

SURVEY OF THE
KATHMANDU-
BIRGUNJ-KOLKATA
CORRIDOR



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Report Summary


This report provides key results from the survey of the border crossing time of the trucks as they cross Nepal-India border in Birgunj and arrive at Nagdhunga (Kathmandu). The survey took place from September 27-October 3, 2013 in Birgunj-Raxaul Border and in Nagdhunga (Kathmandu). October is a festival season in Nepal. The festival season brings two conflicting impacts on transportation time: things are generally smooth and peaceful (which should lead to less travel time) but roads are crowded (because of higher traffic volume). The aggregate effect is ambiguous. Our results provide quantitative indication of how such effects actually are.

We found that the presence of border (both at Indian side and Nepal side) delays the transportation time by 19 hours, 57 minutes (the corresponding number for June was 17 hours 44 minutes). This includes the total of times spent in Indian custom and Nepalese custom yard. If one assumes that the clearing time for vehicles arriving from Duncan side at Indian custom offices are independent of clearing time for vehicles arriving from Raxaul, and further assumes that both of these times are independent of clearing time in custom yard in Nepal, then the standard deviation for the border crossing time is 910.8 minutes (15 hours, 10 minutes). The corresponding reported time for June was 665.5 minutes (11 hours, 5 minutes). Besides, we found that vehicles on average spend only 3 hours, 53 minutes (the corresponding number in June was 7 hours 6 minutes) inside ICD at Sirsiya, with the standard deviation being (87.25 minutes). The variance of data in June was significantly larger, and the standard deviation then was 557.4 minutes.

During the survey period, the trucks on average took 33 hours, 14 minutes to come from the dry port to Nagdhunga, with the standard deviation of this time being 21 hours 7 minutes. The corresponding number for average time from the dry port in Birgunj to Nagdhunga in Kathmandu in June was 36 hours 45 minutes (with standard deviation being 32 hours 11 minutes). For trucks arriving from custom yard to Nagdhunga, the average time during the current survey period was 49 hours 3 minutes (with the standard deviation being 38 hours). The corresponding number for June survey was 52 hours 43 minutes, with the standard deviation being 37 hours 10 minutes.

We had pointed out a striking observation in our previous survey about the relationship of the total time spent by trucks inside custom yard and the time spent doing actual custom related works. If we sum the average time for initial verification, inspection, bank payment and transloading, it turns out to be about 187.64 minutes (3 hours, 7 minutes). In June, similarly, this number was 211 minutes. The actual number can be even less than the reported numbers, as transloading for many trucks can be and are done concurrently with other operations. However, average time spent inside the yard is 1163 minutes, and in June it was 954.8 minutes. This indicates that more than 16 hours 15 minutes (in June, it was 12 hours 23 minutes) inside the custom was spent doing non-custom related works.

Compared to previous two studies, we found the border operations in Indian sides were more efficient, as vehicles were clearing fast. Despite the growth in the number of trucks, Nepalese border crossing time also was relatively stable. Most of the results are in between those reported in March and June survey. The numbers from March and June survey had fluctuated a lot, in particular, the travel time between Birgunj and Kathmandu. Although time spent for different operations inside the yard either decreased or stayed the same, the total time spent inside the custom yard increased a little bit, probably reflecting the impact of the congestion inside the yard.



Like in the past, the calculations in this report may have been downward biased by the fact that we did not sufficiently account for the delays caused by the goods stored in warehouse(s) in the custom yard, because of our short survey period. However, since less than 5% of the trucks were using the major warehouse (i.e the one owned by National Trading Limited) during our stay there, this bias cannot be too large.



Objective of Our Study

The objective of the present study was to estimate the border crossing times for vehicles coming from India to Nepal. Similarly, other objectives also include estimating time spent by trucks inside ICD, in going from Nepal to India, in travelling from Birgunj to Nagdhunga, as well as in performing several tasks (such as document preparation, inspection, transloading etc.) inside Birgunj custom yard.



SECTION 1


Birgunj Custom Office

Birgunj custom office is the most important revenue collection centre of the Nepalese government. According to a recent report by Department of Customs, 22% nation's total revenue is collected by the customs. Birgunj custom office alone generally collects about half of all the custom revenue. In fact, in 2069 Shrawan, out of a total of Rs9.7 billion collected from all custom offices, Rs 6 billion was collected from Birgunj custom yard and the dry port. According to the staff at Birgunj custom, 90% of its total revenues are collected from the tariff imposed in vehicles, oil and industrial raw materials. Because this custom plays such a pivotal role in Nepal's revenue collection, it is one of the most strategically important places in Nepal. For this reason, it has also traditionally been at the forefront of major custom related initiations in Nepal: it was one of the first custom offices, along with Bhairahawa and Biratnagar custom offices, to install ASYCUDA++ system, it was one of the first custom offices where wide area network (WAN) was installed, linking it directly to the custom head quarter and enabling real time monitoring from Kathmandu and it is also one of the first custom offices that are being considered as to be transformed into modern and more efficiently operated dry port.

The custom agency coordinates and coexists with many governmental agencies, the list of which is given at the final paragraph of this chapter. Custom office runs a lab in Tripureshwar (Kathmandu) which is mainly assigned the task of identifying chemical compositions of the imported goods when necessary. There are three quarantine offices-for livestock, plants and processed food items. These offices are also located very close to, but outside, the custom yard (see attached map). Furthermore, designated custom officer(s) also have some paralegal power according to the Custom Act (2064BS/2007AD): suspected individuals could be tried and sentenced by the designated custom officer, however, those who lose the case can appeal against the case at the higher legal level (i.e. at *Rajashwa Nyayadhikaran* etc).

