



Study on Timeline of Export and Import of Containers through JNPT

July 2017



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Introduction

For a developing country of India's size and potential, undertaking trade facilitation reforms is an urgent need today to match pace with the growing global trade. This requires simplification and harmonization of procedures in order to reduce the time and cost taken for trading across borders.

With India's ratification of WTO's Trade Facilitation Agreement (April, 2016), there is an extended onus on the government for identifying action areas in order to simplify trade procedures and the associated time and cost. Various steps have been undertaken for this - there are fewer

restrictions on foreign direct investment, tax holidays are given to developers, public-private partnerships (PPPs) are promoted for infrastructural projects and the Single Window for Trade Facilitation (SWIFT) has been launched by the Central Board of Excise and Customs (CBEC). It is also estimated that there is a requirement of around USD 1 trillion towards infrastructural investment in India during the 12th Five Year Plan period, 2012-2017, to maintain India's growth trajectory. With Indian economy on an exponential growth curve and Indian government's strong inclination to enhance trade and investment, foreign companies are turning to India for emerging market deals. At a point when the world is tending towards India, the country is likely to witness an increasing flow of rail, road and port traffic.

Table 1: India's Ease of Doing Business Ranking

Parameter/Year	2015	2016	2017
Overall Ranking	134	131	130
Trading Across Borders	126	144	143

Table 2: World Bank's Estimate of Trading Across Borders through Mumbai

Parameter	Time to Export (Hours)		Time to Import (Hours)	
	Documentary Compliance	Border Compliance	Documentary Compliance	Border Compliance
2016	61	88	67	311
2017	58	85	65	307

Source: www.doingbusiness.org

However, India's performance in World Bank's Ease of Doing Business Report has only shown a marginal improvement over the last few years (Table 1). Further, Table 2 shows the time to export and import through Mumbai, Maharashtra, as represented in the World Bank Doing Business Report (2017).

This report undertakes a comprehensive and analytical study of the various procedures and agencies involved in the supply chain for export and import through JNPT. It involves an analytical assessment of the time taken at various intervention points - dissecting the dwell time of containers from/to Container Freight Stations (CFS), Inland Container Depot (ICD) as well as Direct Port Entry/Delivery – entailing transportation of containers and other operational aspects, the process of assessment, registration and examination, among others. Further, the role of partner government agencies (PGAs) and shipping lines in the process have also been analysed.

Objectives

- To track supply chain of import/export at JNPT through identification of all the procedures, agencies and stakeholders
 - ✓ Inclusive of all formats of port entry and delivery such as Direct Port Delivery, Direct Port Entry, CFS facilitated, Factory stuffed and ICD facilitated through rail, etc.
- To calculate the time taken for import and export of Containers through JNPT on a monthly basis.
- To specifically identify dwell time at various agencies in the process. These would include, but not be restricted to, the following:

Border Compliance

- ✓ Customs Clearance and Inspections: Time taken by the Customs for export and import clearances.

- ✓ Port Handling: Time taken by Terminal, CFS's and ICD's for export and import.
- ✓ Allied Agencies: Time taken by agencies such as FSSAI, PQ, etc. during the course of import and export.

Documentation Compliance

- ✓ Time taken to obtain, prepare and submit documents required during export and import but not to be restricted to Clearance, Inspection, Port Handling, etc.
4. Parking lots and Port gate: Time taken for entry and exit through these areas
 5. Data from various agencies would be collected and analyzed to calculate the time taken for movement of export & import containers from JNPT.
 6. Identification of action areas and measures for reducing dwell time during the course of export and import of containers from JNPT aiming to meet specified Government targets:
 - ✓ Procedure-wise area of intervention
 - ✓ Stakeholder-wise area of action
 7. To critically analyze the various stages in the export and import cycles with a view to reduce the dwell time at each stage, with the principal aim of facilitating the reduction in export and import cycles from the current stage to the targets set by the government. Stage wise approach in terms of reaching the target will be suggested.
 8. To analyze the transaction cost borne by the trade at each stage, with a view to mobilize reduction of the same
 9. To provide incisive insights and recommendations on the improvement areas at various stages of the value chain, with focus on improving operations and reducing delays

Stakeholders

1. **Customs Broker:** Also known as Customs House Agent (CHA), a customs broker is a representative or an agent of the importer/exporter, and prepares and submits documents for clearing goods through Customs. He/she holds a customs licence for practise and is well versed with customs rules, regulations and tariffs.
2. **Customs:** It is the official department of the government with the authority to check goods and travellers. In international trade, the customs department collects duty on imported goods as levied by the government, and provides requisite clearances for both export and import goods.
3. **Container Freight Station (CFS) and Inland Container Depot (ICD):** A container freight station is an extension of the port. It is the custodian of goods after they are cleared from the terminal. The process of customs clearance takes place inside the CFS.
4. **Port/Terminal:** A port is the point of entry of goods and travellers into the country. It provides facilities for berthing of vessels, and loading/unloading of cargo. A terminal is part of the port wherein different berths may be a part. It may be cargo-specific or designed to handle all types of cargo.
5. **Shipping Line:** A shipping line is a company that operates fleet of ships which transport cargo to different parts of the world. While most shipping lines are owners of the containers they carry, some lines lease the same from an external organisation.

Methodology

1. **Preliminary assessment** of parameters related to border compliance and documentary compliance at JNPT
2. **Data collection** from stakeholders such as terminal operators, customs – Jawaharlal Nehru Customs House (JNCH) and ICD Tughlakabad, CFS operators and CONCOR
3. **Data analysis** entailing the process of data cleaning and analysis of the collected data through SAS,

STATA and MS Excel. It would entail stakeholder-wise calculation of dwell time and finally, consolidation of the same in the process chain of EXIM trade

4. **Report** preparation describing average timelines for export and import value chains, and qualitatively indicating areas of improvement. The following parameters have been considered during analysis and report preparation:
 - a. Out of the total number of containers imported and exported at JNPT, the sample size considers the containers under the import and export category and not the containers meant for transshipment. Further, only Full Container Load (FCL) containers have been considered for this study.
 - b. The time in the tables is recorded in the hour format that is $[h]:mm:ss$. However, in the figures and charts, it is recorded in a decimal format. For example, a time of 04:30:00 recorded in a table is represented as 4.5 hours in the chart.
 - c. The total time taken in each agency is calculated as the average time taken from the first process at the agency to the final process (and not as a linear addition of time consumed in all processes recorded at an agency, as it July lead to inflated overall dwell time).

Limitations of the study

- a. **Transit time calculation for port to CFS:** Due to issues faced in determining unique container numbers, it was difficult to calculate transit time. Hence, based on observation and various previous researches conducted, we have used an average time of 12 hours as transit time for CFS.
- b. **Missing entries in data sets:** Many entries in the data sets were missing or not recorded by the agencies. For instance, out of 04 CFS', only 01 CFS' recorded the time of shipping line delivery order. For the month of July the transit time could not be calculated for Import and export containers for ICD Tughlakabad, as the relevant timestamps were not provided by the agency.
- c. **Data error:** At a number of agencies, data errors were recorded. For instance, at certain CFS', the gate-out time was before the gate-in time. Further, duplication of data was observed in the data provided by the PGAs.
- d. **Missing time stamps in OOC entries:** The Out of Charge (OOC) entries in the CFS datasets did not have time stamps. As such, time difference between seal cutting (which has both date and time) and OOC taking place on the same day came out to be negative. For instance, for a seal cutting entry of 01-03-2017 at 13:56:45 and a corresponding OOC entry of 01-03-2017 only, the time taken from seal cutting to OOC would be negative. To overcome this challenge, the difference between seal cutting and OOC was calculated using only the date stamps for seal cutting.

IMPORTANT POINTS FOR JULY 2017 DWELL TIME

The month of July 2017 recoded high dwell time for most stakeholders due to the following reasons:

- **Malware attack on the terminal operating system of APM Terminals (GTICT):** Due to malware attack on the terminal operating system of APM terminals, the entire operations of the terminal were brought to a standstill. As a result,
 - The container data could not be accessed and operations for delivery had to be conducted manually, and
 - The vessels bound for APM terminal were diverted to other terminals at JNP, namely NSIGT and NSICT. As a result, all three terminals have recorded high dwell time for July 2017.

- **CFS data was affected due to malware attack:** Due to manual handling of containers for delivery, the evacuation process for CFS bound containers at the port was hampered leading to an increased dwell time in this month. Further, as part of the malware attack, various CFS' were not able to extract the monthly data from their database. As such only 04 CFS' have shared the data and the same has been analysed and presented in this report.

- **Diversion of containers from Mundra and Pipavav port to JNPT led to increase in dwell time of rail containers:** Due to floods/ heavy rain in parts of Gujarat in the month of July, the ICD operations at Mundra and Pipavav Ports was affected. This resulted in diversion of some EXIM traffic to the JNP. This led to increase in pendency and dwell time of rail containers.

