Study on Timeline of Export and Import of Containers through JNPT

June 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.

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

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 2: World Bank's Estimate of Trading Across Borders through Mumbai				
Parameter	Time to Export (Hours)		Time to Import (Hours)	
Year	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

1. 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.
2. To calculate the time taken for import and export of Containers through JNPT on a monthly basis.
3. 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 transhipment. 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 recoded 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 may 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 07 CFS', only 03 CFS' recorded the time of shipping line delivery order. For the month of June 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.

IMPORT DWELL TIME

PORT DWELL TIME 54.35 HR

CFS Bound Containers: 39.83 hr

ICD Bound Containers: 106.03 hr

DPD Containers: 55.25 hr

PORT DWELL TIME

CUSTOMS RELEASE TIME

JNCH: 41.52 hr

ICD TKD: 34.87 hr

136.80 HR

INLAND CONTAINER DEPOT TUGHLAKABAD

198.38 HR

TOTAL IMPORT TIME

CFS bound containers: 188.63 hr

ICD bound containers: 304.41 hr

DPD containers: 55.25 hr

EXPORT DWELL TIME

PORT DWELL TIME 95.22 HR

CFS Bound Containers: 86.40 hr

ICD Bound Containers: 129.87 hr

DPD Containers: 87.37 hr

PORT DWELL TIME

CUSTOMS RELEASE TIME

JNCH: 03.90 hr

ICD TKD: 15.58 hr

115.72 HR

INLAND CONTAINER DEPOT TUGHLAKABAD

94.45 HR

TOTAL EXPORT DWELL TIME

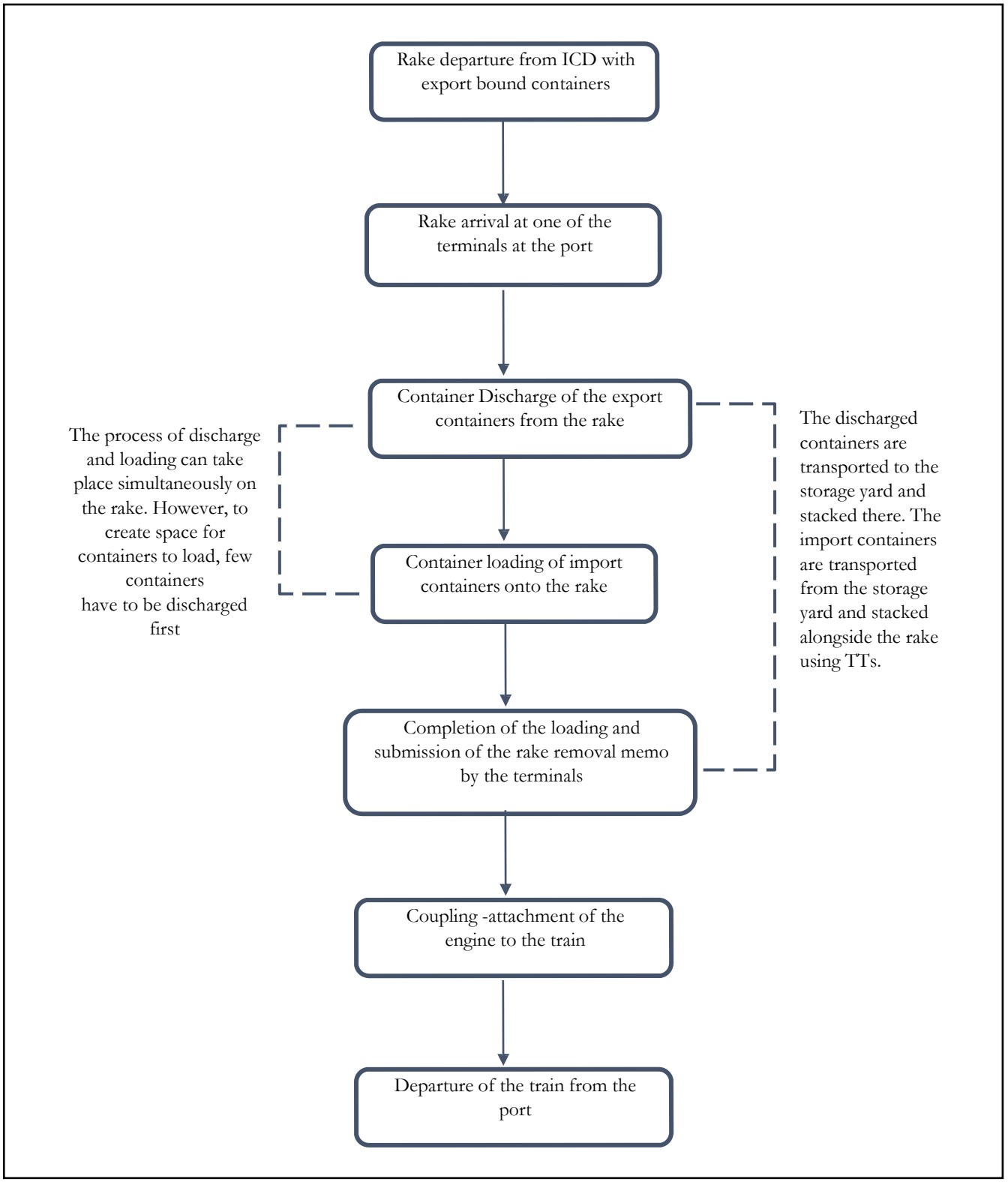
CFS bound containers: 214.12 hr

ICD bound containers: 224.32 hr

DPE containers: 91.27 hr

RAKE HANDLING

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



RAKE HANDLING AND EVACUATION TIME

ARRIVAL TO COMPLETION TIME

07:45 Hr

This is the average time taken from the arrival of rake to the completion of loading at the terminal

HAUL TIME

03:44 Hr

This is the average time taken from the completion of container loading to the attachment of the engine to the rake

DECLARATION TIME

00:35 Hr

This is the average time taken by Railways to declare the destination of the rake after the arrival of rake

TOTAL RAKE HANDLING TIME

11:30 Hr

This is the average time taken from the arrival of the rake to the departure of the rake from the terminal at the JNP

380	RAKES
311	CONCOR
69	PRIVATE OPERATORS
26472	DISCHARGED TEUS
30781	LOADED TEUS

Qualitative Insights

- **There are more mixed rakes than dedicated rakes arriving at the terminal making unloading and loading time consuming ad operationally challenging:** It has been observed that more than 90 per cent of export bound trains coming into the JNP comprise of mixed rakes – rake carrying containers bound for different terminals. This leads to operational challenges at the terminal with respect to the unloading of export containers and loading of import containers. The issue gets further complicated with the final positioning of export bound rake inside the port. The rake placement, it has been observed, is decided on the basis of the availability of the track and not on the basis of the destination (terminal) of the majority of containers. The current practice, at the JNP, is that an export bound train places the rake on the available track. The unloading of export containers and loading of import containers takes place on the same track. Since the rake contains mixed containers, the containers unloaded from the rake at a particular track (in a particular terminal) need to be transported to their respective terminals using TTs. This is a time-consuming process given that the fact that the import containers from other terminals also need to be transported to the terminal where the rake is placed.
- **Random loading of containers at the ICDs:** The current practice of loading export bound containers onto the rake at ICDs is performed on the first come first serve basis. Containers bound for different terminals are placed in a random sequence onto the rake which makes the discharge of these containers at the terminal very challenging and time-consuming.
- **Unplanned sequencing of containers on the rake at ICDs:** In order to reduce the number of crane moves and speed up the process of loading and unloading on the rake, two TEUs are hinged together and lifted as one container. Due to the unplanned loading of containers at the ICDs, two containers bound for different terminals are sometimes joined together which requires more crane moves and extra time to unload at the terminal, thereby adding to the overall dwell time of the containers.
- **Paucity of TTs at the terminal:** It was also observed that sometimes the rake evacuation process is further delayed because of the paucity of the TTs. In case a terminal has its vessel interface going on (containers being loaded onto the vessel) the TTs are used for vessel interface and as such, the rake interface gets delayed.
- **Post arrival declaration by Railways:** In order to reduce the train turnaround time, the destination of an arriving train needs to be communicated to the terminals prior to the arrival of the train. This would encourage pre-stacking of the import containers for that particular destination and reduce the overall dwell time. The current process, however, is that the railway makes the declaration after the arrival of the train at the JNP. This leads to significant delays in the train turnaround time and the overall dwell time of containers at the port.
- **Late submission of Rake Removal Memo:** After the completion of the loading process, the rake has to wait for the engine which generally takes 3-4 hours. This process is further delayed due to late submission of rake removal memo – intimation by terminals to the railways that the loading has finished. The rake removal memo has to be submitted by all the terminals whose containers have been