Generally, the main custom office and custom yard both are crowded. The confiscated cars can be seen being uncomfortably stuffed inside the premise of main custom office, which is located in the opposite side of the custom yard in the Tribhuvan highway. The custom yard itself is not paved, and remains watery and muddy during the rainy season. There is no cafeteria for more than three thousand workers who manage the trucks. It is common to see many individuals assembling stoves and other utensils and cooking right in between the trucks parked inside the yard. It creates the scene of bedlam during the rush hour, contributing to the congestion inside the yard, which further contributes to the delay in the total custom processing time. Although at a small level, such practice also increase fire hazard during the hot days.

The city of Birgunj is a relatively new city and is about 276 kilometers away from Kathmandu via East West Highway, Mugling-Narayangarh highway and Prithvi Highway. The distance between Birgunj and Kathmandu could be reduced to 120 kilometers if the proposed expressway between Kathmandu and Nijgarh is built. Many cities in the southern Nepal were established after clearing the dense forest that used to characterize southern Nepal. Birgunj was established in 1890 AD and is named after a former Rana Prime Minister Bir Shamsher who used to wield absolute power in Nepal. Before that, since there were no settlements between Birgunj and Hetauda, an inland city near Churiya mountain range, the government used to raise custom in Chisapani Gadhi, located in the Churiya hill near Hetauda. In 1901,



the government started to collect custom in Birgunj. The custom yard currently in use was built in 1966AD. Despite the exponential growth in import in subsequent years, the yard hasn't changed fundamentally from what it initially was.

Initially, Nepal's custom policy was dependent on the decree issued by the then prime minister. The decree used to specify the goods and their associated tariff rate-often based on perceived selling price at the Nepalese market- irrespective of their actual cost. In 1945, the government began a system of letting importers declare the price of their imported goods in the custom office. Currently, the practice of determining tariff follows the government guidelines, which in turn are set in accordance with the guidelines stipulated in GATT, 1994. Disagreement between importers and government about the actual price of imported goods, and subsequently the necessary tariff to be paid, had traditionally been one of the major sources of delay in custom clearance process. Many government level policy experiments regarding how to effectively, accurately and efficiently determine the price of imported goods and necessary tariffs have been done in the past, before arriving at the current guidelines. We skip the discussion of those experiments here as that is out of the scope of this study.

There are several agencies inside or near the custom office which affect the custom clearance process. They include *Rajashwa Gashti Toli* (Revenue Collection Squad), *Janapath Prahari* (Nepal Police), *Rajaswa Anusandhan* (Revenue Investigation Bureau), *Rashtriya Anusandhan* (National Investigation Bureau), District Administrative Office, and three quarantines (plant quarantine, livestock quarantine and food quarantine) related to the ministry of agricultural development (plant, livestock and food). There is also a branch of the ministry of forest that advises the custom officers on whether a good being imported is in the prohibited list (such as CITES list). The narcotic division is mainly handled by Nepal Police, though there is a call for it to be treated as a separate unit. Efforts were afoot to set up a chemical lab in Birgunj custom circa 2007, but it is not operational yet. However, all of these agencies seem to be working as an integrated unit, and don't normally interfere in the work of custom, unless they are asked to do so by the custom officers. In our discussion with the representatives of freight forward association and federation of Nepalese chambers of commerce and industries, they reported lack of harmony among the several agencies in the custom, but the custom chief ruled out any such discord there, and felt his authority was respected by all.



SECTION 2

Methodology

Like in March and June, the surveyors were placed at the following sites: Indian inland area (at the end of the queue in Indian side of custom), Indian custom, Nepalese borderline, entry point of the Nepalese custom yard, at different points inside custom yard, at the exit of the yard, in the ICD (Sirsiya, Birgunj) and in Nagdhunga (Kathmandu). Together, these surveyors were able to capture the information on the timing of the following routes:

1. Trucks arriving from the western highway (Duncan Hospital area, train stop etc.) of Raxaul and passing through the Indian custom en route to Nepal from that direction
2. Trucks arriving from the eastern highway (main Raxaul bazaar area) and passing through the Indian custom en route to Nepal from that direction
3. Trucks arriving and leaving ICD for Kathmandu
4. Trucks leaving Nepal and going towards India

Each surveyor was asked to write down the vehicle number passing through the post they were stationed in. In the post (inside Nepalese custom yard) where trucks (usually Indian number plates) are transloaded to another trucks (usually Nepalese number plates), the surveyors were asked to note the number of the new trucks. Note that in the absence of such information, we would not be able to calculate the total hours taken by the trucks to reach Nagdhunga (Kathmandu) from Raxaul or to calculate the total time spent inside the yard.

There are three warehouses in the custom area: (a) the first one is owned by National Trading and is inside the custom yard (b) the second one is owned by Nepal Parabahan Godam Karyalaya (Nepal Transportation Warehouse Office) and (c) the third one is owned by Birgunj custom. We have focused on the functioning of only one warehouse, which looked the most prominent and active during the period we were carrying out the survey. This is the warehouse inside the yard which is owned and operated by National Trading Company. Many trucks store their goods (the details are in the section “Clearance process in the yard of Birgunj Custom”) in the warehouse if these are not being immediately released. Since these goods generally take a long time to be released, we are in general not able to capture the total time spent by these goods because of the short duration of our survey period. When possible, we tried to capture the information about the trucks offloading their goods in the warehouse. From our previous experience (in March), and from our conversation with different people as well as some literature surveys on previous studies carried out on border crossing time, we think there is a scant understanding of the kinds of goods stored in the warehouses, and the average time it takes for the goods to take out from there. Hence at this point, all we can conclude is that ignoring the activities associated with the warehouse downward biases total yard time, and hence total border crossing time, calculated. This bias is likely to be magnified in short surveys like the current one being reported.