IMPORT DWELL TIME

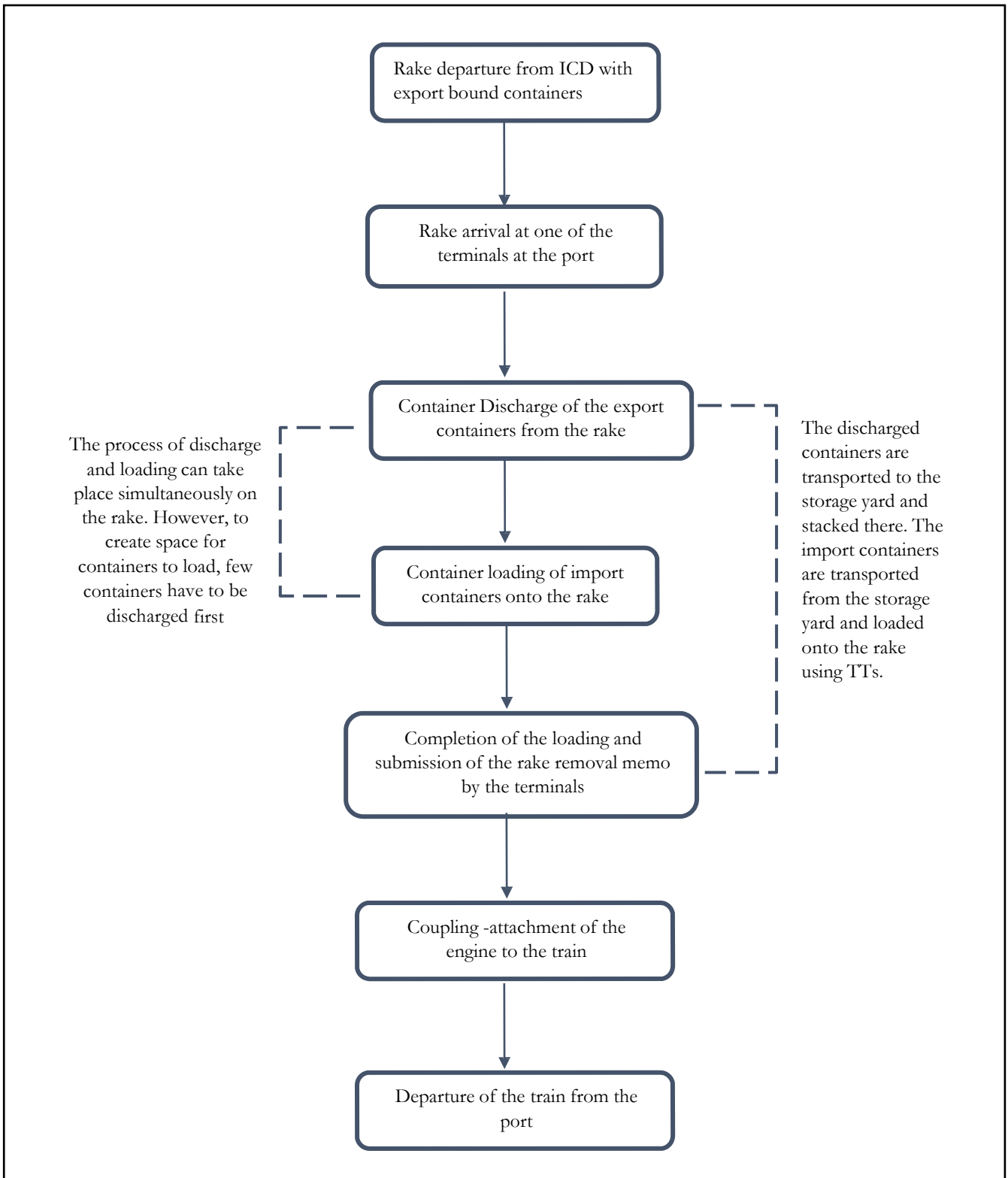
PORT DWELL TIME	Port Dwell Time	70:58 Hr
	Port Dwell Time for CFS Bound Containers	52:41 Hr
	Port Dwell Time for ICD Bound Containers	135:05 Hr
	Port Dwell Time for DPD Containers	83:27 Hr
CUSTOMS RELEASE TIME	Customs Release Time at the JNCH	34:47 Hr
	Customs Release Time at ICD TKD	42:33 Hr
CUSTODIAN DWELL TIME	Dwell Time at CFS	159:16 Hr
	DWELL Time at ICD TKD	221:40 Hr
TOTAL IMPORT TIME	Total Import Time for CFS Bound Containers	223:58 Hr
	Total Import Time for ICD Bound Containers	356:46 Hr
	Total Import Time for DPD Containers	83:27 Hr

EXPORT DWELL TIME

PORT DWELL TIME	Total Port Dwell Time	94.22 Hr
	Port Dwell Time for CFS Bound Containers	87:21 Hr
	Port Dwell Time for ICD Bound Containers	130:54 Hr
	Port Dwell Time for DPE Containers	85:10 Hr
CUSTOMS RELEASE TIME	Customs Release Time at the JNCH	4.17 Hr
	Customs Release Time at the ICD TKD	17:32 Hr
CUSTODIAN DWELL TIME	Dwell Time at CFS	128:58 Hr
	DWELL Time at ICD TKD	107:48 Hr
TOTAL EXPORT TIME	Total Export Time for CFS Bound Containers	228:20 Hr
	Total Export Time for ICD Bound Containers	238:42 Hr
	Total Export Time for DPE Containers	85:10 Hr

Rake Handling

Figure 1: Rake Handling Process at the Jawaharlal Nehru Port-EXIM

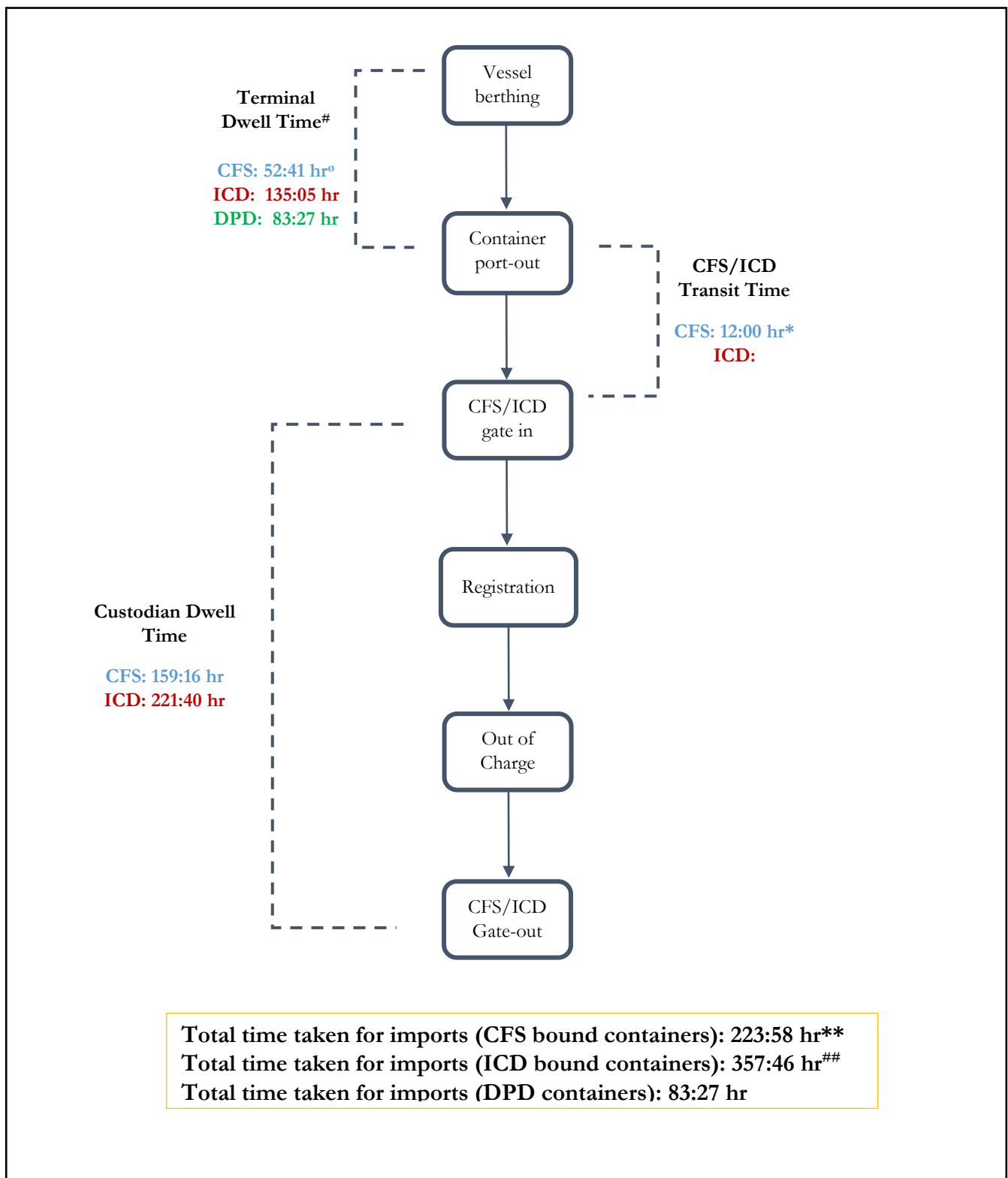


RAKE HANDLING TIME

RAKE HANDLING TIME	<i>Average time taken from the arrival of the rake to the departure of the rake from the terminal at the JNP</i>	12:32 Hr
HAULAGE DELAY	<i>Average time taken from the completion of the container loading process to the attachment of the engine</i>	04:33 Hr
ARRIVAL TO COMPLETION TIME	<i>Average time taken from the arrival of the rake to the completion of loading of containers at the terminal</i>	07:52 Hr
DECLARATION DELAY	<i>Average the time taken by Railways to declare the back loading destination for a rake post arrival of the rake at the terminal</i>	00:37 Hr
TERMINAL HANDLING TIME	<i>Average time required for discharge and loading of a rake excluding delays like Reefer Unplugging, Low or No Pendency Delay, Declaration Delay, etc.</i>	05:32 Hr
Total Number of Rakes	397 (327 CONCOR, 70 Pvt Operators)	
Discharged TEUS	29015	
Loaded TEUS	32008	
Dedicated Rakes for terminals	24	
Mixed Rakes from ICDs	348	
Empty Rakes from ICDs	15	
Rakes arriving at JNPCT	127	
Rakes arriving at NSICT	107	
Rakes arriving at GTICT	163	
Discharged TEUS at Terminals	JNPCT-9087, NSICT-7686, GTICT-12242	
Loaded TEUS from Terminals	JNPCT- 10278, NSICT-8528, GTICT-13202	

IMPORT

Figure 2: Import process at the Jawaharlal Nehru Port



*Assumed

Weighted averages

** Inclusive of assumed transit time

Exclusive of transit time

o The time is displayed in the format (hh:mm)

1. Import Process

The import cycle starts with the shipping line filing an Import General Manifest (IGM) - electronically in the ICES, within 72 hours prior to arrival of the vessel at the port - to the time the goods are out for delivery from a CFS, ICD or through DPD. In between, various processes take place and a minimum of five agencies play a role, which can be assessed in terms of terminal dwell time, road/rail transit time, customs release time and custodian (CFS/ICD) dwell time (Figure 1 above). Further, in the overall process of imports, the time taken by the shipping line and the partner government agencies (PGAs) have also been calculated.