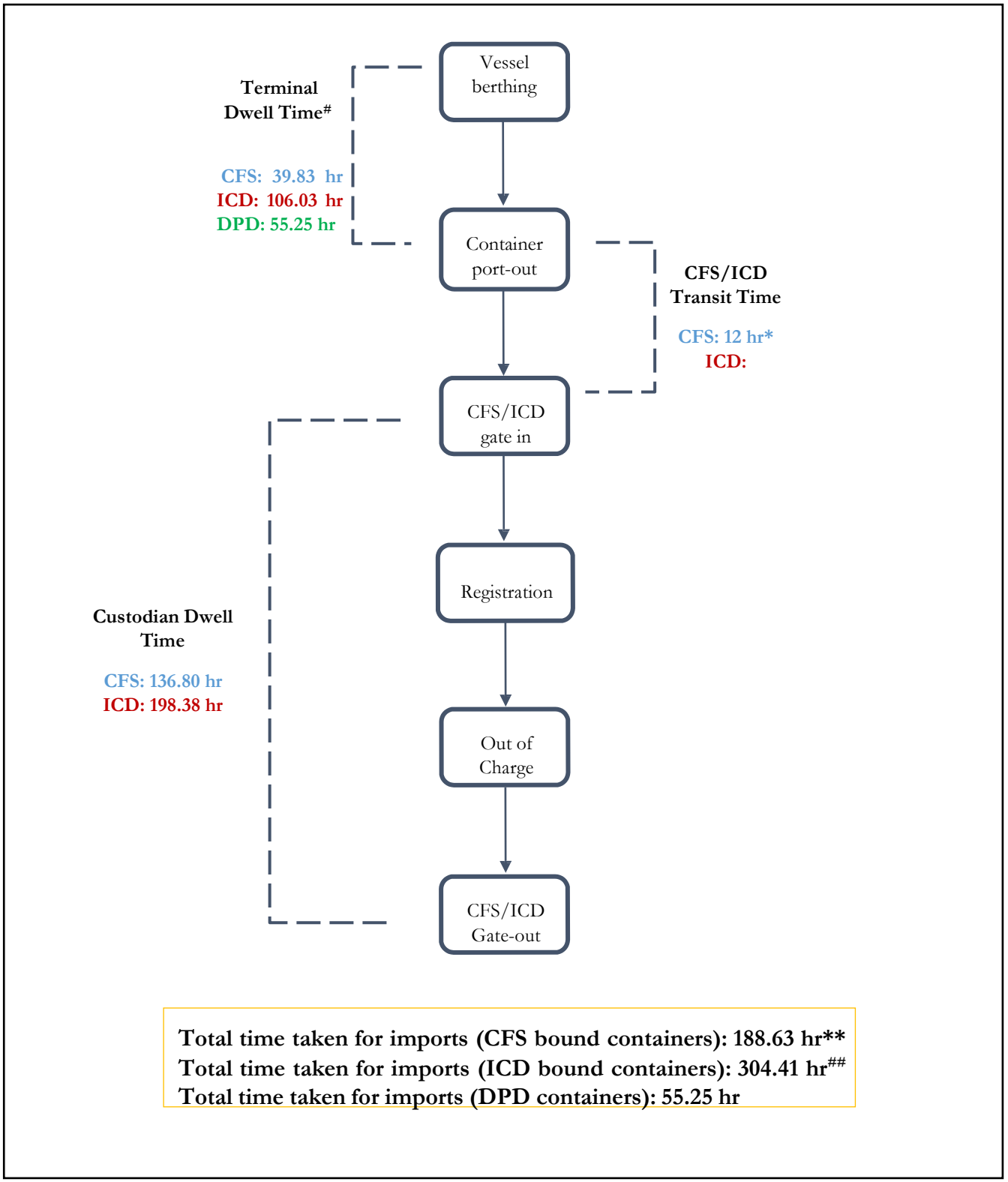
loaded onto the rake, post which the rake can leave the terminal. Since the loading is carried out at one terminal, the real-time submission of rake removal memo by other terminals is not possible. Presently, the terminal sends intimation to other terminals about the completion of loading after which they send the rake removal memo. The rake removal memo cannot be submitted by one terminal because it does not have all the details of the containers coming from other terminals. In order to overcome this issue, JNPT has started a web portal –itcorp.jnpt – which will be an interface platform for all the stakeholders - terminals, port, railways, ICDS, etc. However, currently the portal is not being used by all the stakeholders.

- **Low pendency of private rake operators:** The dwell time for the top ICD locations (5 ICDs) is between 3 - 4 days. However, for other ICDs the dwell time is between 10-14 days which increases the overall dwell time. The low pendency of private operators further adds to the dwell time as rakes have to wait for full container load.
- **Decrease in the rail share at the JNP:** The rail share at the JNP has seen a downward trend from 26 per cent in 2009-10 to 14.64 per cent in 2016-17. The rail share has further declined to 13.95 per cent during the first quarter of 2017-18. The slump in the rail share at the JNP has resulted in a decrease in the frequency of trains. With lesser frequency of trains coming from ICDs, the import bound containers stay at the port for a longer period of time adding to their dwell time at the terminals.
- **Significant freight difference between rail and road at JNP:** Significant difference between rail and road freight is one of the major factors leading to the decrease in the rail share at the JNP. The rail fare for moving an FEU container from Delhi to JNPT is about INR 70,000 against a road fare of INR 50,000. Owing to short distance slab of Railways being 50 Km, rail fare to CFS in the vicinity of 20 to 25 Km is INR 4,000 against road fare of INR 2,500.

- **Free period for the rail bound containers at the terminals needs to be reduced:** The free period for rail bound containers at the port is 7 days. It has been observed that rail bound containers arrive well before their scheduled vessel sail off time which adds significant time to the overall dwell time of the containers. The free period can be brought down to 4 or 3 days bringing it at par with the road bound containers.

IMPORT

Figure 2: Import process at the Jawaharlal Nehru Port



**Assumed*

*** Inclusive of assumed transit time*

#Weighted averages

Exclusive of transit time

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), Nhava Sheva International Container Terminal (NSICT) and Nhava Sheva International Gateway Terminal (NSIGT) is close to 54.10 hours, 52.92 hours and 56.57 hours respectively. Further categorisation of containers and analysis of time taken – overall and stage-wise - have been provided in Table 5, Table 6, Table 7 and Table 8. 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.