SECTION 3

Seasonal Variation in Vehicle Flow

Birgunj custom yard is generally a crowded place. This is even more crowded during the festival season. Festival seasons also bode well for transportation sector, as monsoon is over, and there are normally less political activities to interrupt vehicles. Demand is up, by one account 20% revenue of the shopkeepers in Nepal is made during the festival season. Our data confirms that as well.

During the current survey period, we saw more vehicles in the yard than in our previous survey. During the June survey, we saw fewer vehicles than even those during March; however the number of non-motorized vehicles was observed to be more than those in March. The number reported in table 1 attests to this. In all observation posts, the numbers of trucks were higher.

According to the staff at the custom yard, there are three major reasons why we generally see fewer vehicles in June:

- (a) There is generally less demand of goods during the rainy seasons (Which starts after June)
- (b) Employees import less as a risk adverse strategy as major policy changes (in tariff, for example) are announced during the budget which is generally announced in late June/Early July.
- (c) Harsh weather, both unbearable heat in Terai and increased probability of landslide in mountain, increases the probability of delays and accidents along the highway and the businessmen normally take precaution against them by importing less.

It has been established that less volume at border translates into shorter border crossing time (see Djankov et. al.(2006),”Trading On Time”, World Bank Policy Paper #3909), hence we can expect an improvement in border crossing time in June compared to March. But the time should be more in festival season. However, we found that, as shown in table 2, time was not necessarily more in all posts. While time to arrive Kathmandu from Dry port increased, other time inside the customs seem to be either same as before or slightly decreased.

In the exit route, i.e. going from Nepal to India, June saw fewer trucks because of a moratorium in the export of sands and pebbles. Indian constructors use Nepalese sands and pebbles in large amount, and according to the chief of Birgunj custom, when moratorium was lifted immediately after we left the custom, on average 300-350 trucks carried such goods from Nepal to India daily. Our data in October show that on average 400-450 trucks left Nepal during the survey time.

Furthermore, historically, Nepal used to be pretty much closed during the rainy season. All goods necessary for Kathmandu used to be imported in winter, and people would stockpile them for summer. While increased population in the south has changed that tradition, some residual effect from the past seems to be persistent when one compares data between summer and post/pre summer.



SECTION 4

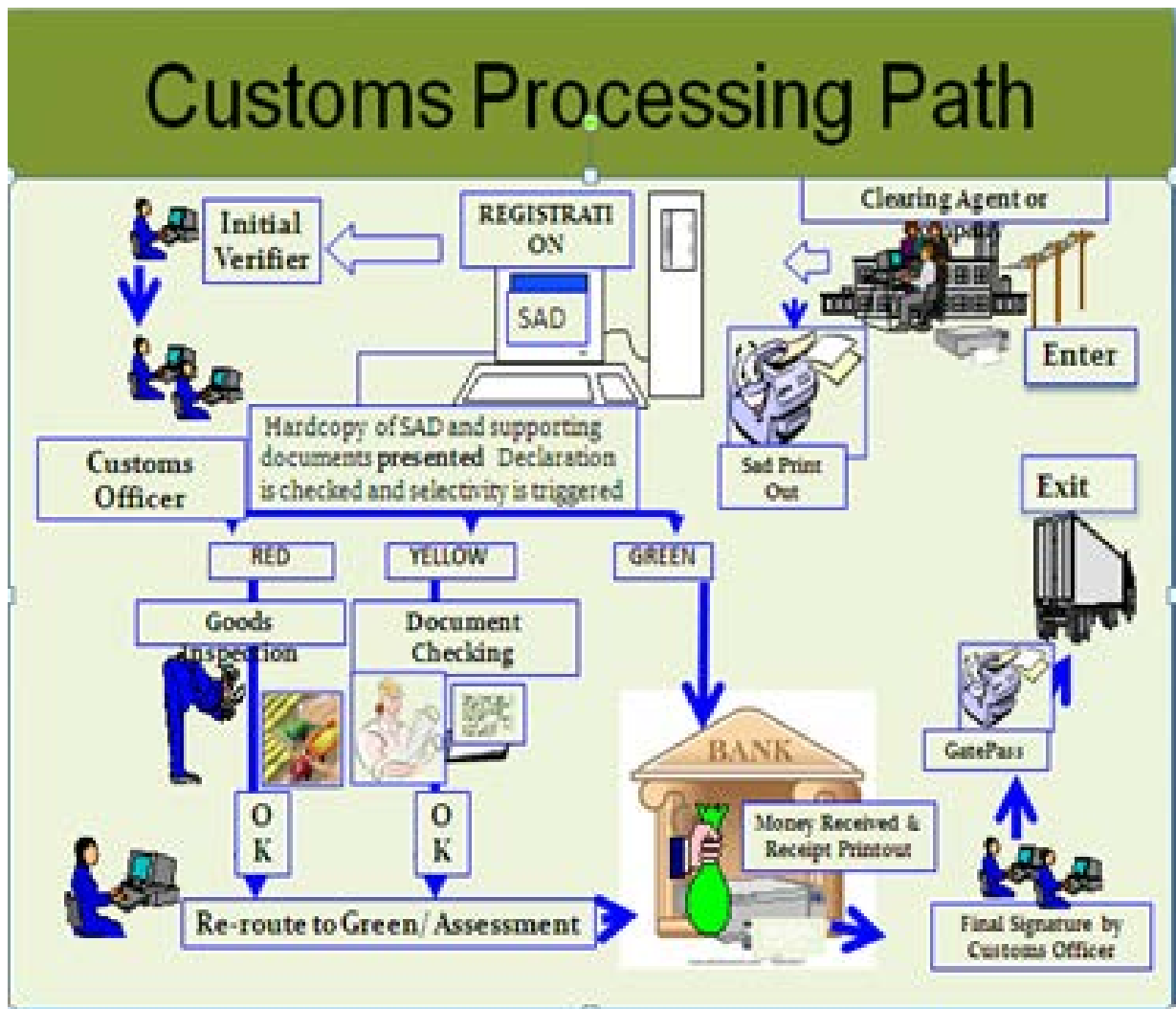
Clearance Process in the Yard of Birgunj Custom

