



# Study on Timeline of Export and Import of Containers through JNPT

February 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](http://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.

**Table 3: Target Timelines for Export (Hours)**

Year	Port	Customs Clearance	Clearance at the Gate
2015-16	103	3	2
2016-17 (Target)	80	24	-

**Table 4: Target Timelines for Import (Hours)**

Year	Port	Railway	Customs Clearance	CFS
2015-16	44	91.2	115	152
2016-17 (Target)	30	36	30	120

The report also acts as a benchmarking tool for the targets for 2016-17 – for export and import (as summarised in Table 3 and Table 4) – set in the meeting held on August 12, 2016 under the chairmanship of the CEO, NITI Aayog to build consensus regarding the role and responsibility of each ministry/agency to finalise Port Ecosystem efficiency parameters.

## 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

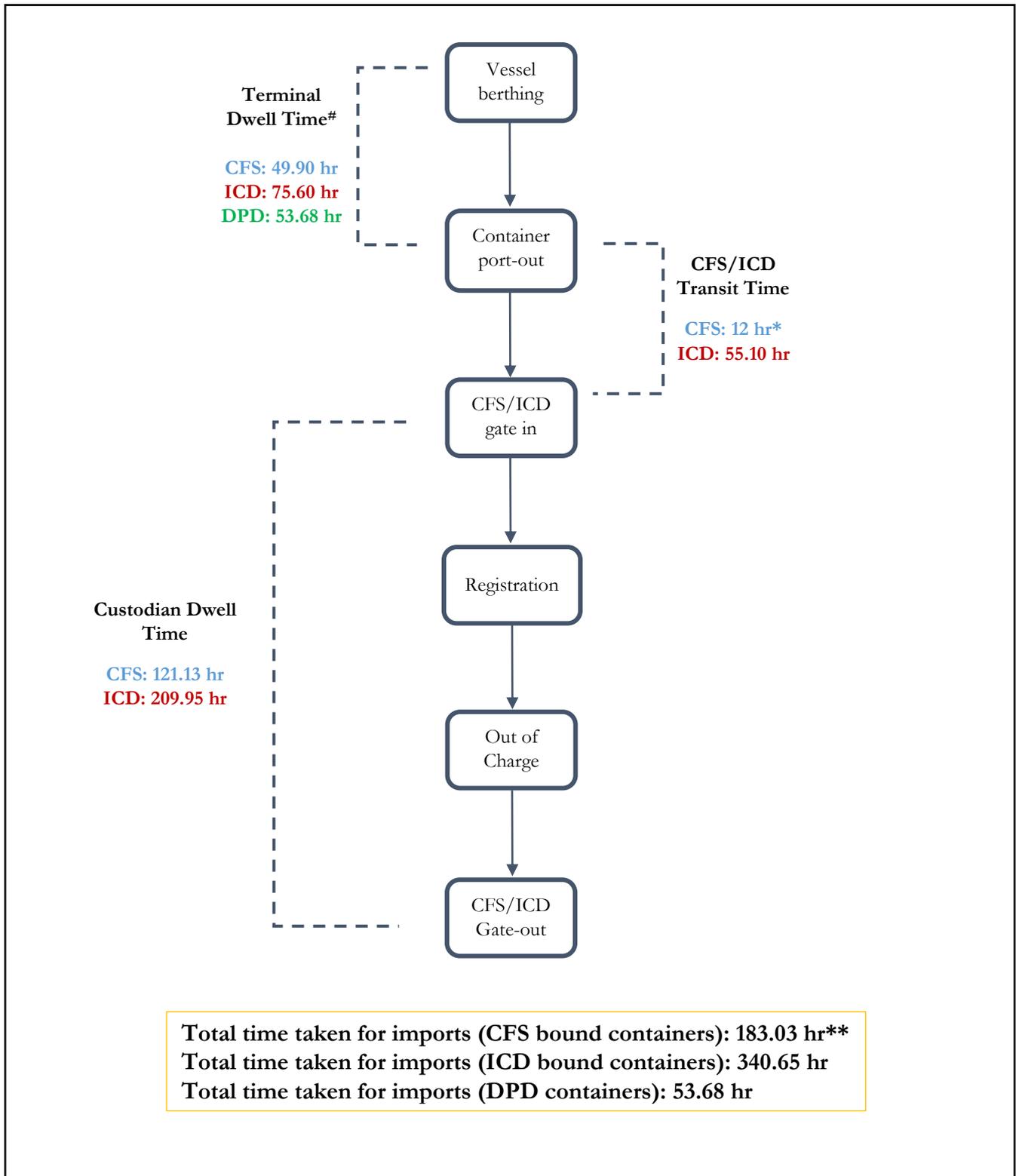
1. **Preliminary assessment** of parameters related to border compliance and documentary compliance at JNPT
2. **Data collection** from stakeholders such as terminal operators, customs – Jawaharlal Nehru Customs House (JNCH) and ICD Tughlakabad, CFS operators and CONCOR
3. **Data analysis** entailing 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 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 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 11 CFS, only 2 CFS recorded the time of shipping line delivery order.
- 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.

# IMPORT

Figure 1: Import process at the Jawaharlal Nehru Port



\*Assumed

#Weighted averages

\*\* Inclusive of assumed 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), Gateway Terminal International Container Terminal (GTICT), Nhava Sheva International Container Terminal (NSICT) and Nhava Sheva International Gateway Terminal (NSIGT) is close to 52.87 hours, 56.15 hours, 48.85 hours and 64.55 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.

Parameter	JNPCT (n)	GTICT (n)	NSICT (n)	NSIGT (n)
<b>Total number of import containers</b>	<b>28,755</b>	<b>40,977</b>	<b>9,695</b>	<b>10,742</b>
Number of CFS bound containers	20,475 (71.20%)	27,877 (68.03%)	6,276 (64.73%)	7,096 (66.06%)
Number of ICD bound containers	5,589 (19.44%)	8,092 (19.75%)	1,111 (11.46%)	2,089 (19.45%)
Number of Direct Port Delivery (DPD) containers	2,691 (9.36%)	5,008 (12.22%)	2,308 (23.81%)	1,557 (14.49%)
<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									
Average dwell time (vessel berthing to container out of port) (hr)	47:49:58	78:13:08	39:05:06	51:20:14	71:53:17	60:03:56	41:45:03	62:11:47	61:19:24	57:30:49	96:25:01	53:53:19
<b>Average terminal dwell time (hr)</b>	<b>52:52:44</b>			<b>56:09:24</b>			<b>48:51:40</b>			<b>64:33:13</b>		
<b>Average port dwell time (hr)</b>	<b>55:18:59</b>											
<i>Note: Average port dwell time is the weighted average for all four terminals in terms of import FCL containers handled</i>												

Table 7: Vessel Berthing to Container Discharge - Import Containers for February 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)	9:19:46	9:08:58	8:04:18	9:25:57	9:40:23	10:10:36	6:34:33	6:13:42	6:49:43	12:06:19	11:31:53	10:08:30
Terminal average (hr)	9:10:36			9:34:15			6:31:20			11:42:32		
Port Average (hr)	9:22:20											
<i>Note: Average time for port is the weighted average for all four terminals in terms of import FCL containers handled</i>												

Table 8: Container Discharge to Container Out of Port - Import Containers for February 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPD									
Average time taken from container discharge to container out of port (hr)	38:30:12	69:05:03	31:00:48	41:53:18	62:14:07	49:48:55	35:10:30	55:58:05	54:29:40	45:24:30	84:53:08	43:44:49
Terminal average (hr)	43:42:17			46:34:25			42:20:20			52:50:41		
Port Average (hr)	45:56:33											
<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 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.

Table 9: Transit Time of Import Containers from JNPT for February 2017		
Parameter	CFS	ICD Tughlakabad
Average time taken (hr)	12*	55.10
* 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.