Table 5: Distribution of Import Containers for June 2017

Parameter	JNPCT (n)	GTICT (n)	NSICT (n)	NSIGT (n)
Total number of import containers	**36,802**		**13,013**	**12,276**
Number of CFS bound containers	26,498 (72.00%)		8,692 (66.80%)	8,900 (72.50%)
Number of ICD bound containers	7,499 (20.38%)		2,912 (22.38%)	2,600 (21.18%)
Number of Direct Port Delivery (DPD) containers	2,807 (7.62%)		1,409 (10.82%)	776 (06.32%)

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 transhipment containers
b) Figures in brackets represent percentage share
c) Data for GTICT was not available for the month of June due to ransomware attack on the terminal systems

Table 6: Dwell Time of Import Containers for June 2017

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)	41:17:19	108:32:26	43:50:24				34:31:37	98:07:47	72:59:42	40:44:14	108:25:30	64:22:22
Average terminal dwell time (hr)	**54:06:49**						**52:55:29**			**56:34:02**		
Average port dwell time (hr)	**54:21:08**											

Note: Average port dwell time is the weighted average for all four terminals in terms of import FCL containers handled

Table 7: Vessel Berthing to Container Discharge - Import Containers for June 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)	12:49:46	12:11:07	12:52:55				6:47:19	6:28:43	7:17:49	10:50:00	11:14:57	9:37:43
Terminal average (hr)	**12:42:08**						**6:46:27**			**10:50:43**		
Port Average (hr)	**11:05:33**											
Note: Average time for port is the weighted average for all four terminals in terms of import FCL containers handled												

Table 8: Container Discharge to Container Out of Port - Import Containers for June 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)	28:28:01	96:36:20	30:57:29				27:44:18	91:39:04	65:41:53	29:54:14	97:10:32	54:44:39
Terminal average (hr)	**41:27:17**						**46:09:02**			**45:43:19**		
Port Average (hr)	**43:18:15**											
Note: Average time for port is the weighted average for all four terminals in terms of import FCL containers handled												

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 9). 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 June 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 9: Transit Time of Import Containers from JNPT for June 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 and the CFS. The total number of bills of entry received for all the categories have been summarised in Table 10.

Table 10: Total Customs Release Time for JNCH (Average Time)

	RMS	**Group**	**Group (First Check)**
Number of Containers	**60,799 (54.80%)**	**45,399 (40.92%)**	**4,752 (4.28%)**
Submission of B/E to Assessment (hr)	00:10:05 (n=60,798)	80:53:36 (n=45,063)	
Registration to Examination of Goods (hr)		08:00:56 (n=30,201	14:35:25 (n=3,374)
Examination to Out of Charge (hr)		01:23:35 (n=30,148)	
Registration of Goods to Out of Charge (hr)	02:22:40 (n=60,798)	06:58:02 (n=44,904)	
Examination to Assessment (hr)			72:55:53 (n=3,366)
Duty Payment to Out of Charge (hr)			09:54:05 (n=3,064)
Total time (hr)	**2:32:45**	**87:51:38**	**97:25:23**
Total Customs Release Time at JNCH (hr)= 41:31:08			

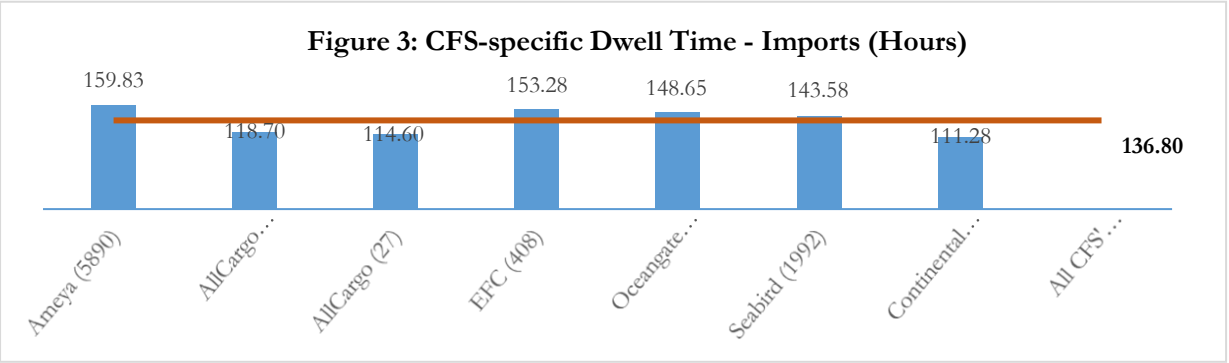
1.3.2. Customs at ICD Tughlakabad

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

Table 11: Total Customs Release Time for ICD (Average Time)

	RMS	**Group**	**Group-II**
Number of Containers	**6,283 (48.33%)**	**5,316 (40.89%)**	**1,402 (10.78%)**
Submission of B/E to Assessment (hr)	00:08:48 (n=6,283)	49:58:28 (n=5,100)	
Registration to Examination of Goods (hr)		13:30:45 (n=4,417)	21:00:12 (n=1,012)
Examination to Out of Charge (hr)		01:53:02 (n=4,338)	
Registration of Goods to Out of Charge (hr)	04:16:58 (n=5,764)	13:40:07 (n=4,887)	
Examination to Assessment (hr)			36:38:09 (n=1,008)
Duty Payment to Out of Charge (hr)			04:36:31 (n=970)
Total time (hr)	**4:25:46**	**63:38:35**	**62:14:52**
Total Customs Release Time ICD TKD (hr) = 34:52:35			

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 07 CFS has been represented (refer to Table 25 – Annexure 1.1). The total average time taken by all CFS (07 could be included) has also been provided in Table 12. CFS specific dwell time for 07 CFS at the JNP has been depicted in Figure 2. 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 12: CFS Specific Dwell Time for June 2017

	A	B	C	D
CFS (07 CFS' | n=18,404)	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	**86:51:57**	**44:19:36**	**58:00:38**	**136:48:14**

** 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.*

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 13).

Table 13: CONCOR Dwell Time for June 2017

	A	**B**	**C**	**D**
	GC-FAC	**Non-GC-FAC**	**Warehouse**	**Direct**
Number of Containers	**1898**	**1771**	**67**	**159**
Arrival to OOC	134:01:16			
Arrival to EJO		133:35:05	140:54:36	143:46:35
EJO to DJO			44:02:55	
DJO to Destuffing			3:58:16	
EJO to OOC		74:35:46		40:07:56
De-stuffing to OOC			152:27:29	
OOC to DJO				20:59:06
OOC to Gate pass	12:37:48	3:10:46	38:46:18	
DJO to Gate Pass				3:05:53
Gate pass to departure	18:53:13	13:22:23	3:20:12	3:58:15
Total time (hr)	**165:04:31**	**229:09:50**	**304:21:58**	**208:50:08**
Total CONCOR Dwell Time for ICD TKD (hr) = 198:23:52				

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 14).

Table 14: Average Time Taken for Generation of Delivery Orders by Shipping Lines	
Total no. of DO	**8578**
No. of DOs prior to OOC	3632
No. of DOs given post OOC	2418
No. of DOs received on same day as OOC	2528
Average time taken from CFS gate-in to receiving delivery order	**130:19:20**