This chapter provides detailed information on how the clearance process works in the Birgunj custom yard.

Figure (1) below provides the detail of the whole process inside the Birgunj Custom Yard, and this is also a general description of processes inside other customs (such as Bhairahawa where we carried out another survey). In summary, the processes are given as follows:


- (a) First, necessary administrative forms should be filled by the importer or his/her agents. There is a hall in the yard where many agents use computers for printing Single Administrative Documents (SAD), known as *pragyapan patra* in native language. It is the main document of the clearance process. It includes details of importer, exporter, financial institutions, mode of payment, transportation, tax amount, total value as per invoice etc. The agents may fill these documents even before the truck arrives in the yard and, in fact, many of them do so.
- (b) The application is registered automatically in the custom and noted by the officers. Based on the type of goods and in accordance to the categorization prescribed by *Selectivity Module* of Asycuda, they are categorized as green, yellow or red. Then the inspectors are assigned for the job. Those marked yellow are generally those goods that are released after checking the documents submitted by the importers. Custom officers have confided to us that many of them still play safe and check almost every imported goods categorized yellow.
- (c) Goods marked for inspections are then subjected to the inspections (see below for further clarification of this process). Inspection process may also involve one of the three quarantine agencies (plant, livestock or processed food). If the officers are satisfied after verification, they sign on the documents, otherwise goods are kept in the yard for rechecking.
- (d) Once the verification is made and custom tariff assessment is provided by the inspectors, the importer/agent should pay the custom tariffs at the counter of Everest Bank Ltd, at the conclusion of which they receive the certificate of payment.
- (e) The importer/agent should submit SAD, tax receipt, commercial invoice and transportation document to the custom. If the presiding chief inspection officer on duty is satisfied, he/she will sign in the documents.
- (h) On the basis of the signed documents, the vehicles are released after 2pm daily.

Figure 1 Processing Path in Birgunj Custom



The operation in the custom areas during the weekend deserves special mention. All banks, except Everest Bank, are closed on Saturday in Nepalese side, so the importers who don't have sufficient cash at hand to clear the custom due and who do not have an account in the Everest Bank (this bank incidentally is a joint venture between Nepalese and Indians) will be stuck in the yard until the next day. Indian side of the custom is closed on Sunday, however, there is a provision which allows importers to pay extra tax and get custom clearance service on Sunday too. Informally, we are told that relatively few importers choose to use that provision, so we tend to observe fewer vehicles on Sunday. Both Saturday and Sunday thus observe the volume of vehicles in the Birgunj yard area that is roughly 50~60% of other normal days.

Finally, it is also relevant to note here an additional post inspection system in place. There exists an office, *Bhansar Jaachpaas Parikshan Karyalaya* (Custom Clearance Inspection Office(CCIO)), established in 2064BS (i.e. 2007AD), which has authority to go to the warehouse of the importer and inspect the goods, as well as compare the price given in the SAD with the international market rate and if found any discrepancies, initiate action against the importer. The agency can initiate action against the importer until 4 years of the import date, if it finds they falsely represented the characteristics related to their import. If CCIO asks an importer to bring the necessary documents and clarify their transaction, they have to travel to the office of CCIO in Kathmandu and explain their transaction to the relevant officer. It is of great inconvenience to the importers who are not from Kathmandu (say from places



like Nepalgunj). The custom officers also believe that there is an urgent need of a CCIO office in Birgunj, since Birgunj handles most of the import. CCIO may also be causing a lot of delay associated with border crossing, which we haven't been able to capture in this survey.



SECTION 5

The Warehouse Inside the Custom Yard

There are, as explained earlier, three warehouses, but we focus on the most active warehouse here, which is owned by National Trading Company and is located at the southern border of the custom yard. Some of the vehicles arriving from India unload the goods in this warehouse which charges 5 paisa per KG per day for seven days, 7 paisa per KG per day for 8 days to one month and 10 paisa per KG per day thereafter. The main reasons for unloading and keeping the goods in the warehouse are (a) not having the documents for clearing the custom ready and (b) unwillingness/incapability of the importers to clear the goods on time due to not having fund for clearance . Generally goods are imported through letter of credit (LC), therefore the importers end up having to take some additional days than they initially expected to collect documents from the bank in which their LC was opened.