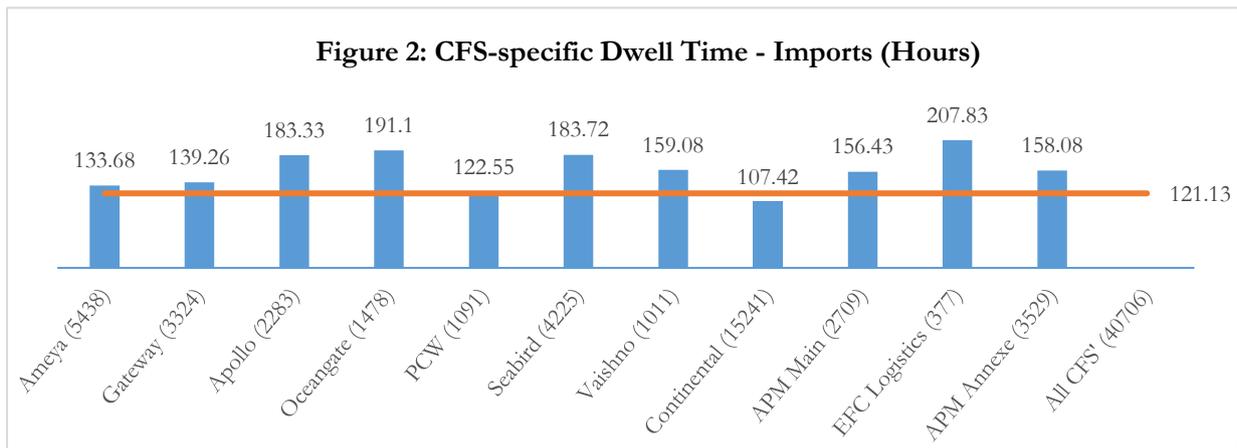
Table 10: Total Customs Release Time for JNCH (Average Time)			
	RMS	Group	Group (First Check)
Number of B/Es	51,806 (56.59%)	35,396 (38.66%)	4,345 (4.75%)
Submission of B/E to Assessment (hr)	0:11:49 (n=51,805)	36:13:30 (n=35,153)	
Registration to Examination of Goods (hr)		11:53:17 (n=26,983)	12:42:50 (n=3,531)
Examination to Out of Charge (hr)		1:01:23 (n=26,724)	
Registration of Goods to Out of Charge (hr)	8:27:25 (n=51,534)	11:03:27 (n=35,100)	
Examination to Assessment (hr)			57:42:31 (n=3,530)
Duty Payment to Out of Charge (hr)			07:13:45 (n=3,270)
<b>Total time (hr)</b>	<b>8:39:13</b>	<b>47:16:57</b>	<b>77:39:05</b>
<b>Total Customs Release Time at JNCH (hr)= 26:51:50</b>			

#### 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 B/Es			
Submission of B/E to Assessment (hr)			
Registration to Examination of Goods (hr)			
Examination to Out of Charge (hr)			
Registration of Goods to Out of Charge (hr)			
Examination to Assessment (hr)			
Duty Payment to Out of Charge (hr)			
<b>Total time (hr)</b>			
<b>Total Customs Release Time ICD TKD (hr) =</b>			

### 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 11 CFS has been represented (refer to Table 25 – Annexure 1.1). The total average time taken by all CFS (11 could be included) has also been provided in Table 12. CFS specific dwell time for 11 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 February 2017				
	A	B	C	D
CFS (11 CFS'   n=40,709)	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)*
<b>Total</b>	<b>88:41:59</b>	<b>50:00:15</b>	<b>57:13:20</b>	<b>121:08:48</b>
*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. #in column C, as time is not recorded for OOC in CFS data, therefore, a difference of 24 hours is recorded as zero in the calculations. In order to overcome this statistical bias, we have added 12 hours to the calculated time taken in column C.				

#### 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			
	A	B	C
CONCOR -ICD Tughlakabad (n=3,632)	Average time taken from arrival at ICD to OOC	Average time taken from OOC to gate-out	Total (Arrival to gate out)
<b>Total</b>	<b>191:01:16</b>	<b>19:14:27</b>	<b>209:57:48</b>
*C is not the summation of A and B because of the inconsistent sample size in the data set at each step. Therefore, C should be taken as the true representation of the overall ICD dwell time			

## 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). It may be noted that the average time taken for receiving a delivery order from arrival of a container at CFS is approximately 160.43 hrs.

Table 14: Average Time Taken for Generation of Delivery Orders by Shipping Lines	
<b>Total no. of DO</b>	<b>1,880*</b>
No. of DOs prior to OOC	759
No. of DOs given post OOC	533
No. of DOs received on same day as OOC	588
<b>Average time taken from CFS gate-in to receiving delivery order</b>	<b>160:26:49</b>
<i>*This data is provided by only 2 CFS' (out of 11), therefore the number reflected here is lower than the actual number of containers going to the CFS from both terminals in Table 5.</i>	

### 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 15). 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.

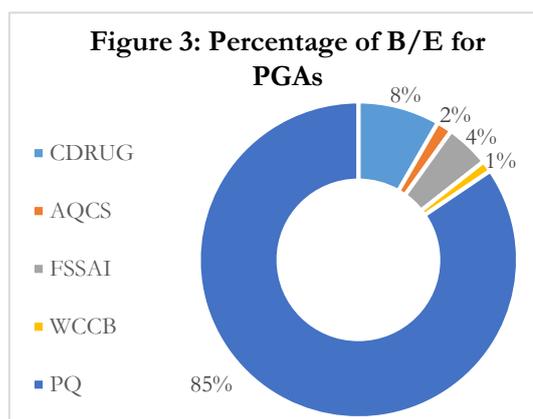
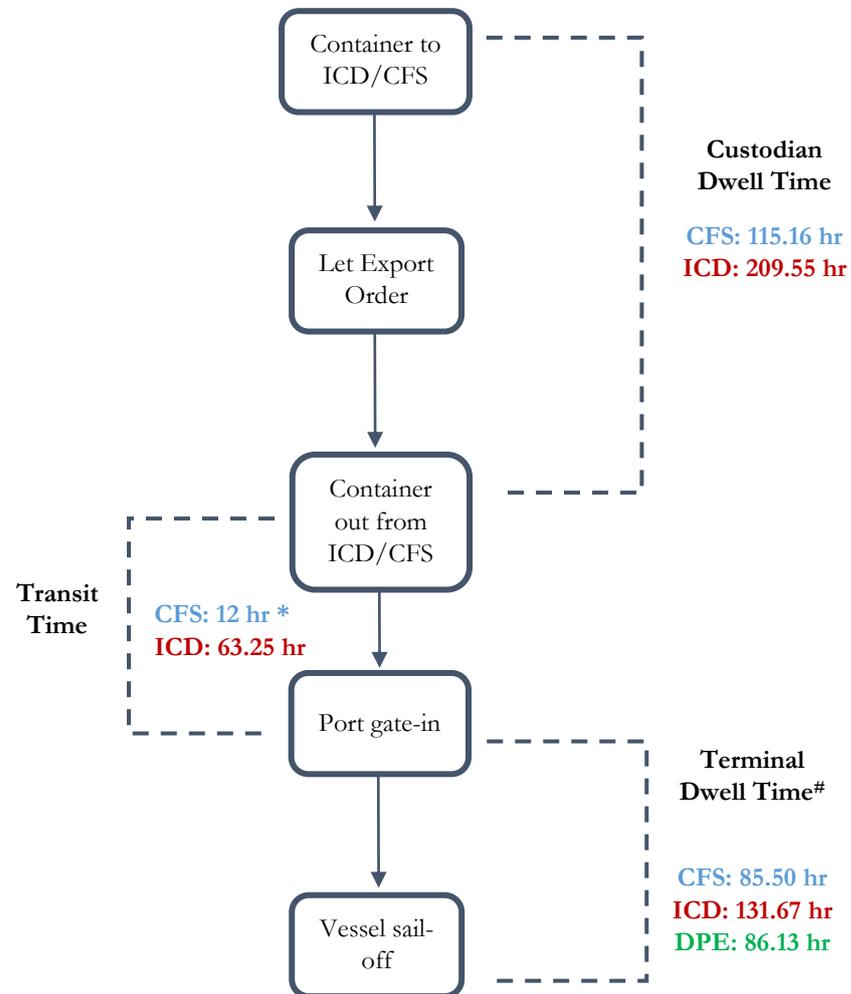


Table 15: Average Time Taken by PGAs in February 2017					
	CDRUG	AQCS	WCCB	FSSAI	PQ
Total number of B/E (n)	<b>8,628</b>	<b>1,623</b>	<b>1,187</b>	<b>4,642</b>	<b>87,739</b>
<b>Time taken from sample collection to report publishing (hr)</b>	<b>210:18:23</b>	<b>155:26:52</b>	<b>252:45:51</b>	<b>261:58:18</b>	<b>176:18:04</b>

# EXPORT

Figure 4: Export process at the Jawaharlal Nehru Port



Total time taken for exports (Containers from CFS): 212.66 hr\*\*  
Total time taken for exports (Containers from ICD): 404.47 hr  
Total time taken for exports (DPE containers): 86.13 hr

\*Assumed

#Weighted averages

\*\* Inclusive of assumed 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.