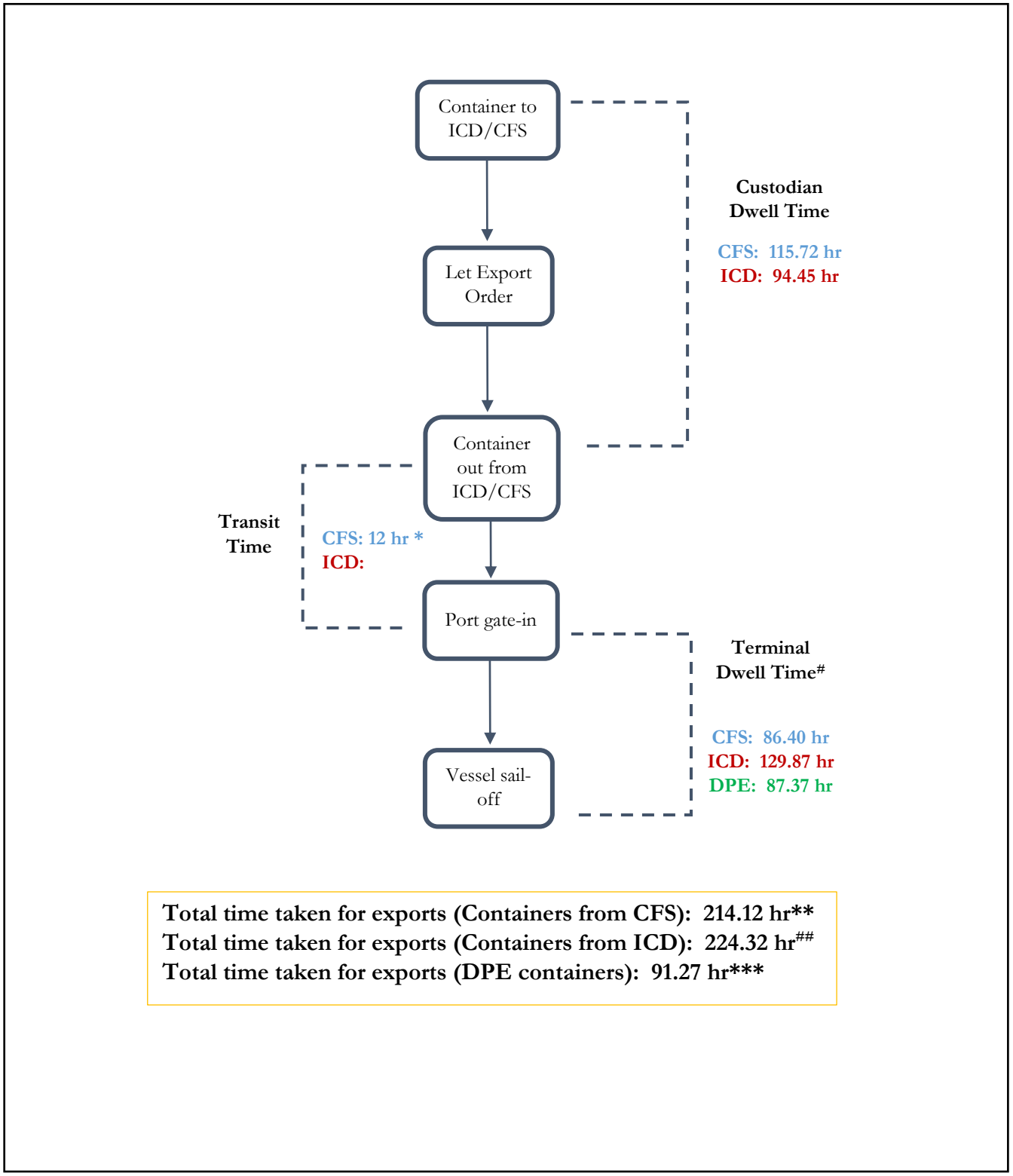
**This data is provided by only 3 CFS' (out of 07), therefore the number reflected here is lower than the actual number of containers going to the CFS from both terminals in Table 5.*

1.5.2. Partner Government Agencies (PGAs)

Data of Partner Government Agency was not available for the month of June 2017.

EXPORT

Figure 4: Export process -JNP



**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 4).

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 16: JNCH Dwell Time for Exports for June 2017	
Total no. of shipping bills (n)	97,771
Average time taken from registration of goods to issuance of LEO (hr)	**3:54:17**

2.1.2. Customs ICD Tughlakabad

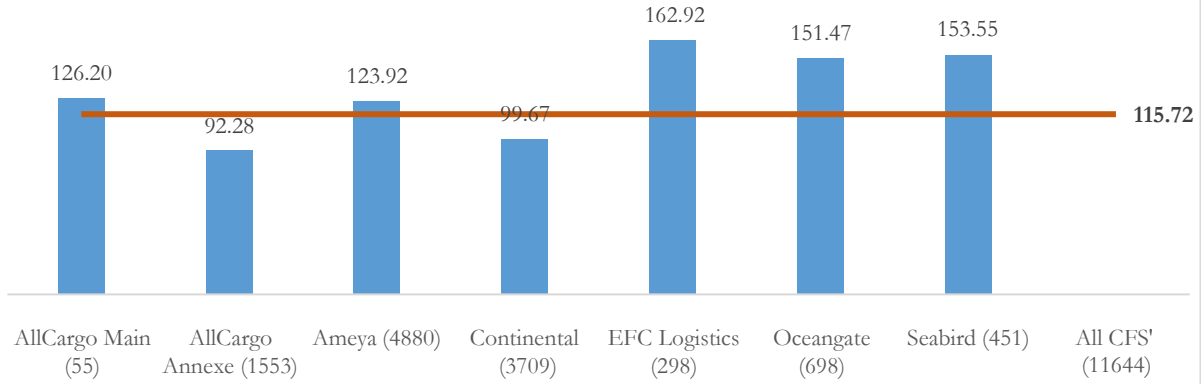
Customs ICD Tughlakabad dwell time is calculated from registration of goods in the customs system to issuance of LEO at the ICD.

Table 17: Customs ICD Tughlakabad Dwell Time for Exports for June 2017	
Total no. of shipping bills	10,166
Average time taken from registration to issuance of LEO (hr)	**15:35:53**

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 5 shows the total dwell time individually for all the CFS' assessed. Further, Table 18 provides the overall average time taken for major processes with respect to the 07 CFS' analysed.

Figure 5: Total Dwell Time - Exports (Hours)



2.2.1. CFS Dwell Time

Table 18: CFS Specific Dwell Time for June 2017				
	A	B	C	D
CFS (07 CFS' | n= 11,644)	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	**96:07:13**	**18:16:20**	**6:07:14**	**115:43:59**
**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 19: CONCOR Dwell Time			
	A	**B**	**C**
	GC-FAC	**Warehouse**	**Direct**
Number of Containers	**401**	**236**	**25**
Arrival to CRN	24:23:59		
Arrival to LEO		49:00:11	8:39:41
CRN to LEO	20:51:17		
LEO to Loading	25:38:47		
LEO to Stuffing		28:48:36	0:59:22
Stuffing to Sealing		10:36:12	2:31:58
Sealing to Loading		50:15:48	33:52:48
Loading to Dispatch	2:05:15	2:05:59	2:19:34
Arrival to Dispatch (hr)	**72:57:38**	**135:51:35**	**48:23:23**
Total CONCOR Dwell Time for ICD TKD (hr) = 94:27:21			

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 20). 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 June 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 20: Transit time of Export Containers to JNPT for June 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 21, Table 22, Table 23 and Table 24.

Table 21: Categorisation of Export Containers for June 2017				
Parameter	**JNPCT (n)**	**GTICT (n)**	**NSICT (n)**	**NSIGT (n)**
Total number of export containers	**20,419**		**18,214**	**11,404**
Number of containers from CFS	6,682 (32.72%)		-	-
Number of containers from ICD	2,673 (13.10%)		4,186 (22.98%)	2,532 (22.20%)
Number of Direct Port Entry (DPE)	11,064 (54.18%)		14,028 (77.02%)	8,872 (77.80%)
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 *b) For GTICT, DPE includes both Factory Stuffed and ICD by Road as has been reported* *c) The 'n' values represent Full Container Load (FCL) containers only, They also take into account only export containers and not re-export and transhipment containers* *d) Figures in brackets represent percentage share* *e) Data for GTICT was not available for the month of June due to ransomware attack on the terminal systems*				

Table 22: Dwell Time of Export Containers for June 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)	86:24:10	122:47:45	89:13:32				-	137:40:34	86:53:45	-	124:28:39	85:47:42
Average terminal dwell time (hr)	**92:41:42**						**98:33:59**			**94:23:01**		
Average port dwell time (hr)	**95:13:02**											
Note: Average port dwell time is the weighted average for all four terminals in terms of export FCL containers handled												

Table 23: Container Arrival to Container Loading - Export Containers for June 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)	71:24:02	109:00:42	74:27:06				-	126:40:30	76:52:57	-	100:44:48	72:07:11
Terminal Average (hr)	**77:58:39**						**88:19:33**			**78:06:43**		
Port Average (hr)	**81:48:44**											
Note: Average time for port is the weighted average for all four terminals in terms of export FCL containers handled												