The warehouse plays an important role in calculating the total custom yard duration for trucks. In general, as explained already, their omission biases our estimate for total time inside the yard downwards. In the minimum, we still don't know the nature of goods stored (we saw mainly computer hardware, for example) there, and the average period of their storage in the warehouse. Furthermore, almost every truck carries goods that require 20-30 SAD documents to be fulfilled. Notice that these trucks are normally owned by transporters, and each truck generally carries goods belonging to many petty transporters. We asked if it is likely that some of the goods carried by the trucks are stored in the warehouse, while others go through the inspection process directly, and we were told that such cases are relatively rare. However, precisely understanding when these goods were released and who claimed them, and identification of sources of delay related to the goods stocked inside the warehouse may clarify our understanding of the border crossing process further. In terms of number, during the summer survey period (June 13-15), 10 trucks transferred their goods to the warehouse, and 17 trucks transferred their goods from the warehouse to the trucks. This is a very small fraction of total flow of vehicles inside the yard (i.e. less than 5%).



SECTION 6

Transloading Inside the Yard

Some goods are carried to Nepalese border by Indian trucks and are later loaded in Nepalese trucks right inside the yard. Indians vehicles plying inside Nepalese border is actually a very politically sensitive issue, and leftist political parties regularly condemn such free travel. Nepalese truckers also complain that while they are asked to pay a hefty bond if they want to go to Kolkata and bring Nepalese goods, Indian trucks are allowed easier access inside Nepal. There is also an oversupply of trucks inside Nepal, and truck owners are always bitter about seeing Indian trucks inside Nepal.

In Birgunj custom, many, if not all, vehicles arriving from India at the yard have Indian number plates. Once these vehicles and the goods they are carrying are checked by custom officials and are provided permission to leave, some of them leave for the different destinations of Nepal, while others transfer the goods to Nepali Trucks/vehicles. We found the following reasons for transloading to Nepalese trucks from the custom:

- (a) Some Indian vehicles are very huge in sizes which do not pass through mountainous roads, necessitating transloading of these trucks if the final destinations are areas in the mountains of Nepal.
- (b) The following is the policy regarding the charge to be paid by the Indian vehicles if they are to ply in Nepal: (i) if the trucks are empty, they need to pay Rs 800.00 per day (plus 13% VAT). After that, they have to pay Rs 1000.00 per day (plus 13% VAT). However, in a given calendar year, these trucks can enter Nepal at most 30 days. (ii) if the trucks are loaded, they can travel free of cost for the first 72 hours. Thereafter, they have to pay Rs 800.00 plus VAT (13%) per day. Maximum day constraint is applicable to them as well. (iii) Small vehicles such as cars have to pay Rs 400.00 per day (plus 13% VAT) and they are also subjected to the maximum 30 days constraint. These policies sometimes make it profitable to transload, rather than carry on from the custom yard, especially if the weather or political climate introduce uncertainty in total expected transportation time within Nepal.
- (c) Indian vehicles carrying brittle, damageable goods may not choose to transload to Nepalese items to minimizing the damage due to such intervention.

However, a substantial number of vehicles carry goods to Parsa and Bara (surrounding areas of custom) and may change their goods to either Nepalese trucks there or deposit it in the warehouse there, as they perceive that it is not beneficial to change the vehicles from custom.

Historically, until about fifteen years ago, all goods used to be unloaded and kept in the yard for thorough verification from custom' officers and the goods were arranged as per the types. All goods were checked by the officers as per the documents. It was possible to do so those days due to the total volume of trade being low. However, increase in imports from countries such as China has made such detailed checking almost impossible lately. Now, it is more typical to see the inspectors checking sample goods, rather than going thoroughly over all goods. However, since each custom officer is given a target of revenue, the sampling is generally not



uniform throughout the year. They generally sample more goods if the target is not considered to be achievable.

It is also observed that, while many trucks customarily go through the custom and enters the complicated process of having to check everything, other trucks, mainly those carrying iron, cement, clinker and oil go directly without entering in the yard.



SECTION 7

The Role of Agents

As noted above, the first step inside the custom yard involves the agents who prepare the documents on behalf of importers. It is important for us to understand who the agents are, how they are selected and how their choice may affect the total time inside the yard. We provide such background information on agents below.

Nepal's experience with custom agents is relatively new. Even though some steps towards officially recognizing agents began circa 1962, it was quickly terminated. Part of the reason was political: until 1990, Nepal exercised a party less political system in which the king ruled as an absolute ruler and any kind of organizations were generally viewed with suspicion, while political parties were banned. Until 1997, there were no agents in the custom and people with power of attorney from the importers took care of the work currently being carried out by the custom agents. In 1997, the government first appointed 240 custom agents, after soliciting applications from general public and initiated a new system under which those other than licensed custom agents were not allowed to do the work of custom agents. These agents were also provided necessary trainings. Three years after that, 247 more agent licenses were again issued. However, many of these agents were found lacking in necessary skills. Currently, there are about 250 active agents. Many of the agents left the work either because they couldn't find sufficient works or because they couldn't work efficiently as the nature of their work has changed. Initially, these agents filled papers using their own hand, but now they are expected to be computer literate, and be adept at using Broker's Module and Single Goods Entry System. Such technical demand also caused some of the attrition observed in the total number of agents.

The agents have their own national organization: *Nepal Bhansar Agent Mahasangh* (Nepal Custom Agent Federation). The federation's stated goal is to be intermediary between the custom administration and the agents and letting agents know about any future changes in custom rules and regulation. It also trains, in cooperation with the custom department, the agents on the new software being adopted at the custom offices.