Total no. of shipping bills (n)	1,20,647
Average time taken from registration of goods to issuance of LEO (hr)	3:50:20

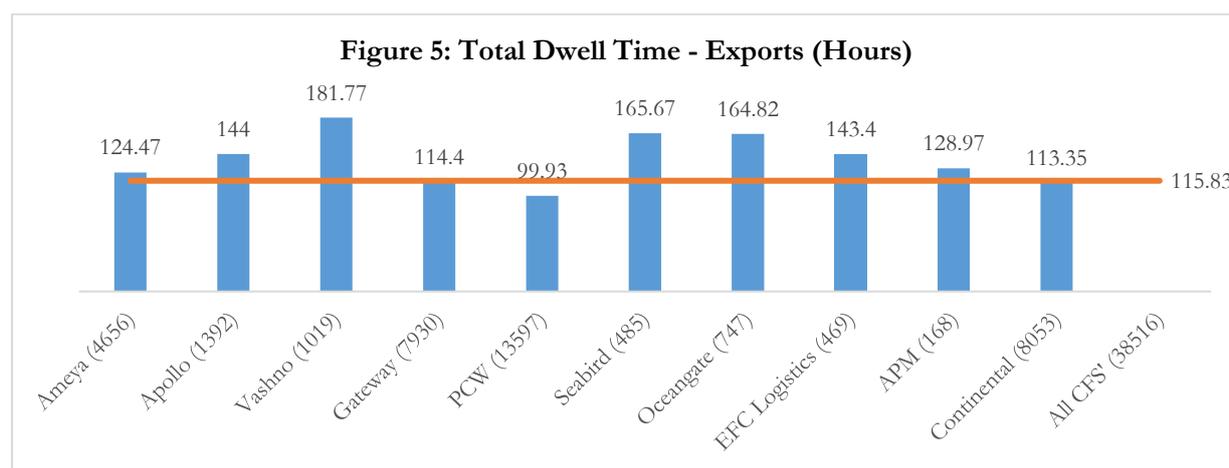
#### 2.1.2. Customs ICD Tughlakabad

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

Total no. of shipping bills	
Average time taken from registration to issuance of LEO (hr)	

### 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 10 CFS' analysed.



#### 2.2.1. CFS Dwell Time

Table 18: CFS Specific Dwell Time for February 2017				
	A	B	C	D
CFS (10 CFS'   n= 38,516)	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)*
<b>Total</b>	<b>94:07:13</b>	<b>26:51:53</b>	<b>05:10:27</b>	<b>115:10:47</b>
<i>*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</i>				

### 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 (Tughlakabad) Dwell Time			
	A	B	C
ICD (n= 956)	Average time taken from container arrival at ICD to putting of customs seal (hr)	Average time taken from putting of customs seal to container loading on wagon (hr)	Total time taken from container arrival at CONCOR to loading on wagon*
<b>Total</b>	<b>194:11:29</b>	<b>15:21:36</b>	<b>209:33:04</b>
<i>*C should be taken as the true representation of the overall CONCOR dwell time. However, column C should not be seen as summation of columns A and B because the number of entries for A and B are not the same</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 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.

Table 20: Transit time of Export Containers to JNPT for February 2017		
Parameter	CFS	ICD Tughlakabad
Average time taken (hr)	12*	63.25
<i>* assumed</i>		

### 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 February 2017				
Parameter	JNPCT (n)	GTICT (n)	NSICT (n)	NSIGT (n)
<b>Total number of export containers</b>	<b>20,675</b>	<b>37,993</b>	<b>17,184</b>	<b>15,341</b>
Number of containers from CFS	5,833 (28.21%)	10,854 (28.57%)	-	-
Number of containers from ICD	2,622 (12.68%)	6,111 (16.08%)	2,999 (17.45%)	3,333 (21.73%)

Number of Direct Port Entry (DPE)	12,220 (59.11%)	21,028 (55.35%)	14,185 (82.55%)	12,008 (78.27%)
<p>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</p> <p>b) For GTICT, DPE includes both Factory Stuffed and ICD by Road as has been reported</p> <p>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</p> <p>d) Figures in brackets represent percentage share</p>				

Table 22: Dwell Time of Export Containers for February 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)	84:54:25	126:03:29	89:19:55	85:50:29	134:17:37	83:41:47	-	119:17:06	79:33:25	-	142:24:05	94:55:04
Average terminal dwell time (hr)	92:44:12			92:26:51			86:29:05			105:14:03		
Average port dwell time (hr)	93:32:27											
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 February 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPE									
Average time from container arrival at port to container loading (hr)	72:23:02	113:05:20	76:53:11	74:49:43	123:44:57	73:14:33	-	109:45:18	70:59:21	-	124:51:50	82:53:44
Terminal Average (hr)	80:12:27			81:49:10			77:45:17			91:43:32		
Port Average (hr)	82:20:01											
Note: Average time for port is the weighted average for all four terminals in terms of export FCL containers handled												

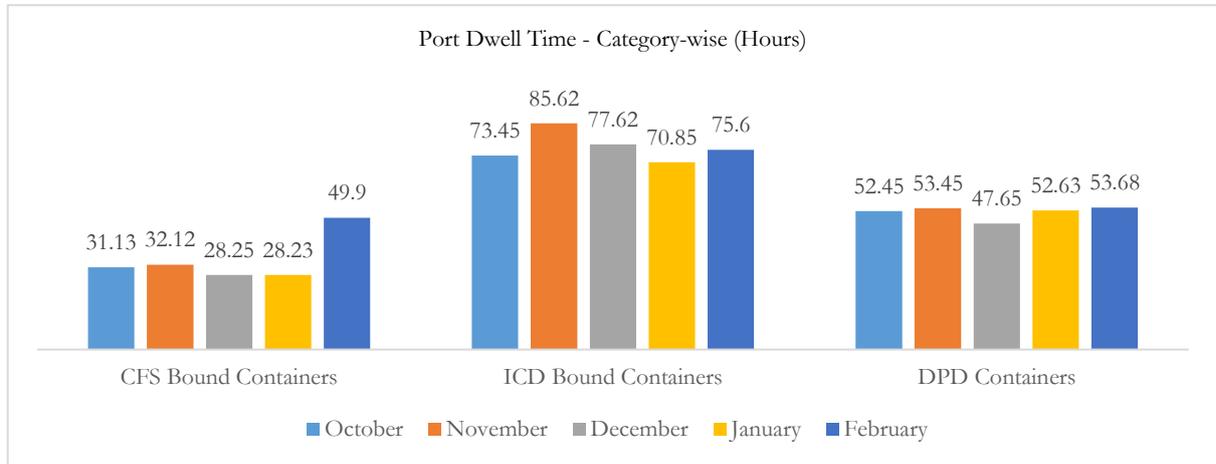
Table 24: Container Loading to Vessel Sail Off - Export Containers for February 2017												
Parameter	JNPCT			GTICT			NSICT			NSIGT		
	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE	CFS	ICD	DPE
Average time from container loading to vessel sail off (hr)	13:15:45	13:26:22	13:18:45	11:00:46	10:32:39	10:27:14	-	9:34:00	8:34:06	-	11:45:23	11:15:11
<b>Terminal Average (hr)</b>	<b>13:18:52</b>			<b>10:37:41</b>			<b>8:44:33</b>			<b>11:21:32</b>		
<b>Port Average (hr)</b>	<b>10:58:34</b>											
<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