1.1. Terminal Dwell Time

Terminal dwell time is the calculation of the time a container is at the terminal. It is calculated as the average time taken from berthing of vessel to the time of container evacuation from port gate. Terminal dwell time varies with respect to the destination of the container – Container Freight Station (CFS), Inland Container Depot (ICD) or Direct Port Delivery (DPD) to the importer.

The total dwell time of container at Jawaharlal Nehru Port Container Terminal (JNPCT), Gateway Terminal International Container Terminal (GTICT), Nhava Sheva International Container Terminal (NSICT) and Nhava Sheva International Gateway Terminal (NSIGT) is close to 57.67 hours, 75.63 hours, 67.82 hours and 89.58 hours respectively. Further categorisation of containers and analysis of time taken – overall and stage-wise - have been provided in Table 3, Table 4, Table 5 and Table 6. It may be noted that in case of DPD, the dwell time of the container at the terminal is its total time taken for import.

Parameter	JNPCT (n)	GTICT (n)	NSICT (n)	NSIGT (n)
Total number of import containers	39,728	54,016	11,566	16,485
Number of CFS bound containers	30,023 (75.57%)	37,868 (70.11%)	8,407 (72.69%)	12,056 (73.13%)
Number of ICD bound containers	7,196 (18.11%)	12,284 (22.74%)	2,278 (19.70%)	3,196 (19.39%)
Number of Direct Port Delivery (DPD) containers	2,509 (6.32%)	3,864 (07.15%)	881 (06.72%)	1,233 (07.48%)
<i>Note: a) The 'n' values represent Full Container Load (FCL) containers only, They also take into account only import containers and not re-import and transshipment containers</i>				
<i>b) Figures in brackets represent percentage share</i>				

Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD
Average dwell time (vessel berthing to container out of port) (hr)	46:39:19	111:48:41	50:06:36	55:12:47	141:52:22	80:00:57	43:09:40	136:04:28	126:43:45	66:28:24	160:44:02	131:14:06
Average terminal dwell time (hr)	57:40:25			75:38:42			67:49:36			89:35:30		
Average port dwell time (hr)	70:58:24											
<i>Note: Average port dwell time is the weighted average for all four terminals in terms of import FCL containers handled</i>												

Table 5: Vessel Berthing to Container Discharge - Import Containers for July 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD
Average time taken from vessel berthing to container discharge (hr)	11:46	12:12	11:30:08	10:40	10:54	10:35:07	7:56:54	8:13:56	8:41:13	19:46	16:49	13:39:09
Terminal average (hr)	11:50:19			10:42:55			8:03:38			18:44:16		
Port Average (hr)	11:54:56											
<i>Note: Average time for port is the weighted average for all four terminals in terms of import FCL containers handled</i>												

Table 6: Container Discharge to Container Out of Port - Import Containers for July 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD	CFS	ICD	DPD
Average time taken from container discharge to container out of port (hr)	34:53	99:31	38:36:28	44:33	130:57:27	69:24:58	35:12	127:50:33	118:02	46:42	143:54:58	117:34
Terminal average (hr)	45:50:40			64:56:01			59:45:58			70:51:31		
Port Average (hr)	59:03:19											
<i>Note: Average time for port is the weighted average for all four terminals in terms of import FCL containers handled</i>												

1.2. Transit Time - CFS and ICD

Transit time is the time taken for the container to reach the custodian - which can either be a CFS or an ICD. The rail transit time for ICD has been calculated as the difference between the time of loading on rail and time of arrival (gate-in) of the container at the ICD (Table 7). The CFS transit time is taken from the time of exit of a container from port to its arrival (gate-in) at the CFS. The same has been arrived at on the basis of field observations. For the month of July the transit time for ICD Tughlakabad could not be calculated for import containers as the relevant timestamps were not provided by the relevant agency.

Table 7: Transit Time of Import Containers from JNPT for July 2017		
Parameter	CFS	ICD Tughlakabad
Average time taken (hr)		12*
* assumed		

1.3. Customs Release Time

1.3.1 Jawaharlal Nehru Customs House (JNCH)

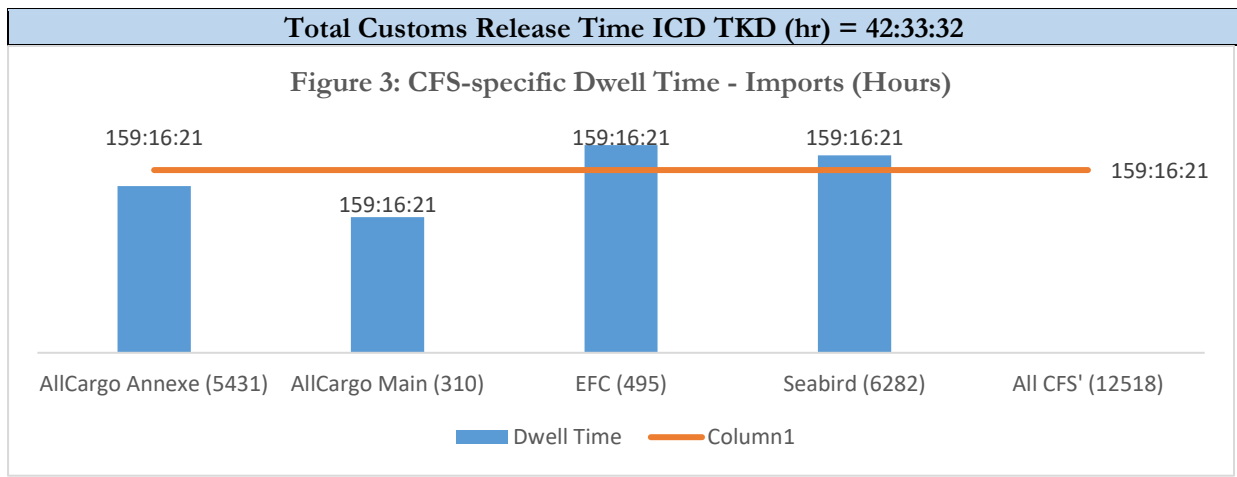
Customs release time is the time taken by the customs authorities, be it at the dock, at CFS or at ICD, to give Out-of-Charge (OOC) to a bill of entry for delivery of container(s) to the importer. It is calculated as the average time between submission of bill of entry to assessment and registration of goods to OOC [in case of RMS and Group B/E]; and registration of a container to assessment and duty payment to OOC [in case of Group (First Check) B/E]. It must be noted that the process of customs release is not linear; many agencies play a parallel role such as the PGAs, the importer/customs broker for duty payment, shipping line for delivery order and the CFS. The total number of containers under the bills of entry received for all the categories have been summarised in Table 8.

Table 8: Total Customs Release Time for JNCH (Average Time)			
	RMS*	Group	Group (First Check)
Number of Containers	67,430 (55.04%)	50,643 (41.34%)	4,435 (3.62%)
Submission of B/E to Assessment (hr)	00:25:52 (n=67,430)	65:01:57 (n=50,326)	
Registration to Examination of Goods (hr)		08:18:00 (n=33,773)	16:25:06 (n=3,383)
Examination to Out of Charge (hr)		01:15:05 (n=33,557)	
Registration of Goods to Out of Charge (hr)	01:47:29 (n=66,767)	06:47:39 (n=50,098)	
Examination to Assessment (hr)			82:15:22 (n=3,373)
Duty Payment to Out of Charge (hr)			08:36:29 (n=3,213)
Total time (hr)	2:13:21	71:49:37	107:16:57
Total Customs Release Time at JNCH (hr)= 34:47:57			
<i>*RMS – Risk Management System</i>			

1.3.2. Customs at ICD Tughlakabad

Once a container is received at ICD Tughlakabad, the customs release time starts from assessment till out of charge is given.

Table 9: Total Customs Release Time for ICD (Average Time)			
	RMS	Group	Group-II
Number of Containers	6,508 (44.62%)	6,415 (43.98%)	1,663 (11.40%)
Submission of B/E to Assessment (hr)	00:21:32 (n=6,508)	65:59:44 (n=6,256)	
Registration to Examination of Goods (hr)		10:48:22 (n=5,511)	16:54:43 (n=1,330)
Examination to Out of Charge (hr)		02:24:42 (n=5,466)	
Registration of Goods to Out of Charge (hr)	02:23:34 (n=6,193)	11:47:27 (n=6,219)	
Examination to Assessment (hr)			41:18:24 (n=1,328)
Duty Payment to Out of Charge (hr)			04:14:00 (n=1,302)
Total time (hr)	2:45:06	77:47:11	62:27:07



1.4. Custodian Dwell Time

1.4.1. CFS Dwell Time

CFS dwell time is calculated from the time of gate-in of a container at the CFS to its gate-out from the CFS. In the analysis, data from 04 CFS has been represented (refer to Table 25 – Annexure 1.1). The total average time taken by all CFS (04 could be included) has also been provided in Table 10. CFS specific dwell time for 04 CFS at the JNP has been depicted in Figure 3. Please note that the total time taken by CFS is calculated in terms of gate-in to gate-out (and not as a linear addition of time taken in the various processes) due to the sample size being different for each process and many parallel processes involving customs, customs brokers and shipping line taking place.