SECTION 8

Clearance Process in Inland Clearance Depot (ICD) in Sirsiya, Birgunj

This chapter provides a brief introduction of newly started Dry port in Sirsiya, Birgunj, which is a major point of processing the imported goods. The Dry port is rail based ICD spread over 38 hectares and begun its operation on 16th July, 2004. It is connected to seaport in Kolkata via Raxaul. The port is roughly divided in eastern and western sides, and the rails, depending on the goods they carry, are parked in one of these sides. The railway yard of ICD has six full length lines. It also has container stacking yard with 656 ground slots and these slots are capable of holding 1570 twenty feet equivalent unit (TEU) at one time. It is a fairly modern facility for Nepal, as it boasts covered goods shed, fire detection system, alarm system, back-up power, huge parking facilities etc. The official estimate of the total time required for the clearance of cargo at Birgunj dry port is 1 day, and the total time required for goods to arrive from Kolkata port and be released from the Dry port is 8-9 days.

The clearance process of ICD, which is generally similar to the process at the custom yard, is as follows. The importers are required to submit the documents which provide information on the invoice, packing list, certified copy of L/C and certificate of origin. The port authorities then proceed with the first step at generating the category for the imported goods based on the information provided. As in the custom yard, a *selectivity module* is adopted by the authorities in the ASYCUDA system which generates green or red or yellow signals. The agents put the declaration documents in the system, which generates registration number automatically. The declaration with registration number is then printed out and this print out and other supporting documents are then submitted for final verification. The inspectors in the port then verify the documents, which also involves verifying the information of importer, exporter, statistical quantities, harmonized codes, custom values, vessel and bill of loading as well as small details such as the signatures in the declaration form. Then, the tax and duties are determined. The agents then pay the duties and taxes payable at the counter of the Everest Bank Ltd, which has a branch in the Dry Port. The agent then takes the receipt of payment. After that, the final verifier selects the container and marks green/blue and red /yellow. If the containers get green/blue, then it is released. If the containers get red/yellow, it is thoroughly checked. If there is no any discrepancy, the goods are released. Clearly, if any discrepancies are found, additional duties are paid and then the goods are released. Once the examination is completed, it is copied to Risk Management Unit. The goods are then loaded to the trucks waiting for them, and are transported to their destination.



SECTION 9

Clearance Process for the trucks carrying exported goods at the custom office

This is a relatively straightforward process, compared to the clearance process required for the trucks carrying imported goods. For the trucks carrying goods from Nepal to India, the exporters often have the certification issued by Federation of Nepalese Chambers of Commerce and Industries (FNCCI). They take this certification, as well as the *Pragyapan Patra* (declaration form), to the Nepalese custom office, which provides clearance paper once it determines everything is in proper order. The clearance paper is then showed to the guards at the border, who then allow the vehicles to proceed.

The Indian custom office is small compared to the Nepalese office. Their custom yard is privately owned and is not as extensively used as in Nepal.

The bilateral treaty has guided this process, so the procedure in Indian side is also same for the trucks carrying exporting goods from India to Nepal.



SECTION 10

A Note on Method Used to Estimate Inspection Time inside the Yard

We provide a brief explanation of how we estimated the time inside the custom yard here. Things are generally slow inside the yard until the operations involving officers (such as inspection) start at 10~11AM (though 10AM is official starting time in Nepal, we observed real work began around 11AM), and during the peak hours, it becomes very hard to keep track of everything without investing substantial manpower. For example, inspections could be carried out at any place (wherever the trucks are parked), and there were 7 inspectors in our March survey, and 8 inspectors in June. The number of inspectors could be as high as 10 (the total number of inspectors working inside the yard), implying that to capture all the information related to the inspection process (such as total time of the inspections of a particular truck), we would need 10 surveyors (so that they can follow the inspectors). In March, we hired additional individuals just for peak hours when possible, but it was not possible to do so every day of our operations given our tight schedule. In the June and current survey, we placed our surveyors at the gate of the inspection office, and asked the inspectors right at the gate which truck they were going to inspect. Rather than following the inspectors to the inspection site, we just tracked the inspectors and subtracted walking time to and from the inspection office to the inspection site (which is generally a couple of minutes).

We also verified the time of SAD submissions using the office record, which were provided by the officers at the end of the working day. Our enumerators utilized this generosity of the officers to recover some of the data they lost during the peak hours and verify other data that they recorded but had some doubt about.

Regarding the calculation of the time spent inside the bank, our surveyors were placed right inside the bank. One surveyor was at the end of the entering queue in the bank, and another surveyor was at the end of exiting queue. The difference in these two times was calculated as time required paying the tariff at the bank.

Similarly, calculation of transloading time was carried out by observation. We placed surveyors right at the spot of transloading vehicle.



SECTION 11

Report on Timing

The results from our survey are reported in this section.


We had made a slight change in the way data was collected in June (compared to March) and we continued the practice adopted in June during this survey as well. We had slightly changed our observation posts from the March survey to capture more accurate information about different processes inside the yard and also to address our difficult relation with Indian custom at the end of our previous survey. In ICD, we decided to keep students at the inner gate and note entry and exit time. In the March survey, we had asked students to be at the inspection site. The distances from the gate to the inspection sites (two terminals) were short, students could actually see which terminals they were heading to from the gate itself and we decided that the additional check posts were not necessary to capture the amount of information we needed or we captured last time. Business was brisk at this survey period: A total of 814 trucks entered the yard, and a mere 185 trucks exited the yard during the survey period. The low number of exit this time was a surprise to us.