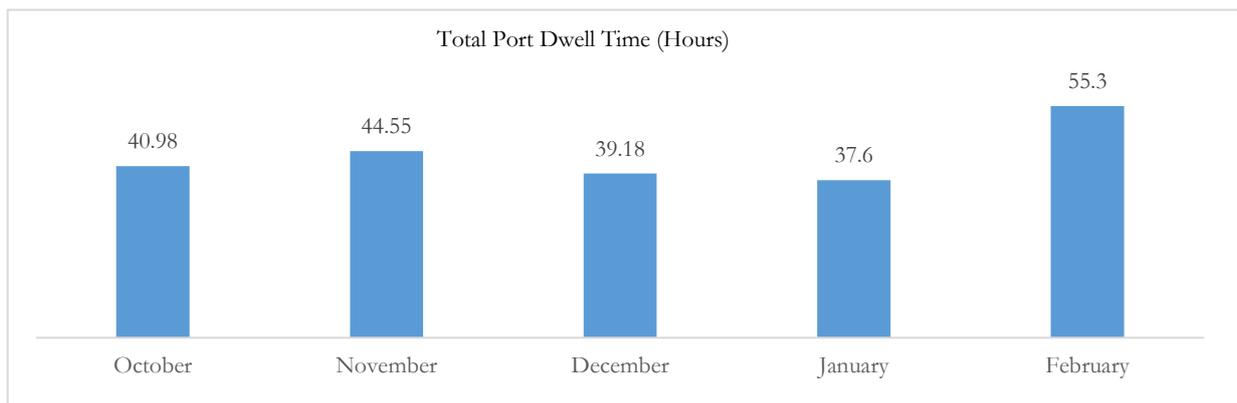
This section aims at analysing the trends in key metrics pertaining to the import and export value chains encompassing the JNP. The monthly comparison of the metrics have been depicted below:

#### 3.1. Imports

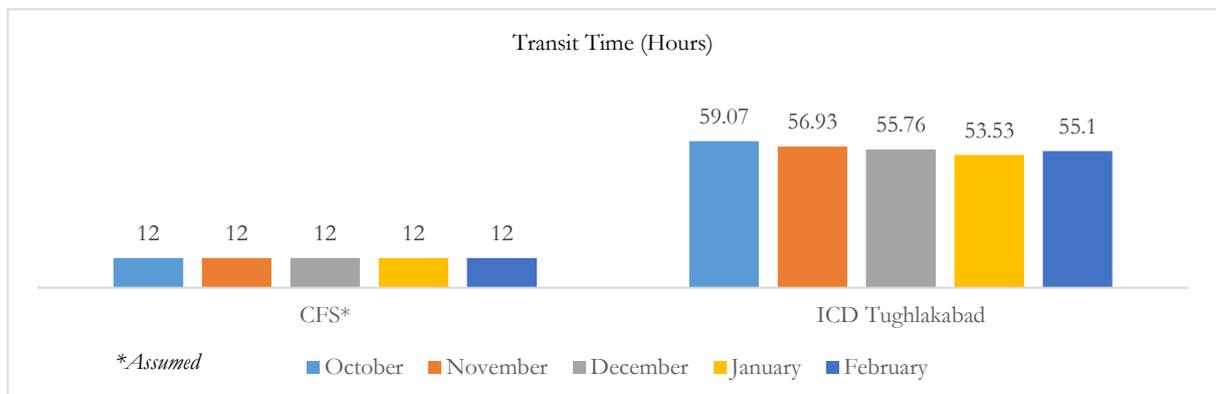
##### 3.1.1. Port Dwell Time – Category-wise



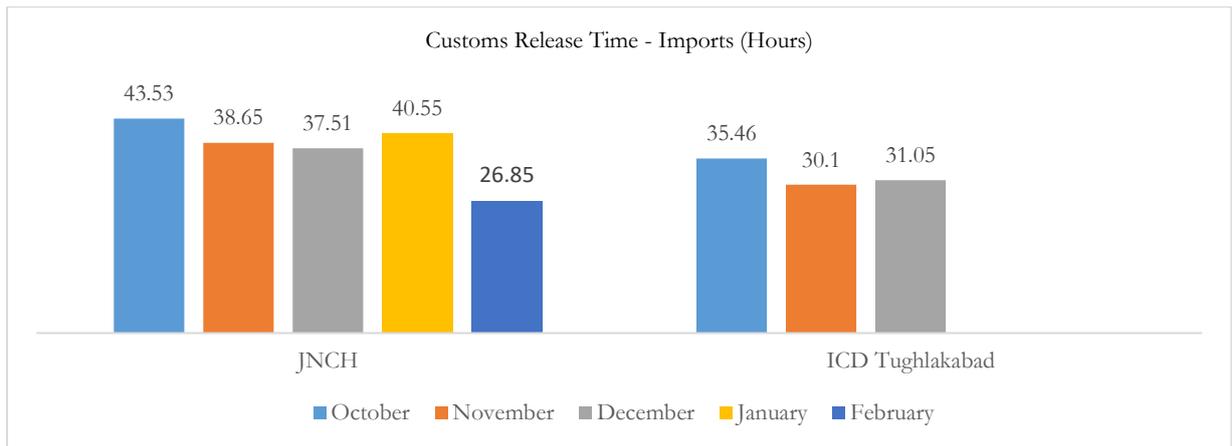
##### 3.1.2. Total Port Dwell Time - All Terminals