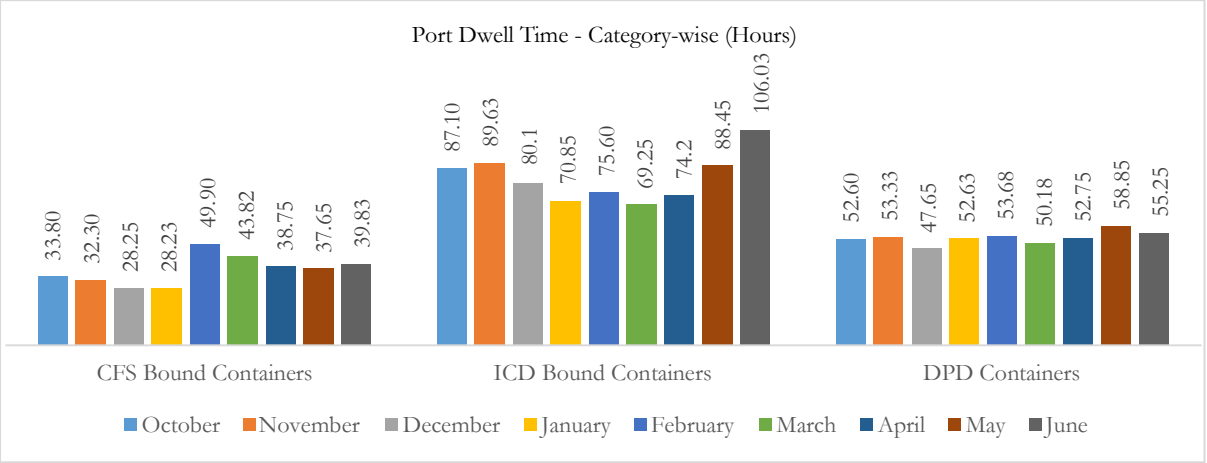
Table 24: Container Loading to Vessel Sail Off - Export Containers for June 2017												
Parameter	**JNPCT**			**GTICT**			**NSICT**			**NSIGT**		
	CFS	**ICD**	**DPE**	**CFS**	**ICD**	**DPE**	**CFS**	**ICD**	**DPE**	**CFS**	**ICD**	**DPE**
Average time from container loading to vessel sail off (hr)	15:50:16	14:36:22	15:33:39				-	11:00:15	10:00:51	-	14:25:57	10:20:29
Terminal Average (hr)	**15:31:38**						**10:14:30**			**11:11:53**		
Port Average (hr)	**12:35:09**											
Note: Average time for port is the weighted average for all four terminals in terms of export FCL containers handled												

3. Trend Analysis

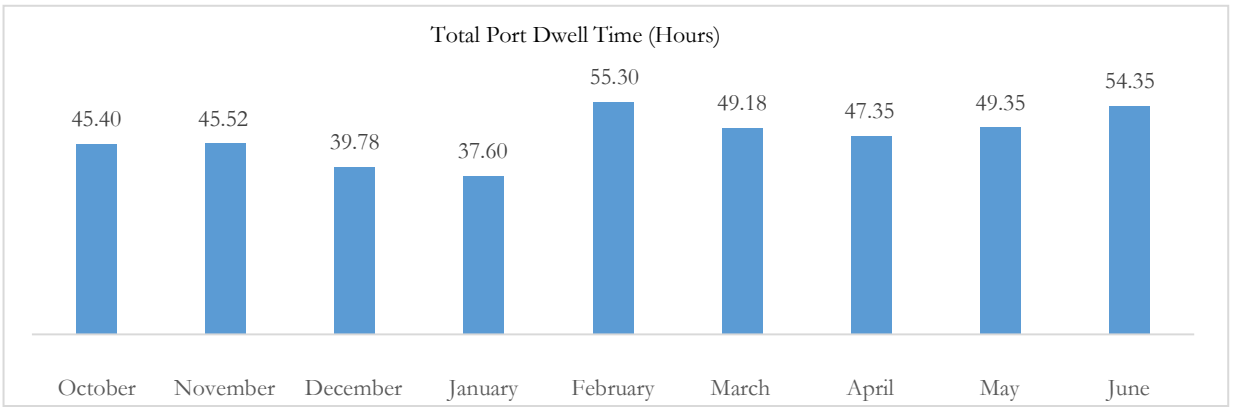
This section aims at analysing the trends in key metrics pertaining to the import and export value chains encompassing the JNP. The monthly comparison of the metrics have been depicted below:

3.1. Imports

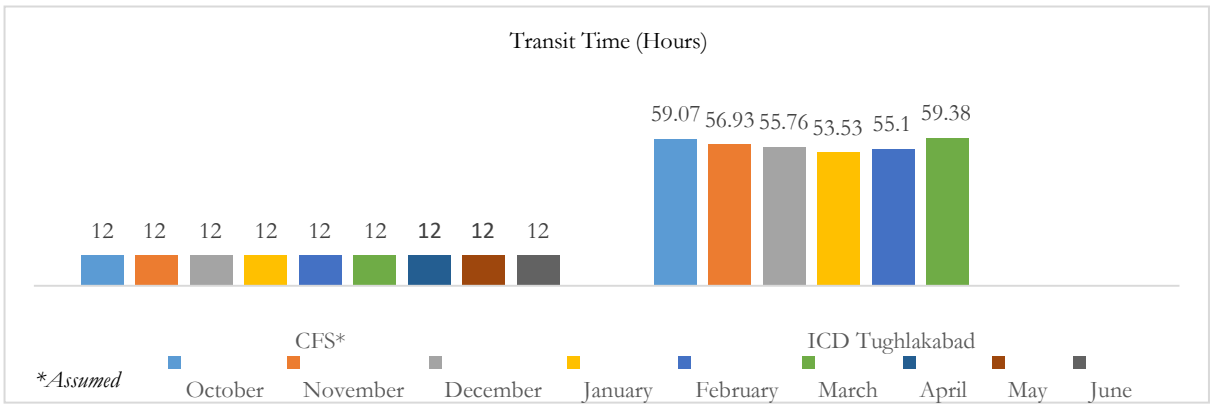
3.1.1. Port Dwell Time – Category-wise



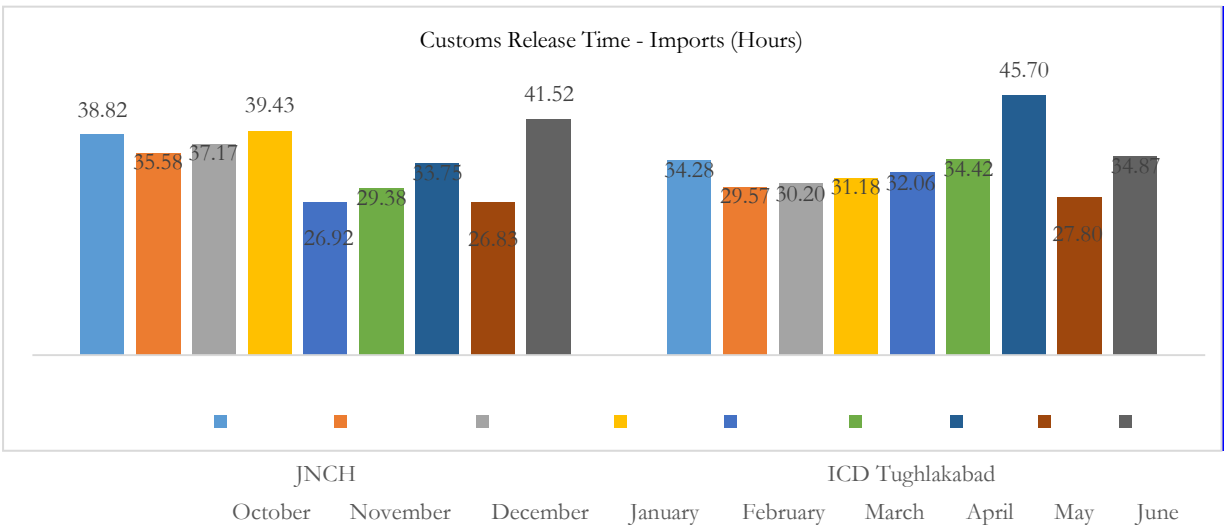
3.1.2. Total Port Dwell Time - All Terminals