Because of our unpleasant experience in March, we did not put any surveyors near the Indian custom office in Raxaul, even though we believe our relationship with the custom office at Raxaul has improved a lot by now. Just like in June, we placed individuals in Raxaul and Duncan area but asked them to keep a low profile and record the truck numbers. We were planning to hire an Indian citizen for this project (we did so in Bhairahawa survey later) in case of something unfortunate would happen but nothing happened. A total of 3198 trucks were recorded going from Nepal to India. Likewise, we recorded 2039 trucks coming from Raxaul side and 1464 trucks coming from Duncan side. As mentioned already, trucks coming from Raxaul side tend to be those which carry consumer goods from Kolkata as well as from other Indian cities. Trucks coming from Duncan side are those that carry clinker, industrial raw materials etc. and are likely to have been loaded from the freight train arriving at Raxaul.

Because of our improved method of recording different processes inside the yard, we were able to record a significant fraction, if not all, of the trucks which entered the yard during this survey period. To record the time for initial verification, we posted two surveyors right inside the room where agents print the documents (SAD) in each shift. The surveyors noted the time of each agent's entry in the hall and asked the number of the trucks they were affiliated with. Unfortunately, this procedure is not fool-proof for several reasons. Some agents may not print the document at the hall, but do so at his/her house if he/she has access to the printer at home. However, our observation of agents (their education level and economic strength) did not make us feel that many agents print the documents at home. A total of 1242 truck numbers were recorded at this stage. It is important to note that this stage is one of the most befuddling stages because agents can submit their SAD long before trucks enter the yard (or if documents are not ready or if the importer does not have sufficient funding to pay the tariff) long after the trucks enter the yard.

Table 1 at the end of the report provides summary statistics about the total number of trucks surveyed. We discuss them in further detail below:

(a) Total Time inside Custom Yard



The average total time inside yard during the survey period was 1163 minutes (19 hours, 23 minutes). This was almost a three hours' increase from our previous survey period. 954.8 minutes (15 hours, 54 minutes). Many previous studies of custom has indicated that the distribution of total yard time follows log normal distribution with long tail (see Arvis et al (World Bank Policy Research Paper #4258, 2007)). Our current survey yielded the distribution consistent with their theory (see figure 1(a).) We have also reported the distribution from the June survey.

In June, we found long tail but rather than having a log normal distribution for the total waiting time inside the yard, our distribution was solidly double peaked one. This double peakedness was not that pronounced in our March study and has again vanished from our October study. However, the double peakedness of the total yard time makes sense. Notice that all the vehicles are categorized as either green or yellow or red, out of which of those categorized as green are allowed to go without going through inspection process, whereas red are subjected to rigorous inspection. Though yellow are released after checking documents only, clearly when the yellow category vehicles are relatively fewer in the number and when the total number of samples taken is small in size, the double peakedness must appear, as greens and reds are distinct by their clearly different requirement for inspection time.

The total time inside the yard was around 10% less in June than what was found during March survey period. March study had found that the average time spent inside the yard was 1040 minutes (17 hours, 20 minutes). We have already discussed the possible reasons for these drops. Consumption nationwide drops and demand for goods becomes low during the rainy season and therefore traders import less during this season. The rainy season also, due to heavy rainfall, carries greater risk of landslide and accidents (however, the higher accident rate in rainy season seems to be more like a perception than reality, as a recent unpublished research on traffic accidents by KUSOM showed that no such seasonal effect is actually observed in the traffic accident data). People also anticipate great policy changes during the budget speech, which is generally given by the finance minister in June/July each year and they will not take the risk by importing goods if the tariff rate may change.


(b) From Duncan side in India to Nepalese border

The mean arrival time for the trucks coming from Duncan area to Nepal border was 30 minutes. The maximum time recorded was 186 minutes, minimum was 1 minute and median was 17 minutes. This was a significant drop from our previous survey period. During June survey, the corresponding figure was 96.9 minutes (1 hours, 37 minutes). The median time was 21.5 minutes.

The kernel density plot is shown in figure 2 below in appendix. Figure 2(a) is for the current survey period, and figure 2(b) is for June. We noticed that they are similar except for the current distribution, this looks a bit more spread out. The distribution for this time shows a long tail and is single peaked. This long tail clearly represents the congestion at the border from time to time.

Compared to the March study, these numbers are significantly lower. Actually, the numbers were similar during March and June. The total number for this distance was 110.8 minutes in March, of which 63 minutes was for reaching Indian custom and addition 47.8 minutes was for crossing the bridge and reaching Nepal border. In March we had placed surveyors near Indian custom but stopped doing so for later surveys, so we couldn't separate these times for subsequent surveys.

Most of these trucks that come to Nepal from Duncan direction carry the materials that arrive in Raxaul via railway. Furthermore, they also carry heavily demanded (in



Nepal) raw materials such as clinker for cement industries. They may require some paperwork to be done in Indian custom.

(c) From Raxaul side in India to Nepalese border

The mean arrival time for the trucks coming from Raxaul side to Nepal border was 37 minutes, with the maximum being 527 minutes, minimum 1 minutes and average recorded time being 13 minutes. The standard deviation was 79.65 minutes. The corresponding figure during the June survey was 77.43, with standard deviation being 237.6. Compared to June, therefore, the duration is less and more precise (as evidenced by low standard deviation). The kernel density shows similarity between the distribution in current survey and the distribution from previous survey. There is a long tail in the distribution of these times (Figure 3). Again, the long tail is merely reflecting the traffic jam that characterizes Raxaul's road, if the road is not congested; it should not take a lot of time to go from Raxaul side to Nepalese border. This number was 63.8 minutes in our March study, of which 16 minutes was to reach the custom office and 47 minutes was to cross the bridge and reach Nepalese border.