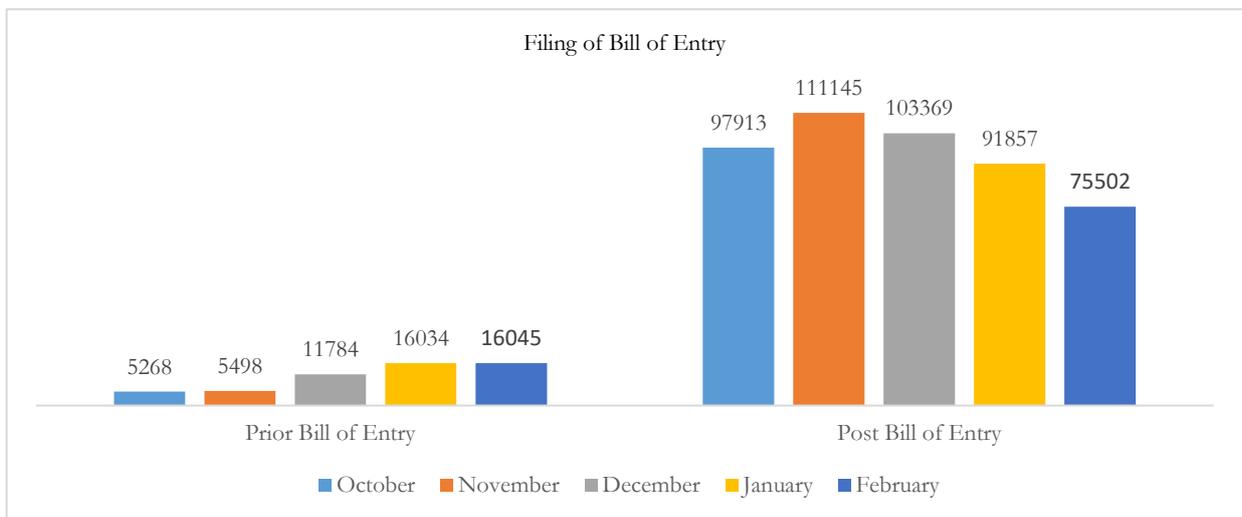
##### 3.1.3. Transit Time



3.1.4. Customs Release Time

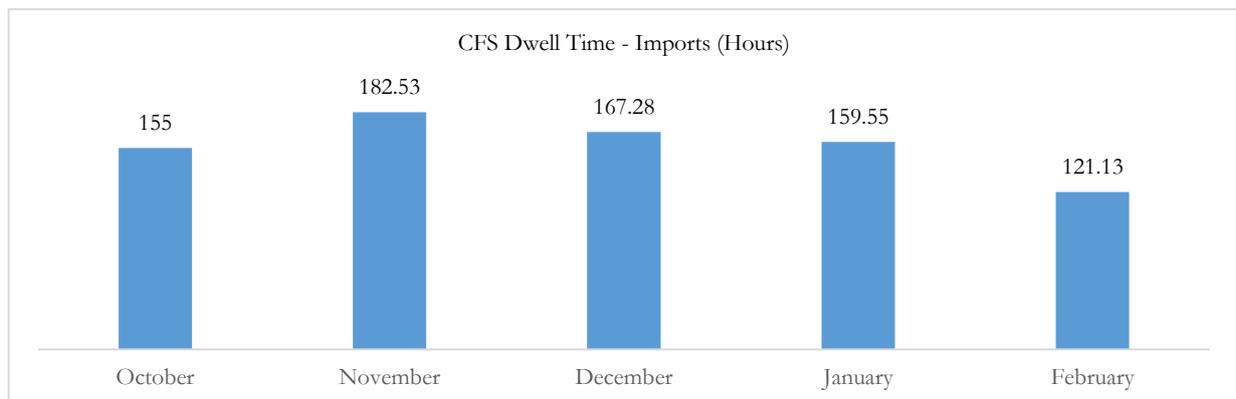


3.1.5. Advance Bill of Entry

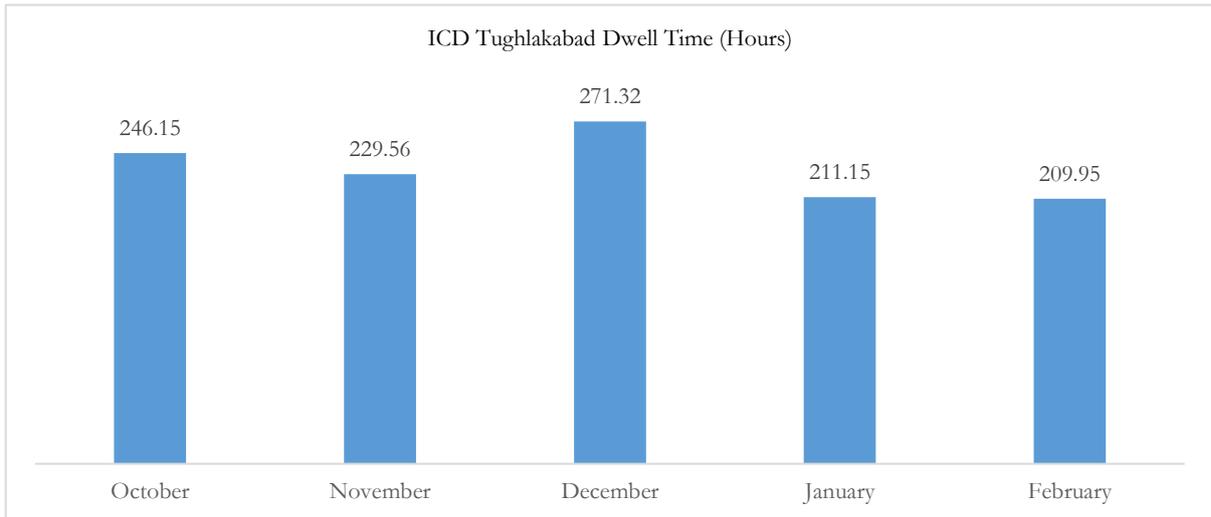


3.1.6. Custodian Dwell Time

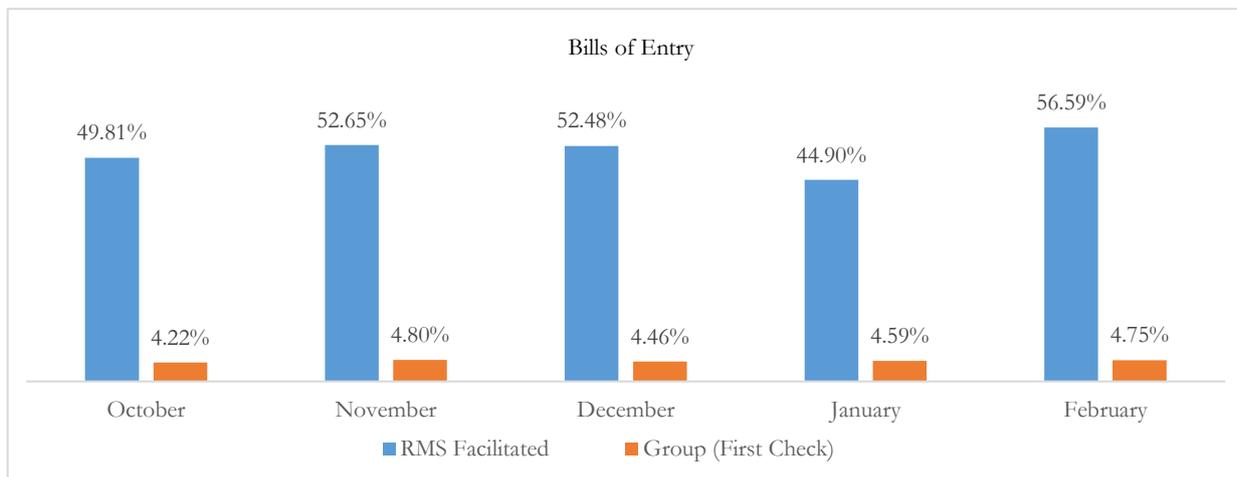
i) CFS



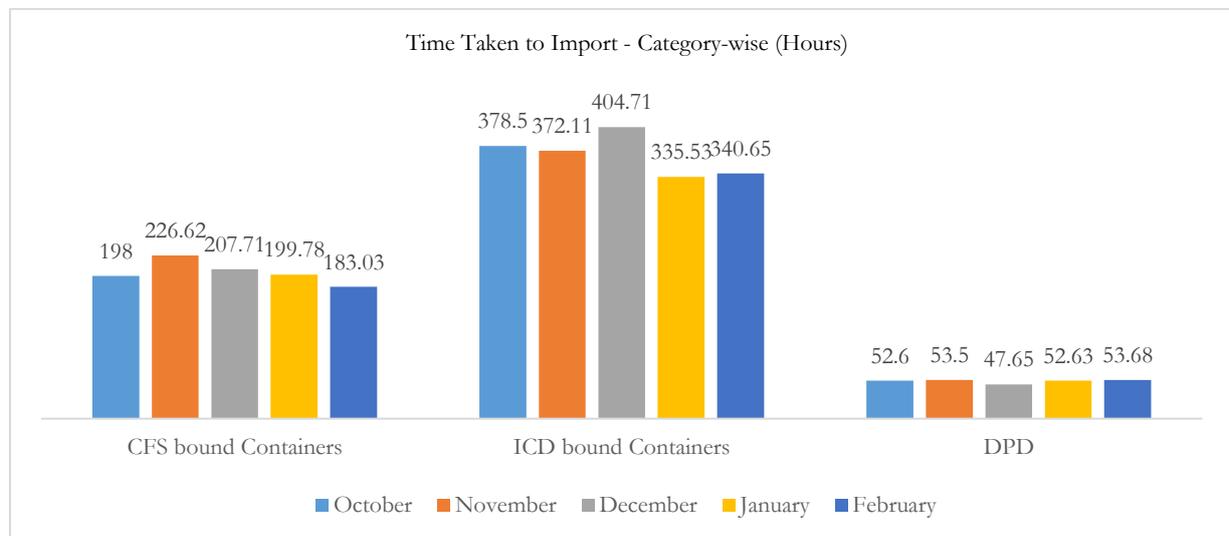
ii) ICD Tughlakabad



3.1.7. RMS and GROUP Bills of Entry - JNCH

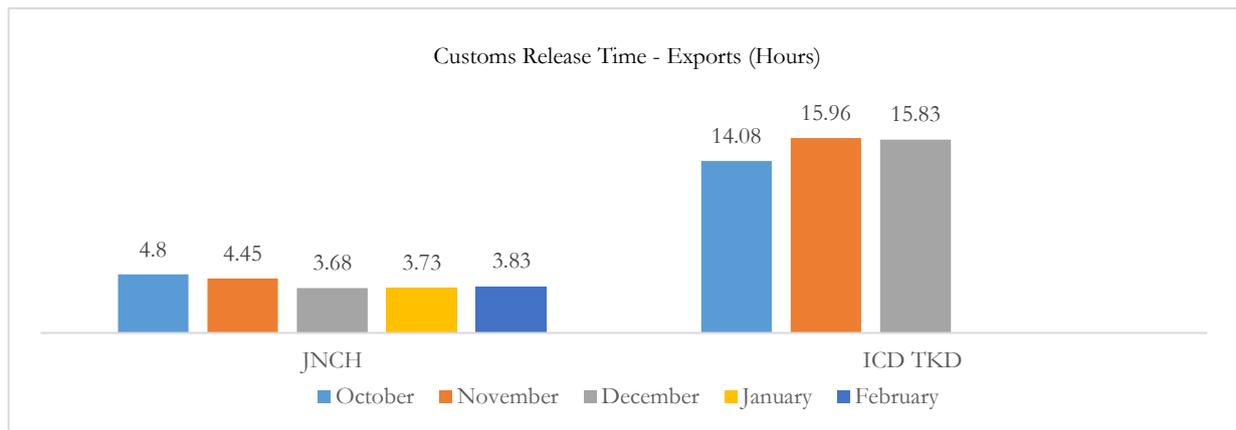


3.1.8. Total Import Time – Category-wise



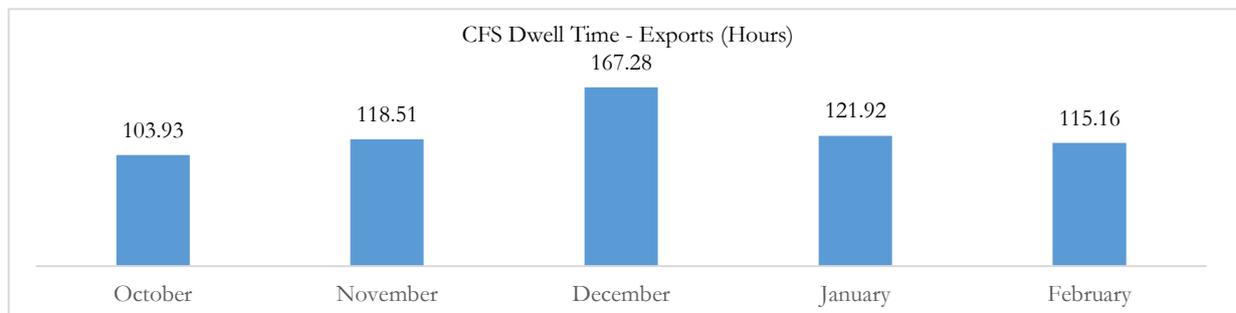
### 3.2. Exports

#### 3.2.1. Customs Release Time

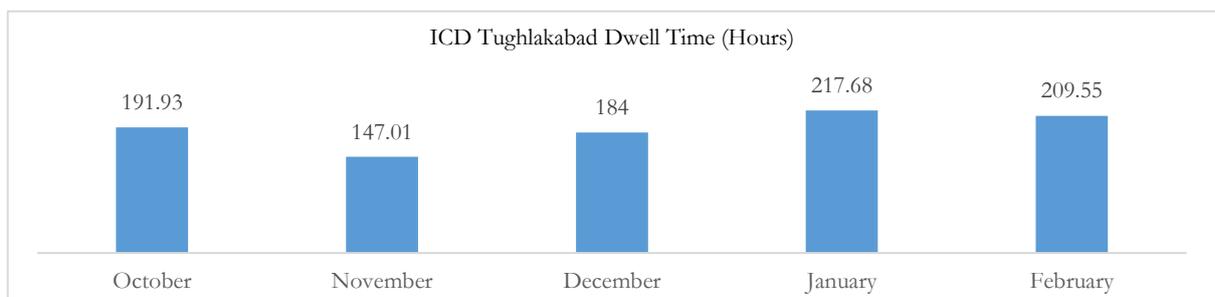


#### 3.2.2. Custodian Dwell Time

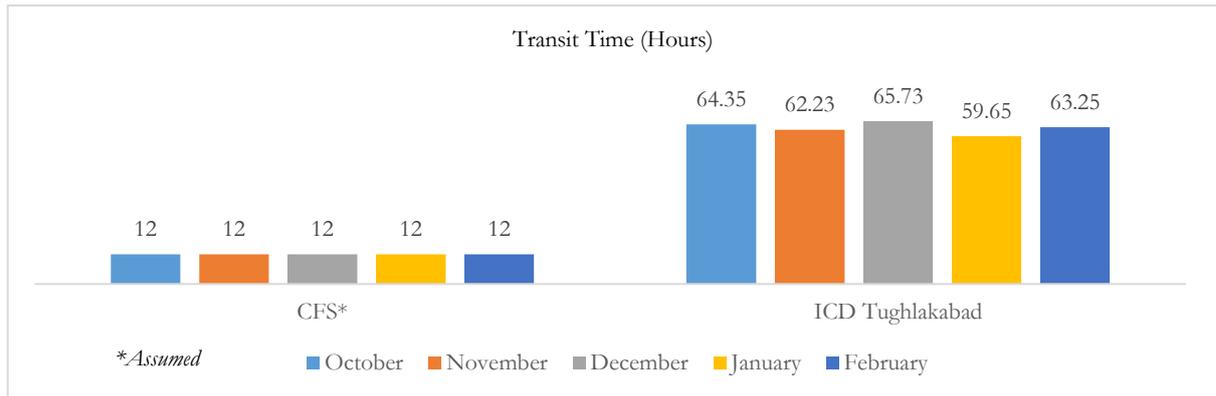
##### i) CFS



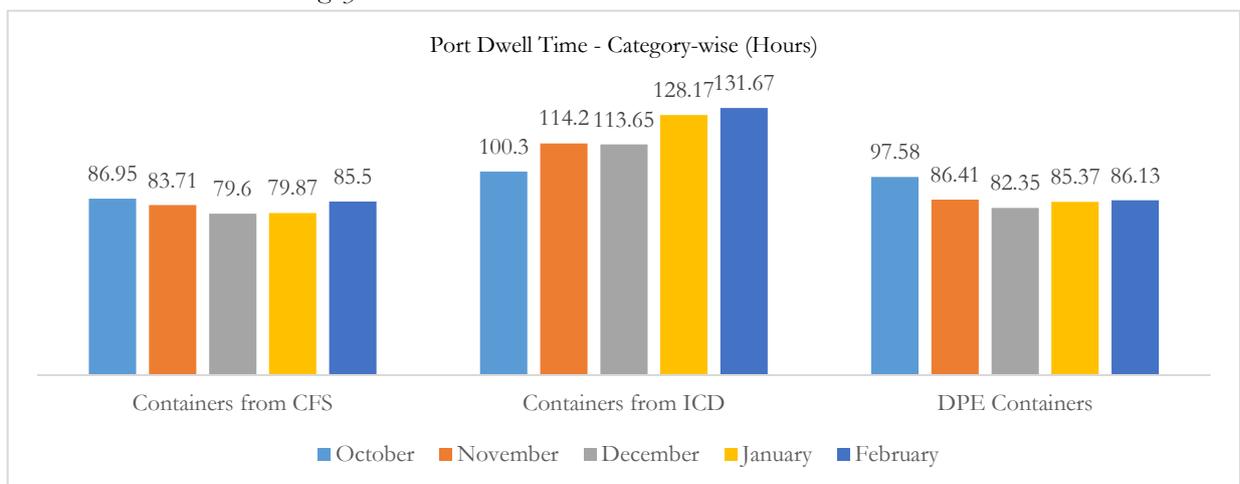
##### ii) ICD Tughlakabad



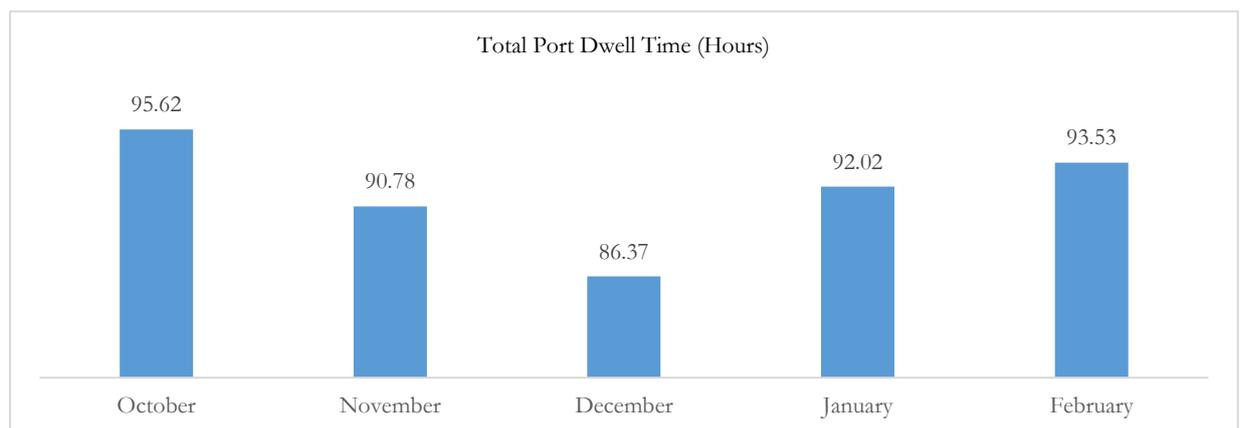
### 3.2.3. Transit Time



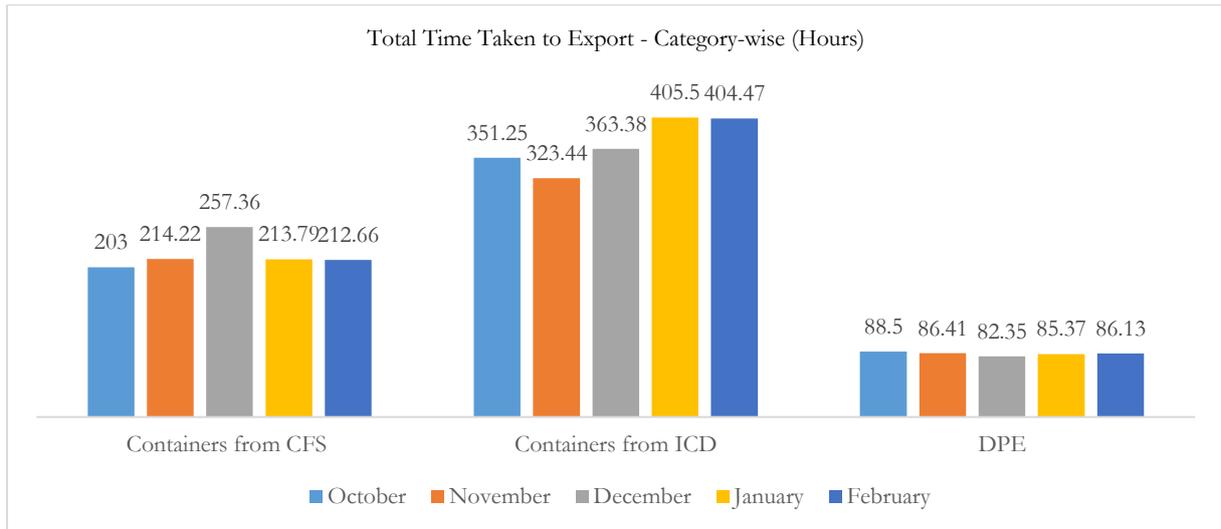
### 3.2.4. Port Dwell Time – Category-wise



### 3.2.5. Total Port Dwell Time - All terminals



3.2.6. Total Export Time – Category-wise



#### 4. Qualitative Insights

i) At JNP, it is mandatory for an importer to submit the original Bill of Lading (B/L) to the shipping line for obtaining delivery order. As part of the prevalent practice, the Bill of Lading is issued after the vessel sails off from the port of loading. The time taken for the B/L to reach the port of discharge vis-à-vis the time taken by the vessel to arrive – which varies with respect to the sailing distance from the port of loading – determines the amount of time the importer has at his disposal to complete the aforementioned formalities. The proportion of time required for the B/L to reach the importer vis-à-vis vessel arrival can be considerably high in case of ports in nearby countries like Sri Lanka and Jebel Ali as compared to ports farther off such as those in Europe or USA. This anomaly creates impediments particularly in the case of DPD containers, wherein the mandate for container evacuation is 48 hours from arrival. In such cases where the time taken for the original