Table 10: CFS Specific Dwell Time for July 2017				
	A	B	C	D
CFS (04 CFS' n=12,518)	Average time taken from gate-in to seal cutting	Average time taken from seal cutting to OOC	Average time taken from OOC to Gate-out#	Total (Gate-in to gate out)*
Total	118:32:23	98:16:09	91:31:03	159:16:21

** D should be taken as the true representation of the overall CFS dwell time. However, column D should not be seen as summation of columns A, B and C because the number of entries for A,B and C is not same.*

NOTE: For July 2017, only 04 CFS' could provide data due to the malware attack on the system. The other CFS' were unable to retrieve data in time. As such only 04 CFS' have shared the data and the same has been analysed and presented in this report.

1.4.2. CONCOR (ICD Tughlakabad)

The dwell time for CONCOR (ICD Tughlakabad) is calculated from the arrival of the container at CONCOR to its gate out. Please note that this time taken by CONCOR is inclusive of the time taken by customs (Tughlakabad) to release the containers (Table 11).

Table 11: CONCOR Dwell Time for July 2017				
	A	B	C	D
	GC-FAC	Non-GC-FAC	Warehouse	Direct
Number of Containers	1904	2054	72	143
Arrival to OOC	156:13:35			
Arrival to EJO		152:16:01	161:55:27	186:53:45

EJO to DJO			67:56:12	
DJO to Destuffing			5:23:35	
EJO to OOC		69:57:09		56:42:51
De-stuffing to OOC			158:48:22	
OOO to DJO				24:58:03
OOO to Gate pass	12:44:23	6:46:32	56:16:59	
DJO to Gate Pass				4:59:00
Gate Pass to Departure	20:33:42	16:36:05	1:47:43	3:57:24
Total time (hr)	189:17:56	244:58:28	311:08:35	272:48:36
Total CONCOR Dwell Time for ICD TKD (hr) = 221:40:46				
<i>GC-FAC : Green-Channel Factory Stuffed Containers</i>				
<i>Non GC-FAC: Non Green-Channel Factory Stuffed Containers</i>				
<i>Warehouse: Cargo gate-in in closed trucks and offloaded in warehouse for Customs examination, followed by stuffing into container</i>				
<i>Direct: Cargo gate-in in closed trucks, followed by Customs examination on truck and direct loading into container</i>				

1.5. Other Supporting Agencies

1.5.1. Shipping Line - Delivery Order

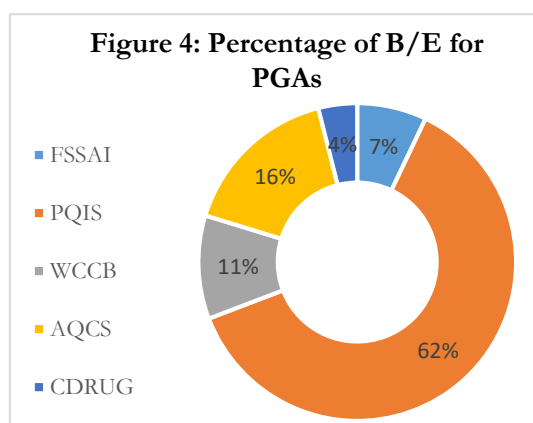
The shipping line provides delivery order (DO) as a final confirmation for delivery of cargo to the customs broker. Any delay by the shipping line in providing delivery order gets added to the total dwell time of the container at CFS/ICD. Some DOs are given after issue of OOC by customs, while others are generated at the same time or prior to OOC (Table 12).

In the month of July 2017, only one CFS (EFC) could provide the data about the SLDOs. Therefore, the number of DOs reflected in Table 12 are lower than the actual number of containers going to the CFS from both terminals in Table 3.

Table 12: Average Time Taken for Generation of Delivery Orders by Shipping Lines	
Total no. of DO	495
No. of DOs prior to OOC	176
No. of DOs given post OOC	133
No. of DOs received on same day as OOC	186
Average time taken from CFS gate-in to receiving delivery order	145:26:15

1.5.2. Partner Government Agencies (PGAs)

Partner government agencies (PGAs) are the allied agencies that are required to examine and provide clearance to certain types/categories of cargo. They play a key role in the overall process of cargo clearance. In an earlier practise, the time required by these agencies was added in the customs release time, however, some cargo (particularly perishable) is now released before the arrival of report by PGAs on the basis of a bond guarantee. While the time taken by these agencies may not add to the overall dwell time, it is important to note that some agencies take as much as 10 days to publish reports despite initiation of SWIFT in April, 2016. This report analyses the time taken from sample collection to publishing of report by five PGAs - Drug controller

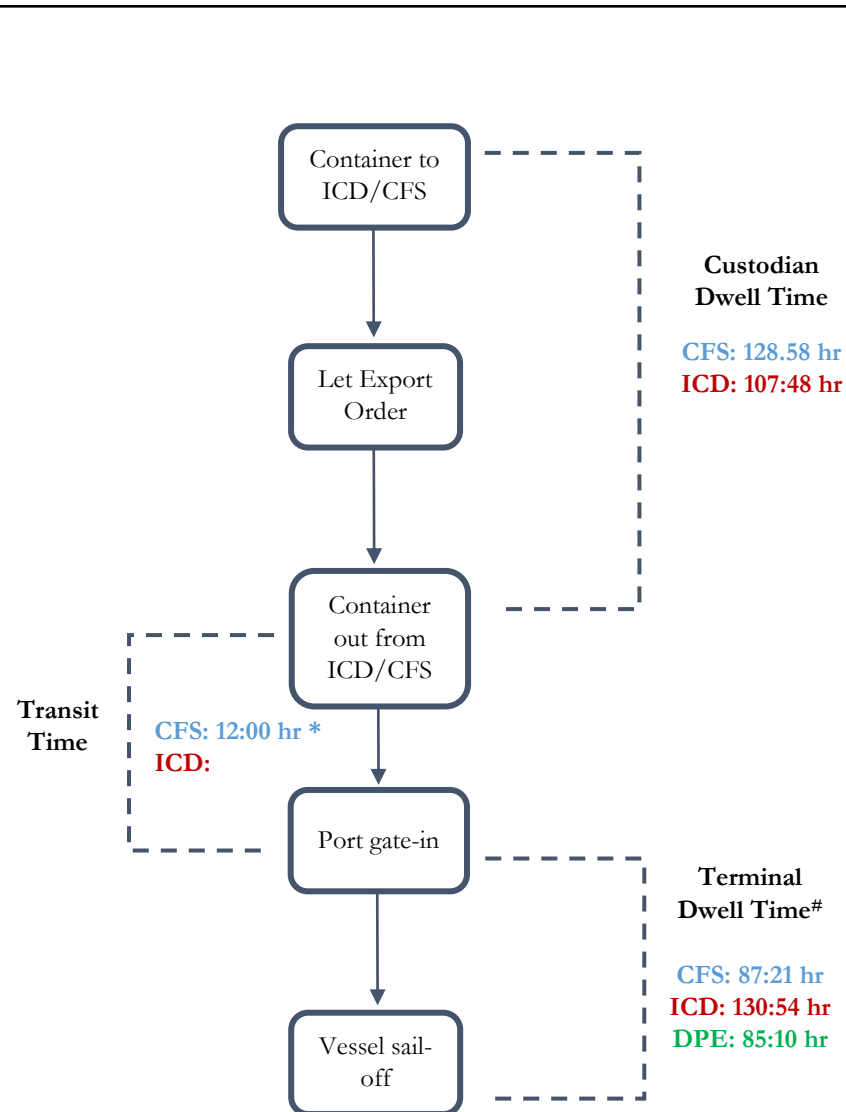


(CDrug), Animal Quarantine (AQ), Wildlife Crime Control Bureau (WCCB), Food Safety and Standards Authority of India (FSSAI) and Plant Quarantine (PQ) (Table 13). Please note that the reports for some agencies like PQ and FSSAI may also be received after out-of-charge due to nature of the cargo.

Table 13: Average Time Taken by PGAs in July 2017					
	CDRUG	AQCS	WCCB	FSSAI	PQIS
Total number of containers (n)	826	1,697	2,355	4,191	15,768
Time taken from sample collection to report publishing (hr)	90:37:23	196:16:57	81:13:10	149:07:24	185:45:27

EXPORT

Figure 5: Export process at the Jawaharlal Nehru Port



Total time taken for exports (Containers from CFS): 228:20 hr**
Total time taken for exports (Containers from ICD): 238:42 hr##
Total time taken for exports (DPE containers): 85:10 hr***

*Assumed

** Inclusive of assumed transit time

*** Inclusive of assumed Customs release time

Weighted averages

Exclusive of transit time

2. Export Process

The export cycle starts from filing of the shipping bill to vessel sail off from the port. In between, various processes take place and a minimum of five agencies play a role, which can be assessed in terms of terminal dwell time, road/rail transit time, customs release time and custodian (CFS/ICD) dwell time (Figure 5).

2.1. Customs Release Time

2.1.1. Jawaharlal Nehru Customs House (JNCH)

Customs release time is calculated from the time of registration of goods in the customs system to the generation of Let Export Order (LEO) at JNCH.