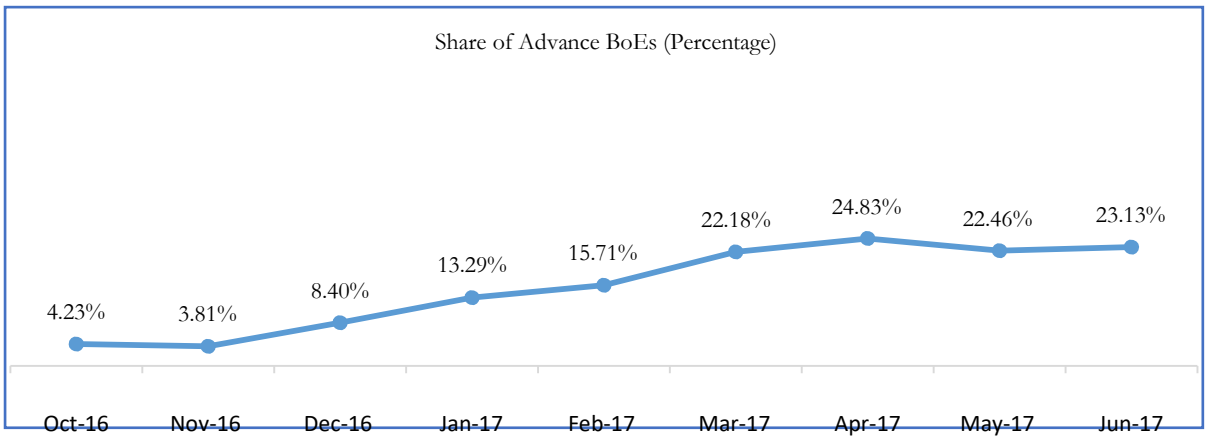
3.1.3. Transit Time



3.1.4. Customs Release Time

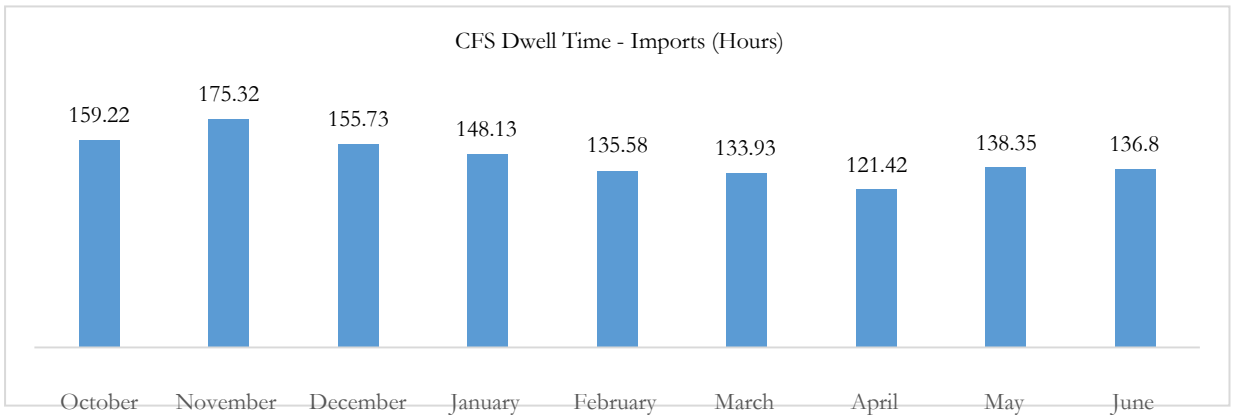


3.1.5. Advance Bill of Entry

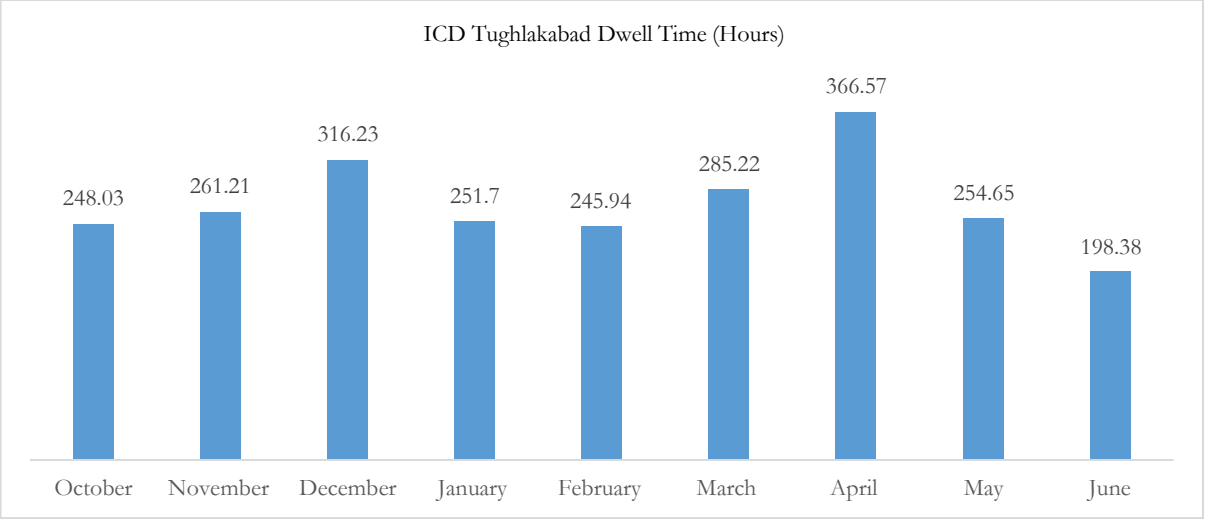


3.1.6. Custodian Dwell Time

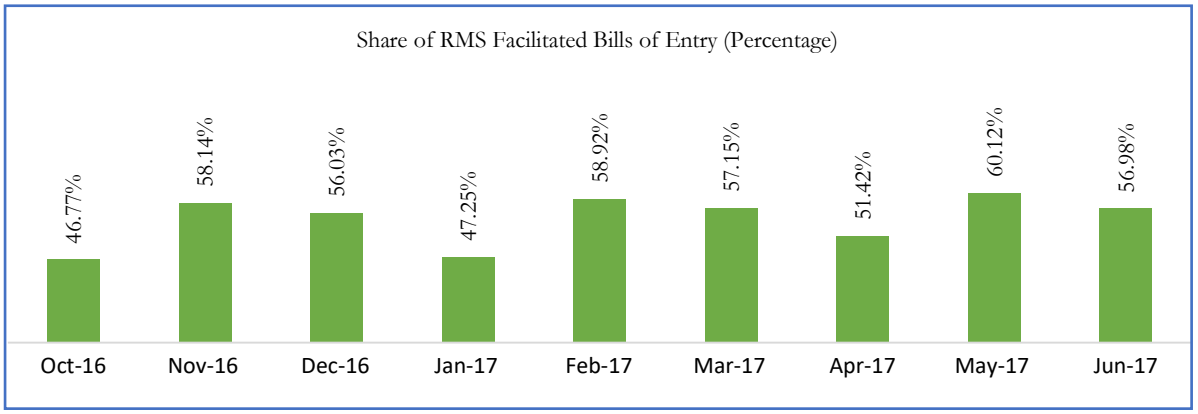
i) <u>CFS</u>



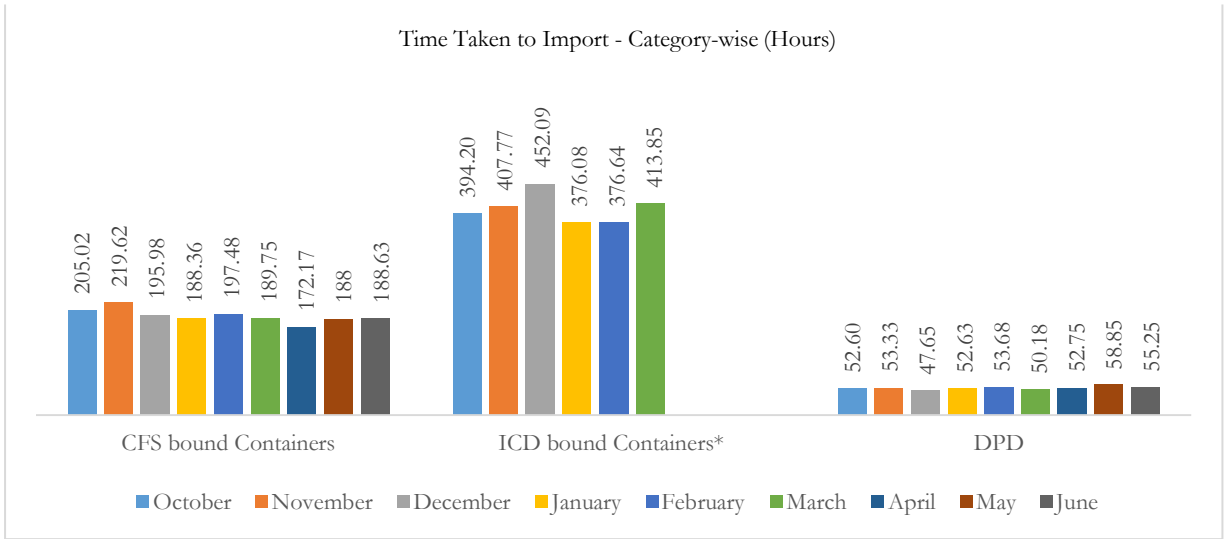
ii) CONCOR (ICD Tughlakabad)



3.1.7. RMS Bills of Entry- JNCH



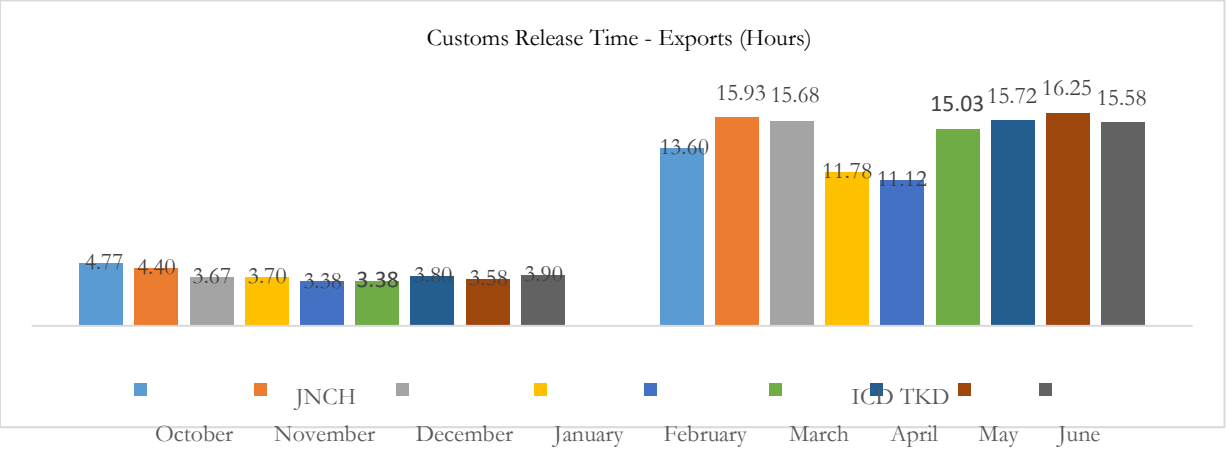
3.1.8. Total Import Time – Category-wise