B/L to reach the importer's bank is longer with respect to the vessel sailing time, it becomes difficult for the importer to clear the containers within the stipulated time. This ensuing delay leads to incurrence of additional costs. Conversely, at Chennai port, an electronic copy or telex B/L suffices for the issue of delivery order by the shipping lines, a practice which helps sufficiently marginalise potential delays in container evacuation.

ii) While several trade processes are completed electronically, there are a few wherein the relevant authority requires physical copies of documents in addition to electronic copies. These include:

- a. The Customs requires a printed copy of the Out of Charge (OOC) after it is accepted online. This printed copy needs to be stamped by the appraising officer for final clearance. This process is not calculated in the actual customs dwell time as requisite time stamps for the same are currently not captured in the customs release time database.
- b. During the gate-out of a container from the CFS, it is necessary to produce printed copies of all the documents submitted and obtained for clearance. As per a case observed, a bunch of 13 printed documents were produced during gate-out which included the Bill of Entry, CFS invoice, arrival notice, customs examination report, job order for seal cutting, delivery order, OOC and Bill of Lading among others. This significantly increases the dwell time of the container at the CFS.

iii) It has been observed, in a recent instance, that a terminal operator at the JNP has reduced the number of quay crane moves. This has led to slower evacuation of cargo from vessels and longer queues of trucks at the terminal. Consequently, there has been increase in the dwell time of containers at the terminal and congestion during evacuation. The authorities need to exercise necessary interventions so that such instances may be avoided and requisite efficiency levels are maintained. This is particularly important with respect to increasing the number of DPD containers at the port as well.