Table 14: JNCH Dwell Time for Exports for July 2017	
Total no. of shipping bills (n)	96,833
Average time taken from registration of goods to issuance of LEO (hr)	4:17:31

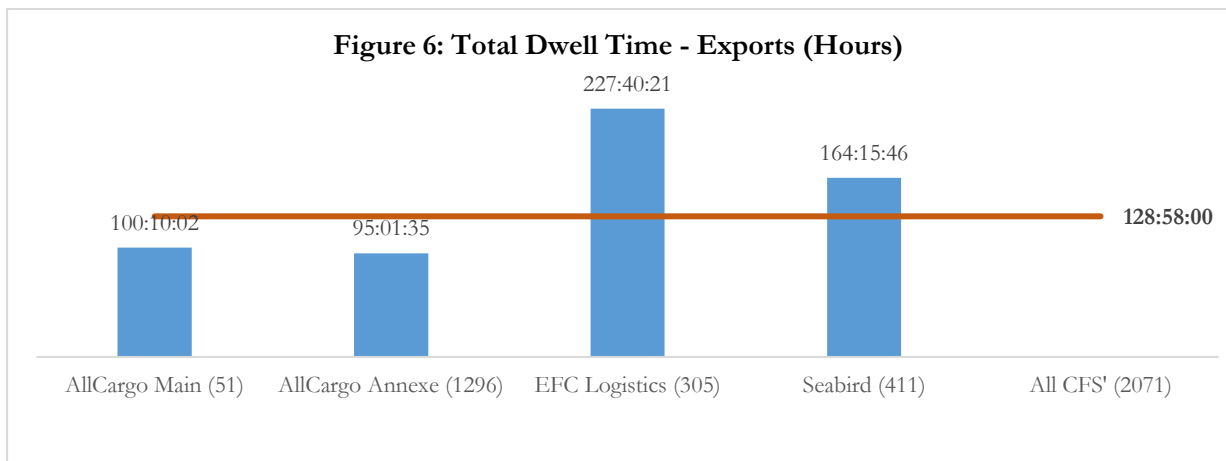
2.1.2. Customs ICD Tughlakabad

Customs ICD Tughlakabad dwell time is calculated from registration of goods in the customs system to issuance of LEO at the ICD.

Table 15: Customs ICD Tughlakabad Dwell Time for Exports for July 2017	
Total no. of shipping bills	8,483
Average time taken from registration to issuance of LEO (hr)	17:32:10

2.2. Custodian Dwell Time

CFS dwell time is calculated from the issue of export carting order to the gate-out of container from CFS. The generation of shipping bill (S/B) is not taken as the starting point for this activity because some S/Bs are filed prior to export carting order, while others are filed post the same. Figure 6 shows the total dwell time individually for all the CFS' assessed. Further, Table 16 provides the overall average time taken for major processes with respect to the 04 CFS' analysed.



2.2.1. CFS Dwell Time

Table 16: CFS Specific Dwell Time for July 2017				
	A	B	C	D
CFS (04 CFS' n= 2,071)	Average time taken from Export Carting Order (ECO) to container stuffing	Average time taken from container stuffing to movement order	Average time taken from movement order to gate out	Total (ECO to gate out)*
Total	102:06:07	23:11:04	11:11:19	128:58:55
*D should be taken as the true representation of the overall CFS dwell time. However, column D should not be seen as summation of columns A, B and C because the number of entries for A,B and C are not the same				

2.2.2. CONCOR (ICD Tughlakabad)

CONCOR (ICD Tughlakabad) dwell time is calculated from gate-in of a container at CONCOR to its loading on wagon for rail transit to the port.

Table 17: CONCOR Dwell Time			
	A	B	C
	GC-FAC	Warehouse	Direct
Number of Containers	589	309	03
Arrival to CRN	25:50:51		
Arrival to LEO		66:54:54	22:31:19
CRN to LEO	23:49:31		
LEO to Loading	32:36:57		
LEO to Stuffing		24:33:30	0:33:33
Stuffing to Sealing		10:00:34	1:16:09
Sealing to Loading		55:39:24	37:13:32
Loading to Dispatch	1:47:03	1:28:38	7:40:01
Arrival to Dispatch (hr)	83:43:44	154:05:29	69:14:34
Total CONCOR Dwell Time for ICD TKD (hr) = 107:48:42			
<i>GC-FAC : Green-Channel Factory Stuffed Containers</i>			
<i>Non GC-FAC: Non Green-Channel Factory Stuffed Containers</i>			
<i>Warehouse: Cargo gate-in in closed trucks and offloaded in warehouse for Customs examination, followed by stuffing into container</i>			
<i>Direct: Cargo gate-in in closed trucks, followed by Customs examination on truck and direct loading into container</i>			

2.3. Transit Time - CFS and ICD

Export transit time is the time taken for the container to reach the port. The rail transit time for ICD has been calculated based on the difference between the time of loading on rail and arrival (gate-in) of the container at the port (Table 18). The CFS transit time has been taken from the time of exit of a container from CFS to its arrival (gate-in) at the port. This figure has been assumed on the basis of field observations. For the month of July the transit time for ICD Tughlakabad could not be calculated for export containers as the relevant timestamps were not provided by the relevant agency.

Table 18: Transit time of Export Containers to JNPT for July 2017		
Parameter	CFS	ICD Tughlakabad
Average time taken (hr)		12*
* assumed		

2.4. Terminal Dwell Time

Terminal dwell time is calculated as the time taken from arrival of a container at the port to the time of vessel sail off. The categorisation of containers as well as the overall average dwell time and average time taken stage-wise have been represented in Table 19, Table 20, Table 21 and Table 22.

Table 19: Categorisation of Export Containers for July 2017				
Parameter	JNPCT (n)	GTICT (n)	NSICT (n)	NSIGT (n)
Total number of export containers	23,795	31,930	20,442	13,901
Number of containers from CFS	8,571 (36.02%)	10,258 (32.13%)	-	-
Number of containers from ICD	2,948 (12.38%)	6,335 (19.84%)	4,988 (24.40%)	2,948 (21.21%)
Number of Direct Port Entry (DPE)	12,276 (51.60%)	15,337 (48.03%)	15,454 (75.60%)	10,953 (78.79%)
<i>Note: a) The containers from NSICT and NSIGT has been classified on the basis of mode (outbound carrier) - Rail and Truck. The containers with the mode "Truck" have been taken as DPE for analysis</i>				
<i>b) For GTICT, DPE includes both Factory Stuffed and ICD by Road as has been reported</i>				
<i>c) The 'n' values represent Full Container Load (FCL) containers only, They also take into account only export containers and not re-export and transshipment containers</i>				
<i>d) Figures in brackets represent percentage share</i>				

Table 20: Dwell Time of Export Containers for July 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE
Average dwell time (container arrival at port to vessel sail off) (hr)	86:43:57	133:24:15	88:57:05	87:52:57	140:07:52	88:57:34	-	124:21:56	79:08:49	-	119:37:24	84:08:28
Average terminal dwell time (hr)	93:39:34			98:46:01			90:10:50			91:38:59		
Average port dwell time (hr)	94:22:14											
<i>Note: Average port dwell time is the weighted average for all four terminals in terms of export FCL containers handled</i>												

Table 21: Container Loading to Vessel Sail Off - Export Containers for July 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE
Average time from container loading to vessel sail off (hr)	15:35:22	13:56:14	14:50:37	10:33:29	10:20:04	10:00:37	-	10:25:54	10:05:21	-	13:00:23	10:59:36

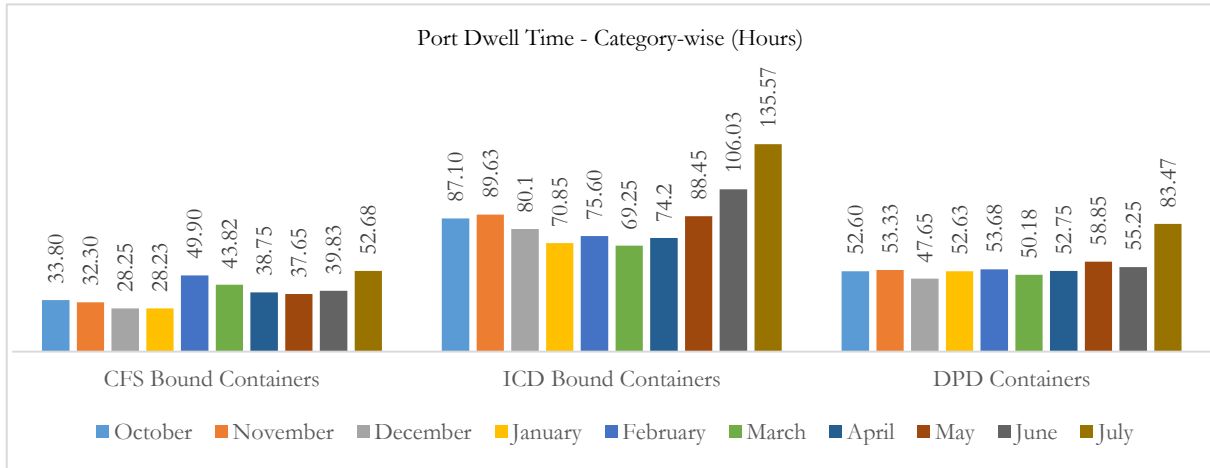
Terminal Average (hr)	15:00:07			10:15:02			10:10:22			11:24:31		
Port Average (hr)	11:38:35											
<i>Note: Average time for port is the weighted average for all four terminals in terms of export FCL containers handled</i>												
Table 22: Container Arrival to Container Loading - Export Containers for July 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE
Average time from container arrival at port to container loading (hr)	71:41:31	120:14:12	74:36:12	77:19:27	129:47:48	78:56:49	-	113:56:01	69:03:28	-	104:04:33	72:07:20
Terminal Average (hr)	79:12:30			88:30:51			80:00:28			78:51:38		
Port Average (hr)	82:39:16											
<i>Note: Average time for port is the weighted average for all four terminals in terms of export FCL containers handled</i>												

