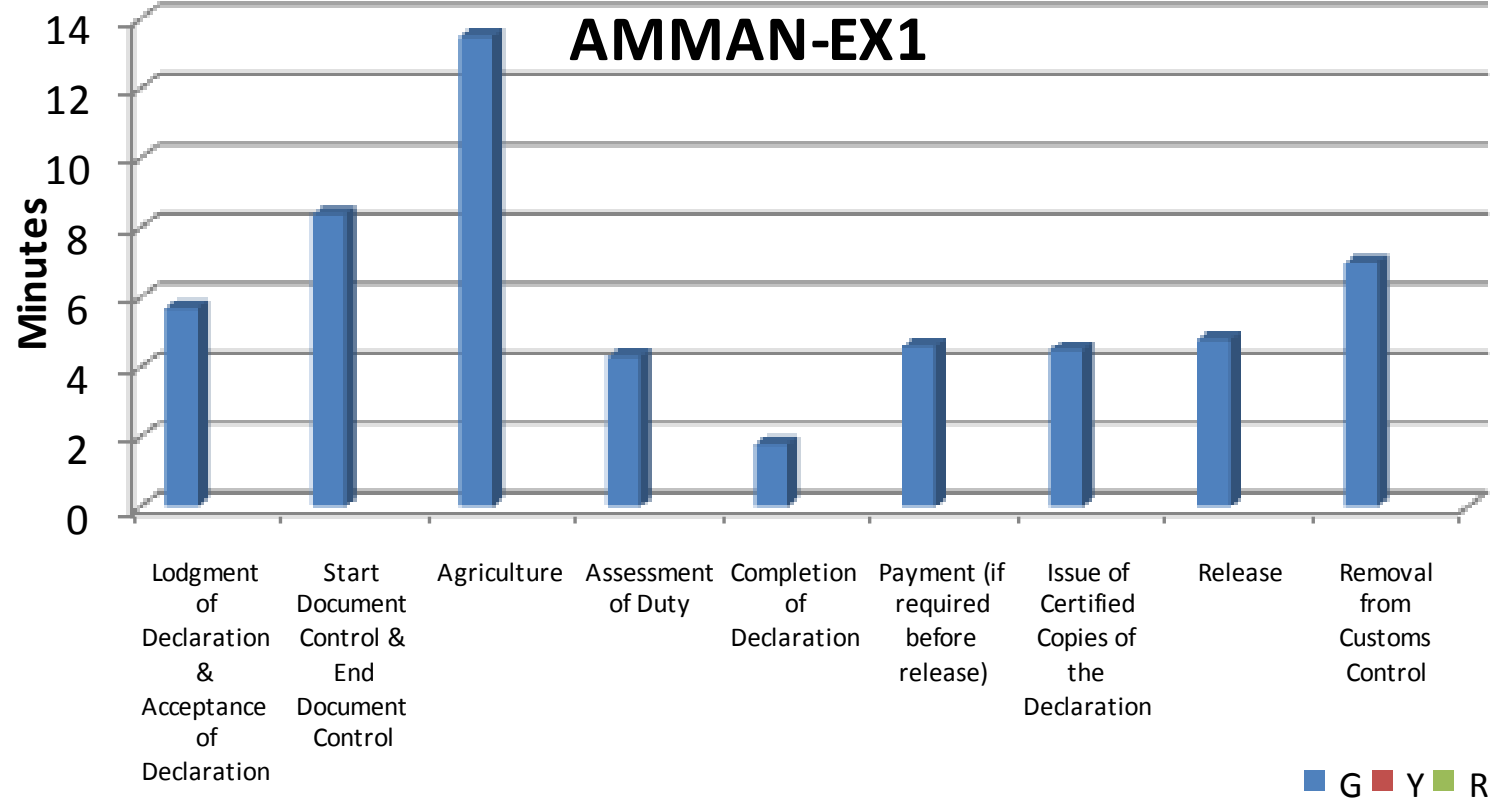




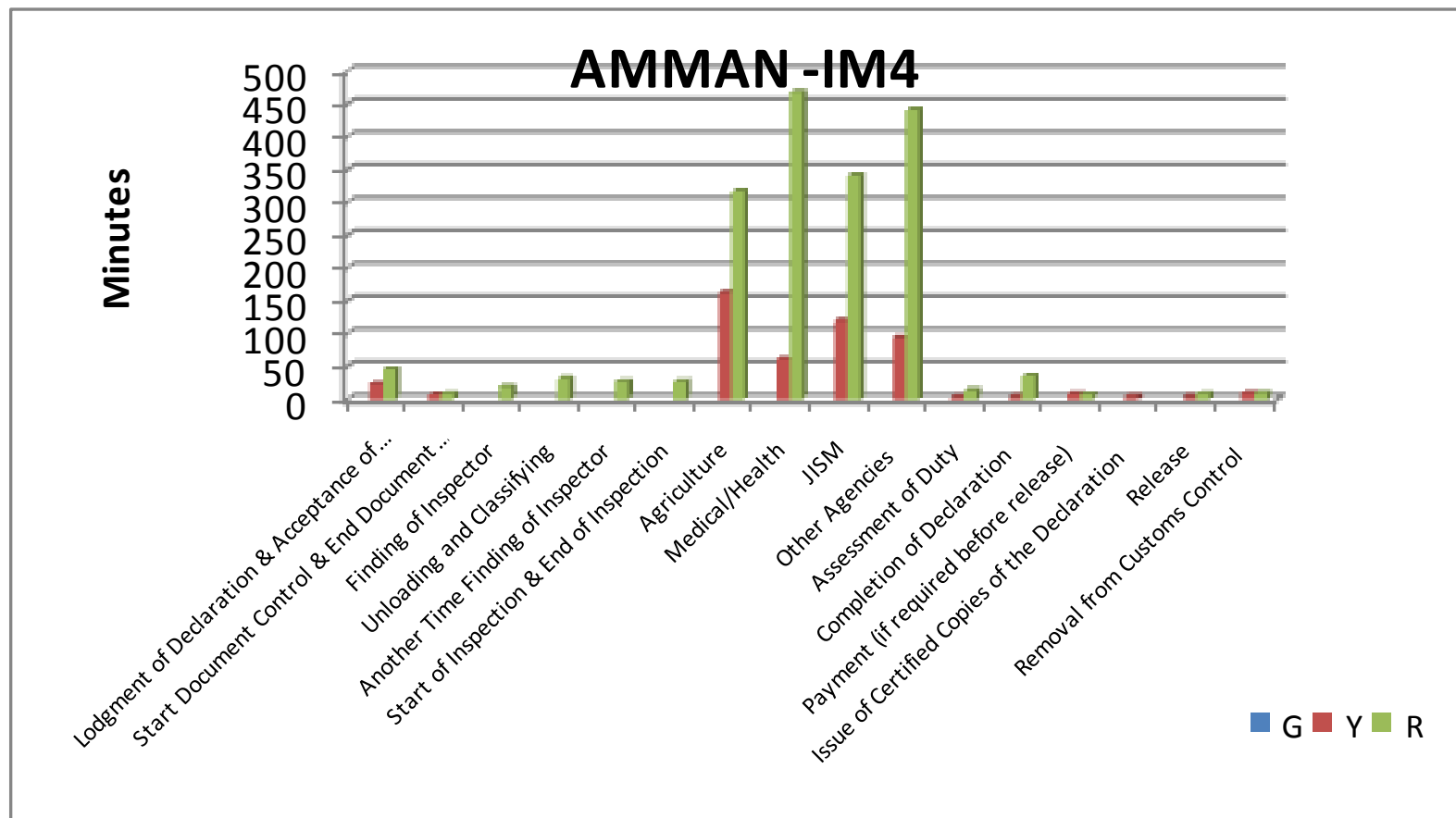
Jaber Customs Center



Jaber Customs Center



Amman Customs Center



Amman Customs Center