iv) While the number of advance bills of entry have doubled in December'16, the overall share still remains low. Further, most of the advance bills of entry are for DPD containers, where it is mandatory to file the declaration prior to the IGM. Generally, importers are reluctant towards filing the bills of entry in advance due to the penalty levied in case of any mismatch in the declaration vis-à-vis the IGM. As per a new provision

in Budget 2017-18, it has been made mandatory to file the bill of entry within 24 hours of vessel's entry inward. This is expected to raise the number of advance bills of entry.

v) It has been observed that CFS and ICD dwell time are considerably influenced by the free period available to the trader. The terminal provides 3 days (72 hours) of free period to the importer, while the CFS gives around 7-14 days. The importer tends to take leeway of the available free time and clear the containers only in the last few days. This has resulted in consistently high dwell time of containers at the CFS' and ICDs.

vi) To handle the increasing number of DPD containers, terminals would have to ensure concurrent augmentation in necessary infrastructure. Paucity of yard space limits the number of possible DPD stacks at the terminal, thereby limiting the scope of increasing the number of DPD containers. To ensure the efficiency and timeliness of evacuation, the terminals need to be prepared in advance with additional infrastructure and equipment such as RTGCs and reach stackers. This will go a long way in avoiding potential congestion at the port.

vii) Currently, there is no provision for mentioning 'DPD' in the advance bill of entry. This creates ambiguities for the shipping line with respect to determining the destination of the container, if not intimated in advance by the importer. Providing a column for 'DPD' in the (advance) bills of entry will reduce instances of error in the IGMs and help expedite procedures such as the issue of invoice and delivery order by the shipping lines.