3. Trend Analysis

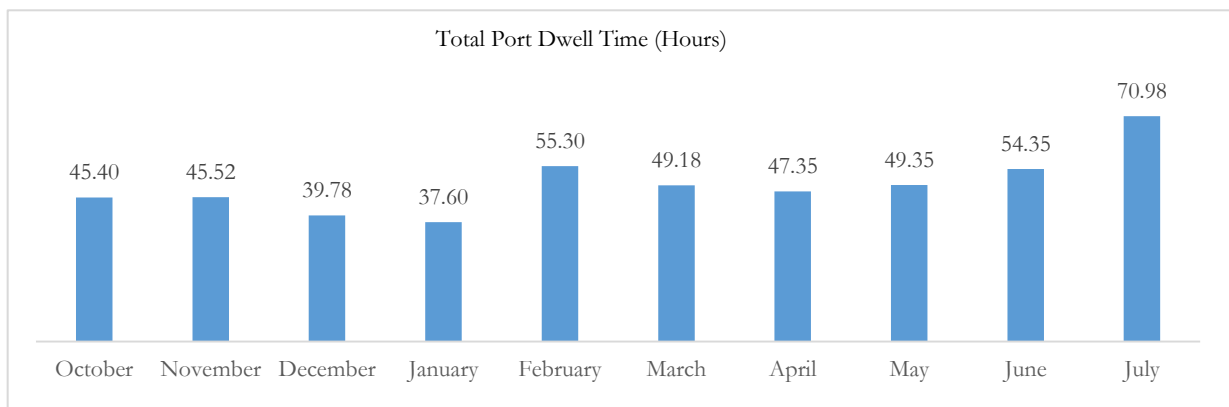
This section aims at analysing the trends in key metrics pertaining to the import and export value chains encompassing the JNP. The monthly comparison of the metrics have been depicted below:

3.1. Imports

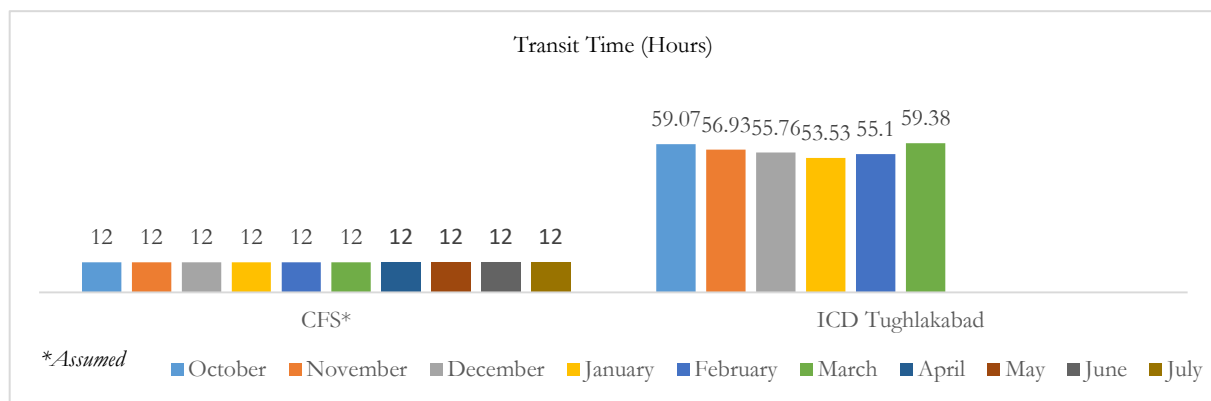
3.1.1. Port Dwell Time – Category-wise



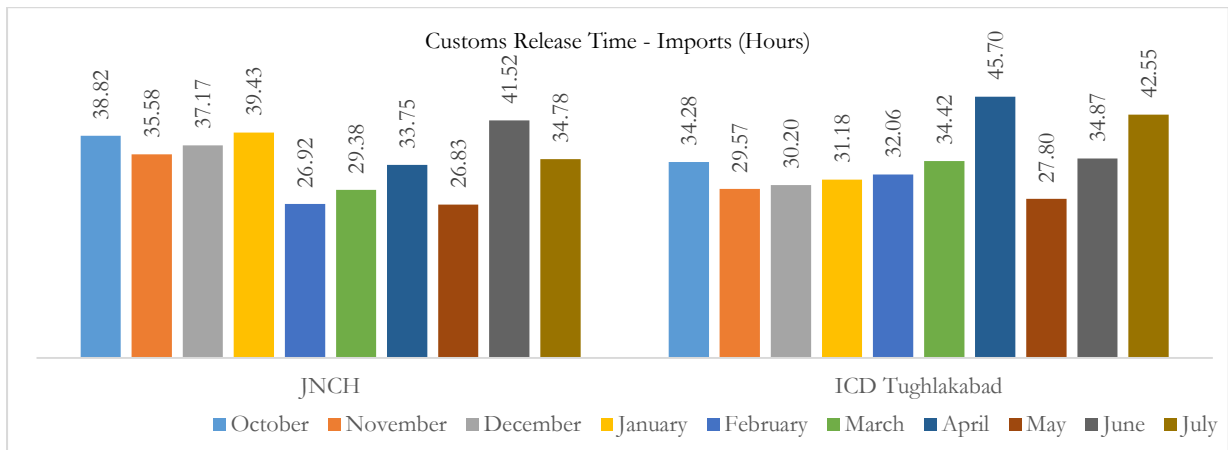
3.1.2. Total Port Dwell Time - All Terminals