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

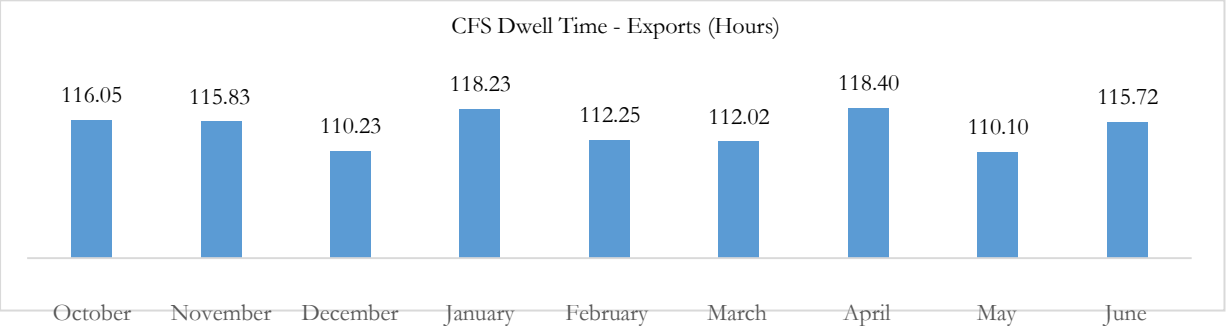
3.2. Exports

3.2.1. Customs Release Time

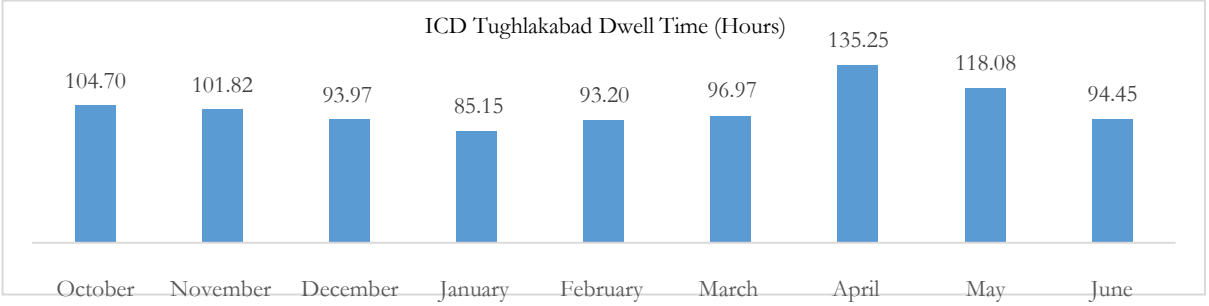


3.2.2. Custodian Dwell Time

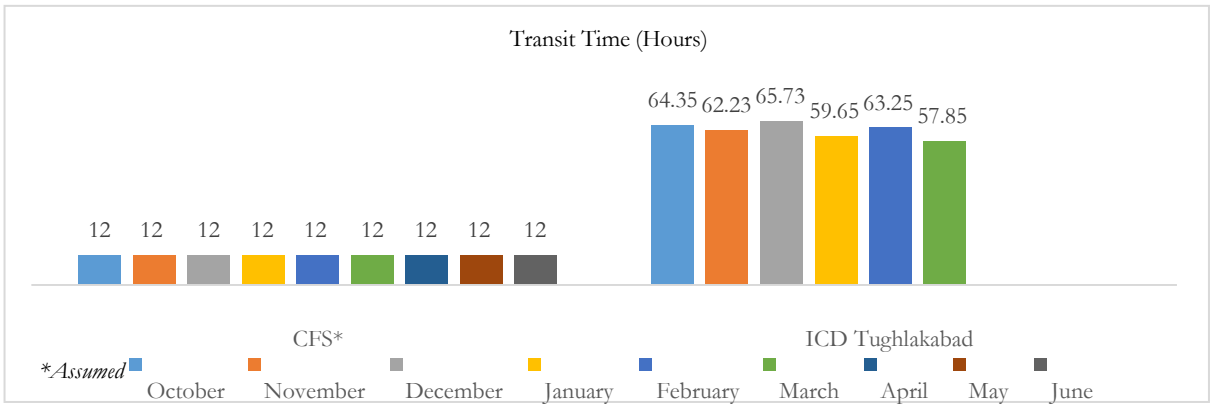
i) <u>CFS</u>



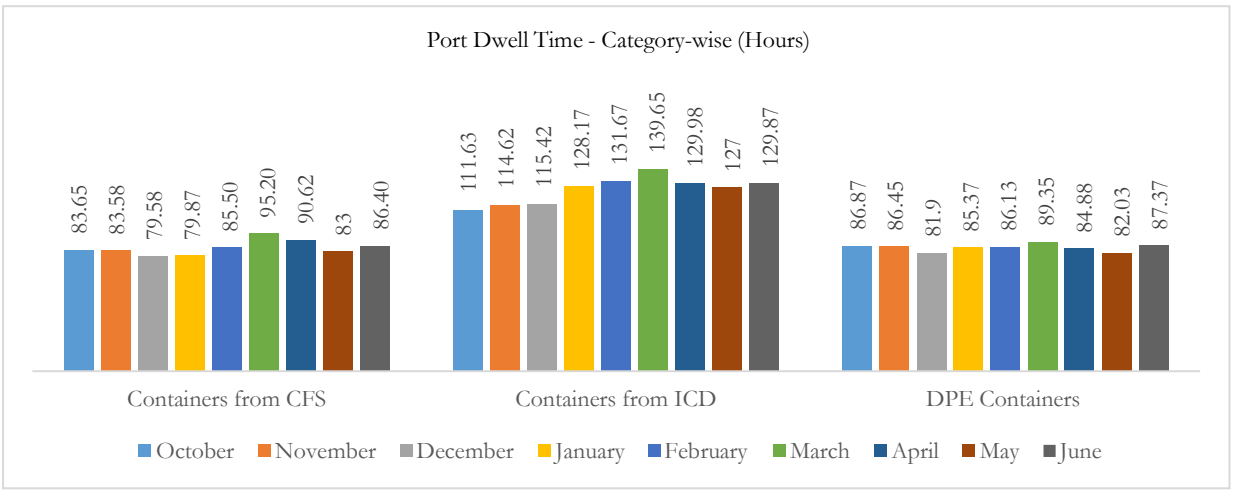
ii) <u>ICD Tughlakabad</u>



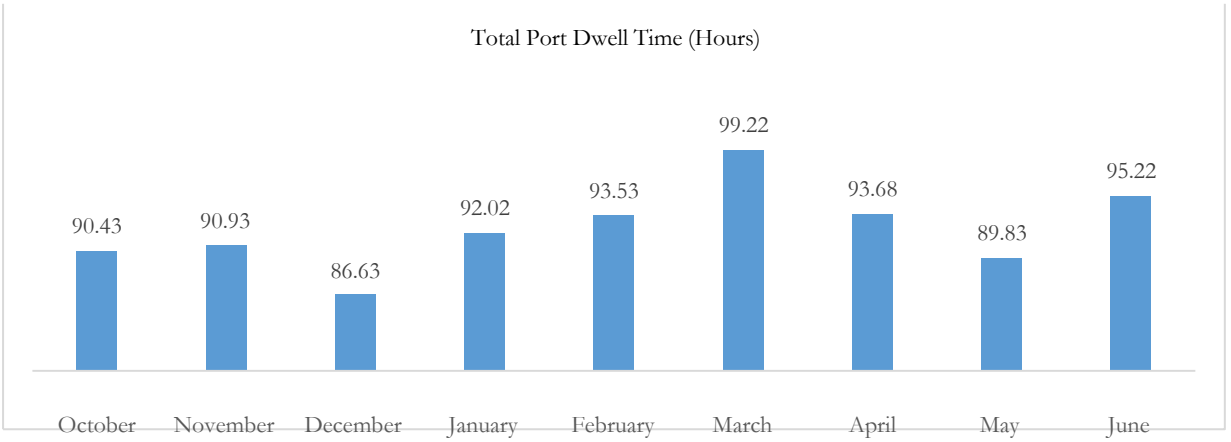
3.2.3. Transit Time



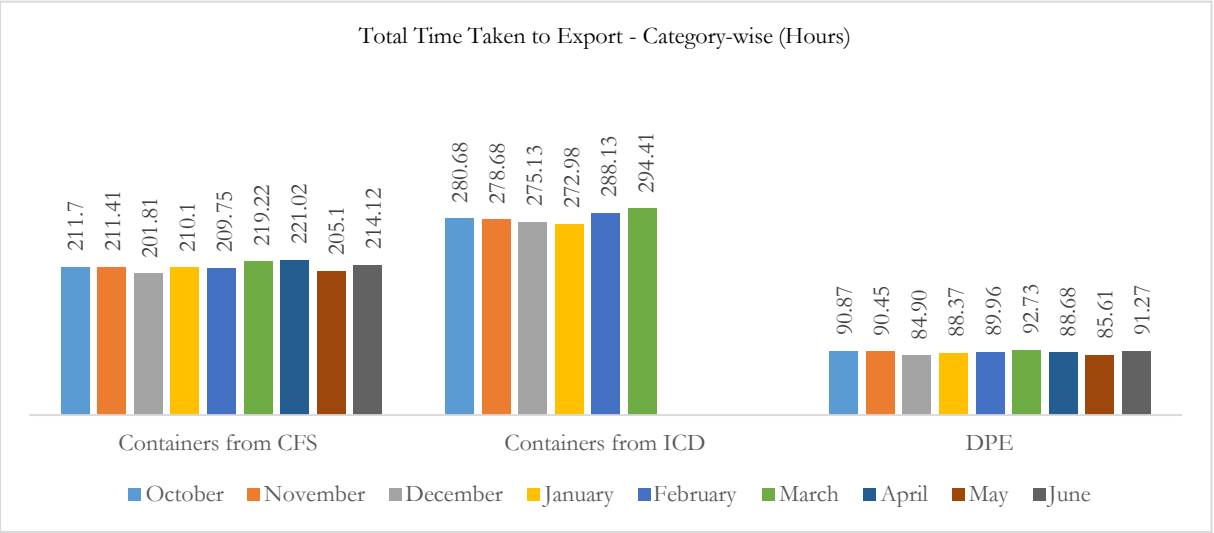
3.2.4. Port Dwell Time – Category-wise



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 and June 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 25: CFS Specific Dwell Time for June 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	**86:51:57**	**44:19:36**	**58:00:38**	**136:48:14**
Ameya	83:59:00	61:23:54	45:18:49	159:50:33
AllCargo Annexe	84:26:33	36:54:11	75:07:46	114:36:49
AllCargo	87:48:08	2:40:00	29:27:45	118:42:40
EFC	115:25:04	4:40:35	92:50:18	153:17:18
Oceangate	107:57:02	20:42:46	54:00:10	148:39:14
Seabird	NA	NA	NA	143:35:41
Continental	74:31:52	NA	NA	111:17:50

ANNEXURE 2 – Exports

2.1. CFS Dwell Time

Table 27: CFS Specific Dwell Time for June 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	**96:07:13**	**18:16:20**	**6:07:14**	**115:43:59**
AllCargo Main	80:50:44	91:38:46	31:35:41	126:12:36
AllCargo Annexe	70:53:15	22:58:47	3:30:47	92:17:15
Ameya	108:42:12	13:26:03	2:45:07	123:55:11
Continental	80:41:41	**N/A**	**N/A**	99:40:06
EFC Logistics	128:32:57	30:44:20	5:31:13	162:55:14
Oceangate	117:14:56	43:17:33	26:19:53	151:28:45
Seabird	121:46:04	20:16:30	13:05:27	153:33:25