## 5. Cost Analysis

### Shipping Lines

Over the years, instances exorbitant and unexplainable charges levied by shipping lines have been frequently flagged by the traders. Today, an importer pays an amount falling in the range INR 25,000 – INR 35,000 to the shipping line for taking the delivery of one container. Some of the charges levied by shipping lines are unclear such as container maintenance, container cleaning and container repair charges, CFS nomination charges etc. Further, the terminal handling charges levied by the shipping lines frequently vary for the same terminal. Such practices have led to adverse effects on transaction cost borne by importers for clearing containers.

Table 25: Shipping Line Charges as per Original Invoices at NSICT						
Head/Shipping Line	For CFS Bound Containers (Per FEU, INR)			For DPD Containers (Per FEU, INR)		
	Hapag-Lloyd	CMA CGM	NYK Line	Hapag-Lloyd	CMA CGM	NYK Line
Terminal Handling Charges	10,000	10,150	9,025	10,000	10,150	10,125
Lift on Lift off	1,100		1,100	1,100	1,200	
Extra Handling Charge	1,000			1250	1,500	
CFS Nomination Charge	12,000					
Cleaning Charge			950	4,000	1,400	950
Container Maintenance Charge	4,000		1,000			1,000
Delivery Order/Import Documentation Fee	4,500	4,950	5,000	4,500	4,750	4,000
Container Inspection and Survey Fee		4,800				
RFC			14,000		500	
Value Added Surcharge		3,000				
Mandatory User Charge			1,250			
Emergency Port Surcharge					8,724	2,903
Shifting Charge				2,708	2,708	2,708
<b>Total Cost</b>	<b>32,600</b>	<b>22,900</b>	<b>32,325</b>	<b>13,588</b>	<b>30,932</b>	<b>21,686</b>

*Source: Original invoices obtained from importers*

The above table is a consolidation of various shipping invoices by different shipping lines obtained, by a particular trader, for a certain commodity ‘A’ at the NSICT. Projection of the difference in charges for the commodity ‘A’ when imported through DPD and CFS have been aimed at in the table. Some of the pertinent observations made include:

- In case of non-DPD containers, the shipping line charges are between INR 22,000 and INR 33,000 per FEU, while in the case of DPD containers it ranges from INR 13,000 to INR 31,000 per FEU.
- The terminal handling charges (THC) vary for each shipping line for the same terminal, NSICT in this case.

- Both THC and Lift on Lift off (LoLo) are simultaneously charged in certain cases.
- NYK Line charges both cleaning charge and container maintenance charge in one invoice; Hapag-Lloyd charges INR 4,000 alternately under container cleaning and container maintenance heads in different invoices.
- The amount of emergency port surcharge quoted by different shipping lines show considerable variance.
- CFS nomination charge is exorbitantly high at INR 12,000 per FEU.

## Customs

The World Bank Doing Business report has highlighted that the cost of Customs clearance at the JNP for imports is USD 97 (~ INR 6200). This figure includes all charges levied by the Customs other than the duty applied on the cargo, which particularly includes the documentation charges. The different documentation charges levied by the Customs are highlighted in the table below:

Table 26: Import and Export Documentation Charges Levied at JNCH		
Head	Cost (INR)	
<b>Manual Filing through EDI Service Centre</b>		
	Export	Import
Bill of Entry (B/E) or Shipping Bill (S/B) having up to Five Items	80	80
Adding Additional Item in Bill of Entry/ Shipping Bill	10	10
Transshipment	80	80
IGM		80
EGM	80	
Amendments in Original Declaration	10	10
Queries	10	10
<b>Online Filing through ICEGATE</b>		
Printing	30	30
Printing Extra Document Copies	10	10
Amendment in Bill of Entry		20
Amendment in Shipping Bill	10	
Additional Amendment	10	10
Overall Total Documentation Charge by Customs	<b>~ 150.00</b> <b>(~USD 2.5)</b>	<b>~ 170.00</b> <b>(~USD 2.8)</b>
<i>Source: <a href="http://www.cbec.gov.in">www.cbec.gov.in</a></i>		

From the above table, it can be observed that the approximate documentation cost for both export and import is USD 2.5 (~ INR 150) and USD 2.8 (~ INR 170) respectively. This cost can be reduced to around USD 1.5 if the documentation is completed online through the ICEGATE.

Through primary analysis, it was observed that the Customs cost given in the World Bank report – which is perception based - is higher vis-à-vis actual cost borne by the trader, possibly based on the feedback received from the customs brokers. An importer appoints a customs broker to undertake the process of customs clearance on behalf of the importer. Therefore, the Customs cost reported by the importer is inclusive of the

charges paid to the customs broker, which may vary for different brokers and cargo types. In general, a broker charges in the range of INR 5000-6000 (~USD 83-100) per consignment.

## ANNEXURE 1 - Imports

### 1.1. CFS Dwell Time

Table 27: CFS Specific Dwell Time for February 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)
<b>Total</b>	<b>88:41:59</b>	<b>50:00:15</b>	<b>57:13:20</b>	<b>121:08:48</b>
Ameya (n= 5,438)	69:22:58	90:56:18	22:56:24	133:41:20
Gateway (n=3,324)	108:56:46	N/A	84:21:36	139:16:37
Apollo (n=2,283)	139:14:28	N/A	N/A	183:02:05
Oceangate (n=1,478)	147:31:25	87:14:05	56:18:23	191:06:00
Punjab Conware (n=1,091)	96:49:59	78:08:53	36:57:37	122:33:41
Seabird (n=4,225)	124:54:05	N/A	N/A	183:43:22
Vaishno (n=1,011)	102:09:11	N/A	145:58:03	159:05:22
Continental (n=15,241)	78:56:04	N/A	N/A	107:25:35
APM Main (n=2,709)	119:11:42	67:35:20	37:54:10	156:26:53
EFC Logistics (n=377)	167:09:26	78:34:46	82:50:23	207:50:36
APM Annexe (n=3,529)	109:39:07	86:12:49	48:41:35	158:05:09

### 1.2. Dwell Time by PGAs

Table 28: Average Time Taken by PGAs in February 2017					
	CDRUG	AQCS	WCCB	FSSAI	PQ
Total number of B/E (n)	8,628	1,623	1,187	4,642	87,739
Time taken from B/E filing to sample collection (hr)	16:48:00	15:29:08	16:19:50	N/A	N/A
<b>Time taken from sample collection to report publishing (hr)</b>	<b>210:18:23</b>	<b>155:26:52</b>	<b>252:45:51</b>	<b>261:58:18</b>	<b>176:18:04</b>

## ANNEXURE 2 - Exports

### 2.1. CFS Dwell Time

Table 29: CFS Specific Dwell Time for February 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)
<b>Total</b>	<b>94:07:13</b>	<b>26:51:53</b>	<b>05:10:27</b>	<b>115:10:47</b>
Ameya (n=4,656)	108:20:11	14:21:38	02:12:07	124:28:09
Apollo (n=1,392)	103:11:09	39:58:16	08:07:45	144:00:09
Vaishno (n=1,019)	140:30:12	36:32:23	07:16:49	181:46:08
Gateway (n= 7,930)	93:05:39	18:39:17	07:37:52	114:24:35
PCW (n=13,597)	85:30:53	33:47:27	02:49:21	99:56:03
Seabird (n=485)	138:29:45	22:30:56	04:03:58	165:04:28
Oceangate (n=747)	126:14:19	32:38:39	25:10:45	164:49:10
EFC Logistics (n=469)	117:06:15	23:21:30	04:18:15	143:24:33
APM (n=168)	66:31:47	29:45:45	17:21:00	128:58:02
Continental (n=8,053)	87:35:26	N/A	N/A	113:21:33