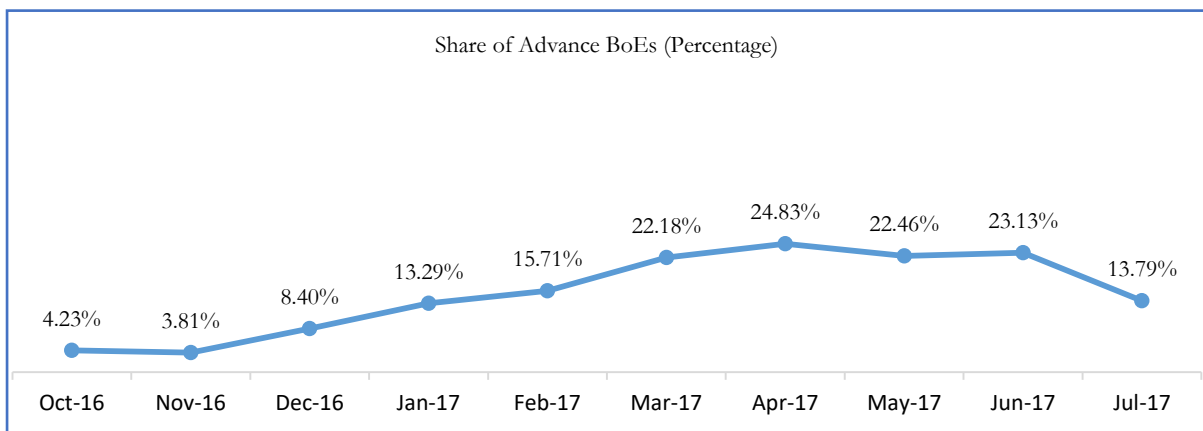
3.1.3. Transit Time



3.1.4. Customs Release Time

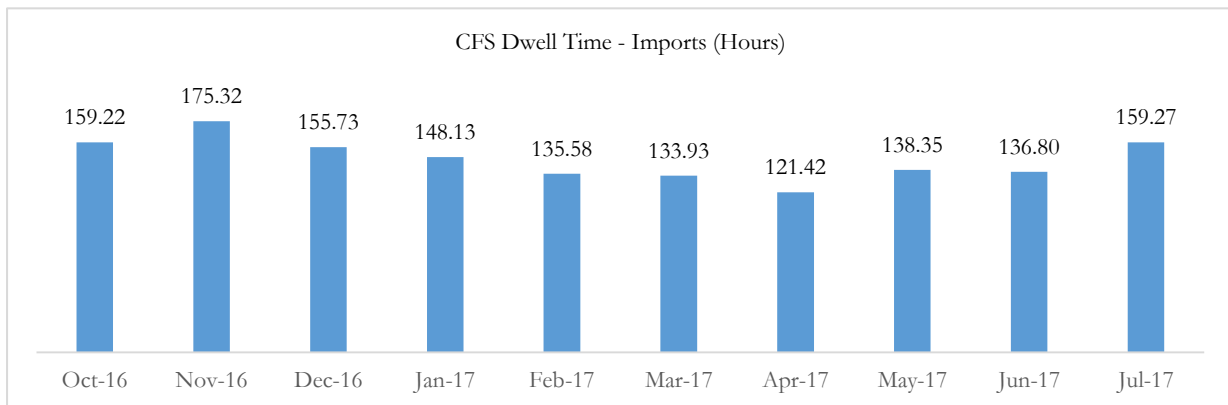


3.1.5. Advance Bill of Entry

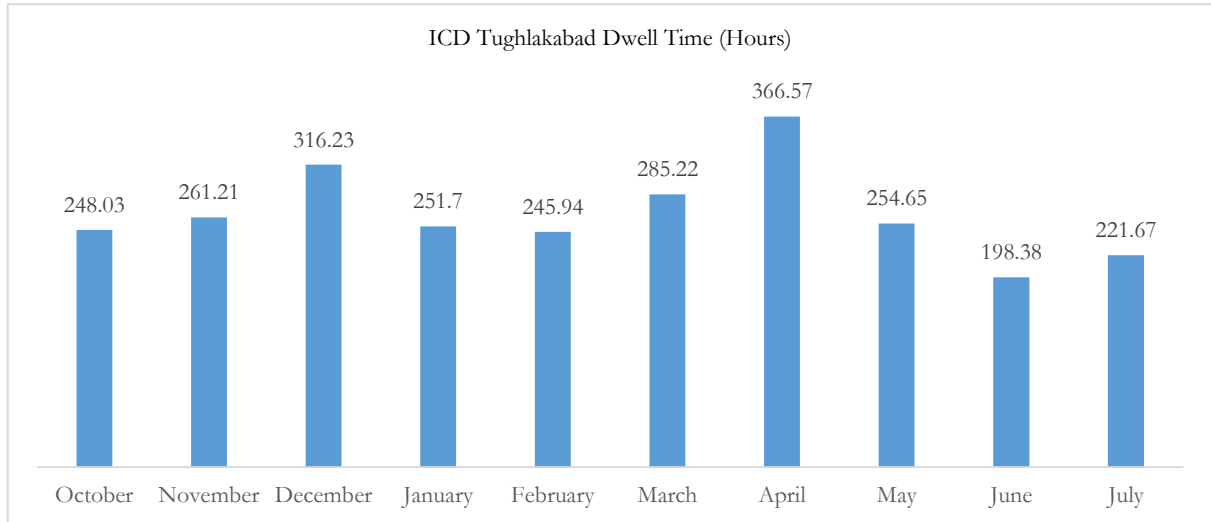


3.1.6. Custodian Dwell Time

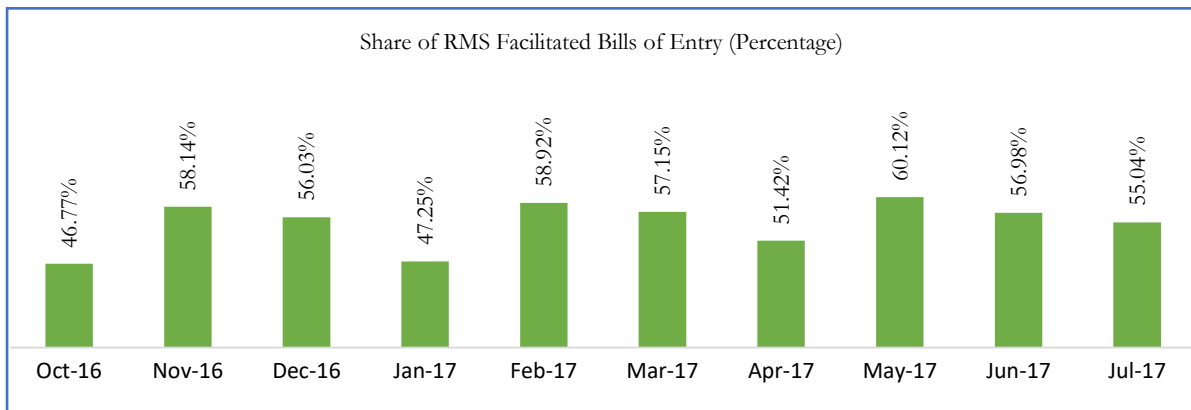
i) CFS



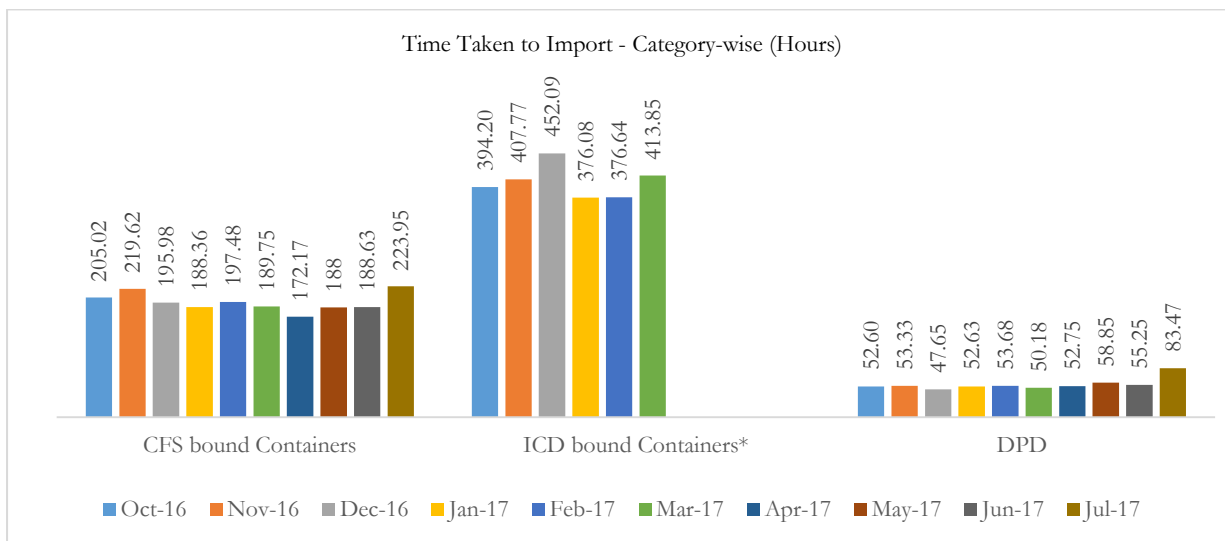
ii) CONCOR (ICD Tughlakabad)



3.1.7. RMS Bills of Entry- JNCH



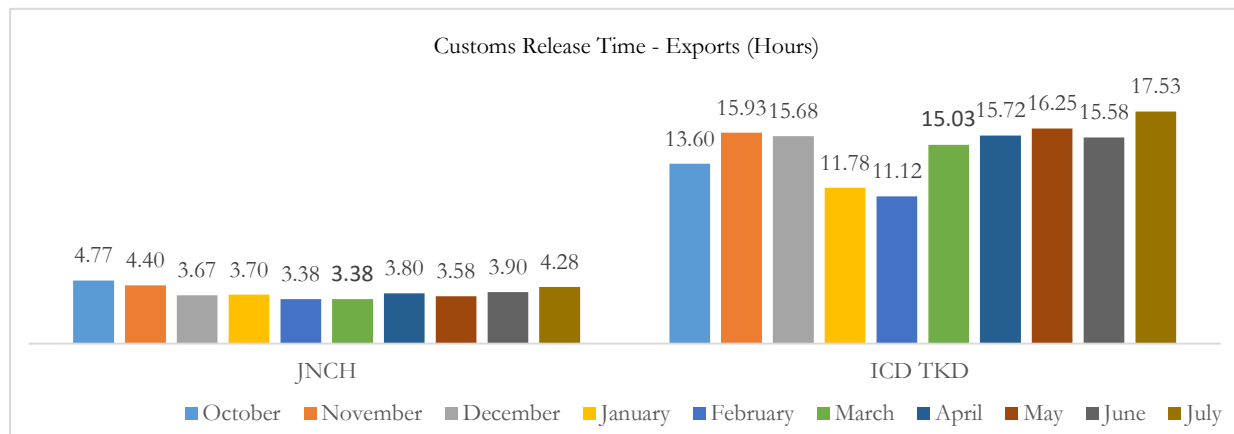
3.1.8. Total Import Time – Category-wise



* As ICD transit time for the months of April, May, June and July are not available, total ICD dwell time is not reflected in the above figure.

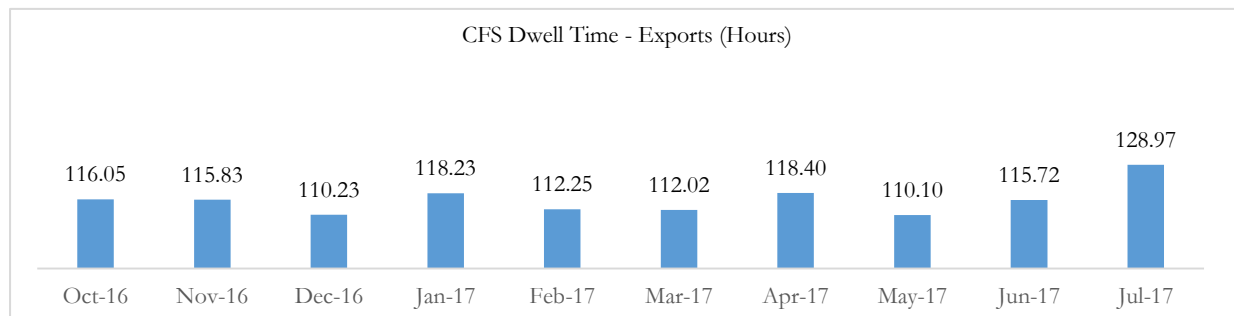
3.2. Exports

3.2.1. Customs Release Time

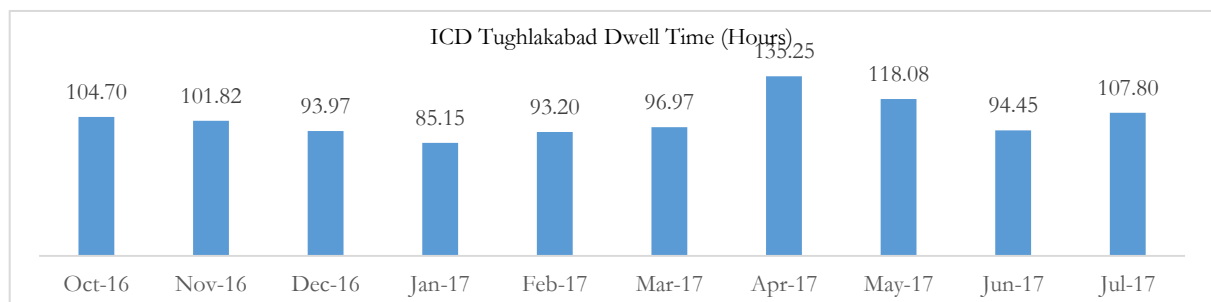


3.2.2. Custodian Dwell Time

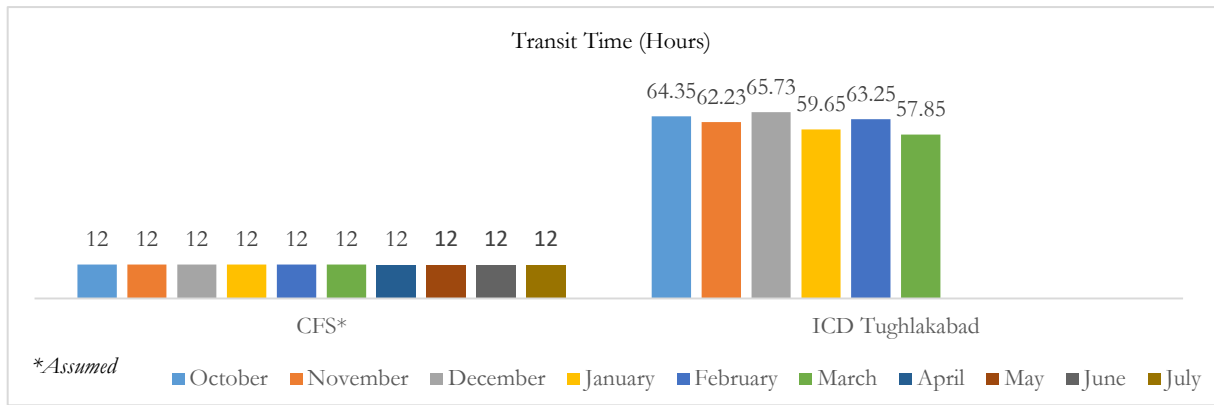
i) CFS



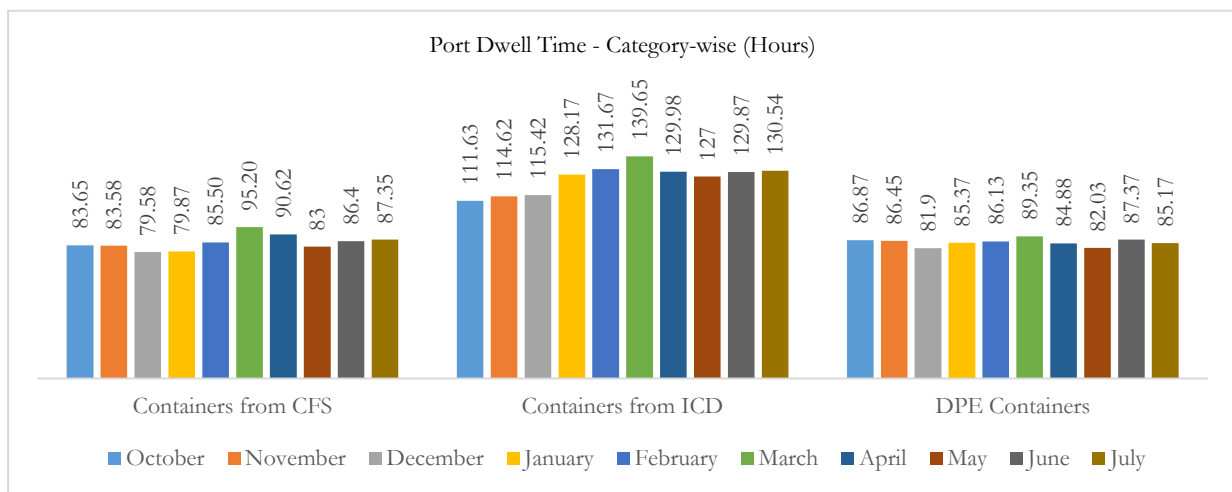
ii) ICD Tughlakabad



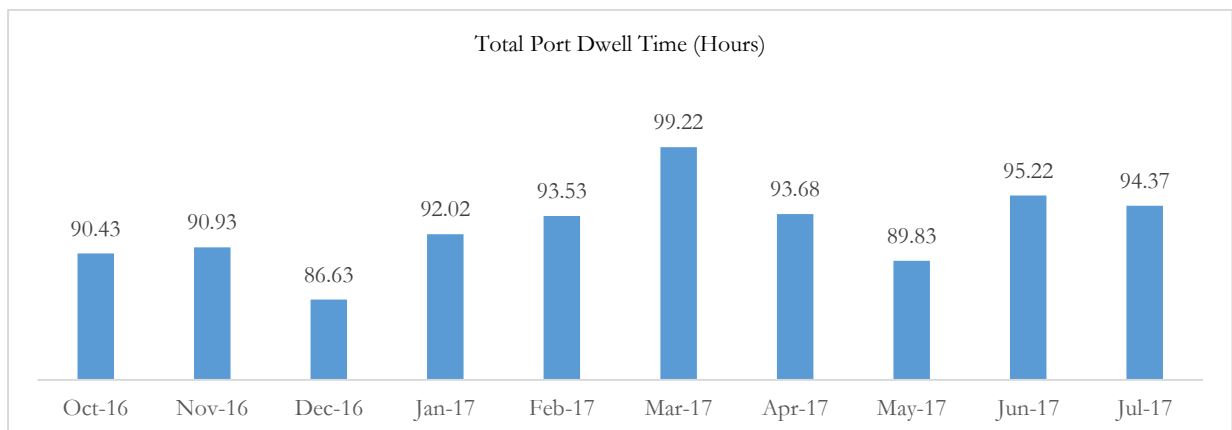
3.2.3. Transit Time



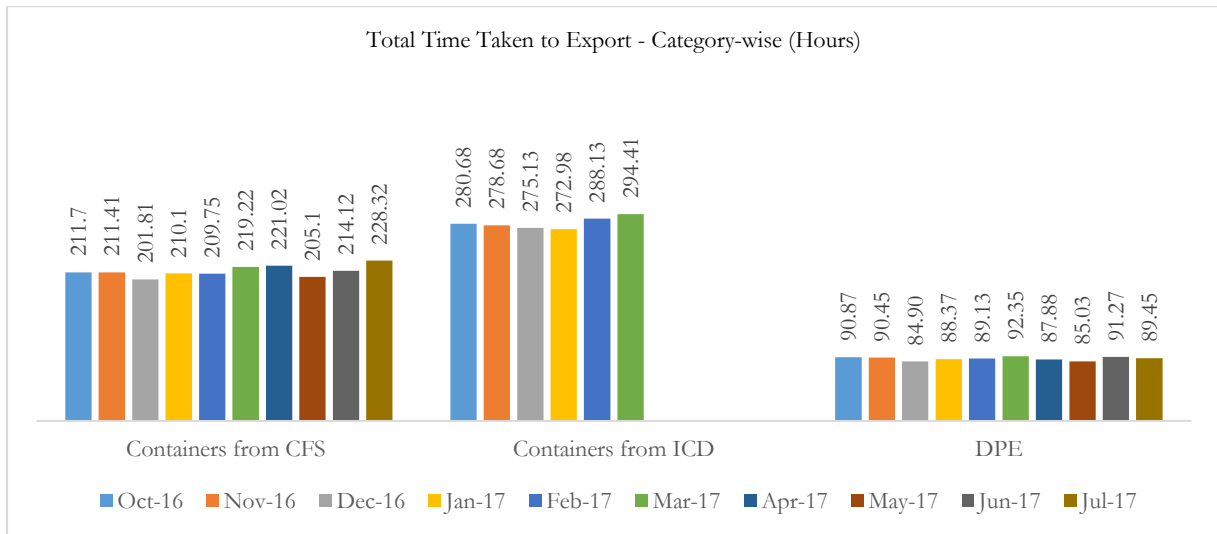
3.2.4. Port Dwell Time – Category-wise



3.2.5. Total Port Dwell Time - All terminals



3.2.6. Total Export Time – Category-wise



* As ICD transit time for the months of April, May, June and July are not available, total ICD dwell time is not reflected in the above figure.

** Total time for DPE is inclusive of customs release time (assumed)

ANNEXURE 1 - Imports

1.1. CFS Dwell Time

Table 23: CFS Specific Dwell Time for July 2017				
	A	B	C	D
CFS	Average time taken from gate-in to seal cutting	Average time taken from seal cutting to OOC	Average time taken from OOC to Gate-out	Total (Gate-in to gate out)
Total	118:32:23	98:16:09	91:31:03	159:16:21
AllCargo Main	56:54:37	314:13:57	122:29:11	118:09:27
AllCargo Annexe	112:49:38	64:39:28	89:53:56	145:13:36
EFC	145:27:08	32:00:00	88:29:05	181:07:41
Seabird	126:33:59	NA	NA	171:59:26

1.2. Dwell Time by PGAs

Table 24: Average Time Taken by PGAs in July 2017					
	CDRUG	AQCS	WCCB	FSSAI	PQ
Total number of Containers (n)	826	1697	2355	4191	15768
Time taken from B/E filing to sample collection (hr)	14:18:58	16:36:43	16:27:38	N/A	N/A
Time taken from sample collection to report publishing (hr)	90:37:23	196:16:57	81:13:10	149:07:24	185:45:27

ANNEXURE 2 - Exports

2.1. CFS Dwell Time

Table 25: CFS Specific Dwell Time for July 2017				
CFS	Average time taken from Export Order to container stuffing	Container stuffing to movement order	Movement order to gate out	Total (ECO to gate out)
Total	102:06:07	23:11:04	11:11:19	128:58:55
AllCargo Main	54:59:34	43:30:42	6:30:26	100:10:02
AllCargo Annexe	76:43:03	20:00:12	4:30:47	95:01:35
EFC	198:16:22	26:52:27	6:03:10	227:40:21
Seabird	116:15:46	27:12:14	21:18:03	164:15:46