Many of these trucks arrive from Kolkata but bilateral trade between India and Nepal constitutes the major proportion of traded goods carried by these trucks. Since most of the goods coming from third country are offloaded in Kolkata port and thoroughly checked by custom there, the arriving trucks do not have to go through many papers. Most of the time, Indian concern is regarding leakage of third country import in India, but Indian authorities have used other policy instruments to address that problem, and its impact in Raxaul border in terms of added border crossing time seems to be minimal.

(d) Initial Verification inside yard

The average time for initial verification during our survey was 35.76 minutes; the maximum among the recorded times was 310 minutes, minimum was 1 minute and the median was 18 minutes. The standard deviation was 49 minutes. Compared to June, the time was stable and same, indicating perhaps that the custom adapted to the increased flow during the festival period. The average time duration for June was 31.8 minutes, with the standard deviation 35.4 and median time being 17 minutes. The density plot (Figure 4a) is remarkably similar to the distribution of June (Figure 4b). In the inspection spot, it was normal to see one truck carrying multiple different goods of different owners, requiring filling 20 or more SADs by the agents.

As discussed already, measuring the time for initial verification is generally one of the most complex tasks. The agents may file the SAD before the trucks arrive in the yard, or they may not use the facility inside the yard to file the report. They fill the SAD early to avoid the parking charge inside the yard and expedite the time spent there. Agents normally use a room inside the yard to fill out the document and print it. This office generally opens at 7AM, long before inspectors arrive at their office. The task is further complicated by the fact that one agent may fill out the form for many trucks. Trucks are also varied by the types of goods they carry. Since the transporters may be carrying different types of goods of different owners, some trucks may have only one type of good, where as other trucks may have several types of goods. It is natural to expect a lot of variation in the time for this process.

During the June survey; agents complained about the computers inside the hall that were not all working and they could not fill all *incoterms* in the computer and they were not able to feed *exwork incoterms*. This delayed the process in their view besides making it hard to make a demand draft of transportation. We did not hear any complaints this time and this may be the reason why we saw decreased time.

- 
- (e) Inspection inside the custom yard
The average time for inspection inside the custom yard was 12 minutes. The maximum recorded time for inspection was 85 minutes, minimum 1 minute, median 5 minutes and standard deviation 17.5 minutes. There has been a remarkable drop in inspection time. Clearly, the staffs at the custom are responding to a higher flow by working fast or letting the vehicles go after very casual inspection. The average time calculated for the June survey was 35.5 minutes with the standard deviation of 19.5 and median time being 34. Compared to June, the time was low, indicating that the inspectors adapted to the increased flow during the festival period. The distribution (Figure 5a) is skewed to the right.

In June, the distribution was almost normally distributed, which we thought was more in line with our expectation, as goods that are inspected are different from green or yellow goods and hence are unlikely to give any kind of double peakedness in distribution. In June, we also noted that longer inspection times were generally caused by the need to use services of quarantines. The reversion to right skewed distribution in the October survey was mainly due to less good requiring referral to quarantines.


We observed that the names of the inspectors were written on the white board in the custom office. The inspectors are divided into officers and non-officers. The officers were seen inspecting vehicles only after 2PM, and non-officers inspected the vehicle before that time. The goods carried by bullock carts or bicycles, generally a gritty and non-charming task from the point of view of the officers in duty, are inspected by non-officers only.

- (f) Payment of tariff in the bank
The average time for payment in the bank was 10 minutes, maximum time being 72 minutes, minimum time being 1 minute. Furthermore, the median time was 8 minutes and standard deviation was 8.13 minutes. The corresponding average time for the June survey was 4 minutes with the standard deviation of 5.2 minutes. The maximum time there was 38 minutes. Notice that this includes only the time spent in the queue inside the bank, where our surveyors were located. The median time for this process in June was 2 minutes. The time distribution (Figure 6a) is right skewed and has a long tail, indicating occasional rush hour at the bank office. The distribution is remarkably similar to the one noted during the June survey (Figure 6b).

The bank generally opens at 10PM and closes at 8PM. The rush was more likely seen around 4PM.

The increased average time in the bank was consistent with the fact that unlike custom, the bank does not adjust its staff. For the bank, it is a small unit that is dedicated for custom. The branch of the bank in the city, for example, is a profitable one, providing lending and other financial services. Therefore, the bank does not normally respond to the increased traffic in the custom by increasing staff, as adding staffs requires a considerable expense. Temporary hiring by the banks is something the central bank strongly discourages as well.

- (g) Transloading time
The average transloading time was 130 minutes; the median time was 120 minutes. This is approximately same as the average time of 140.5 minutes, and the median time of 110 minutes recorded in June survey. The standard deviation of the transloading time during this survey period was 63 minutes, the maximum was 318 and the minimum was 2 minutes. The corresponding standard deviation for June was 90.9 minutes. For June, the minimum time recorded for transloading was 25 minutes,



and the maximum was more than 6 hours (442 minutes). The distribution (figure 7a) is single peaked, and looks like normal, with slightly right skewed. Like the bank payment time, the distribution is similar to the one reported in June (7b). The fact that average time as well as the distribution of transloading was similar in October and June survey is remarkable and shows that we may be converging to a fact that has remained stable over time.

(h) Inside the ICD in Sirsiya

The average time spent inside ICD is 233 minutes (3 hours, 53 minutes). The median was 272 minutes (4 hours, 32 minutes), the maximum time inside ICD was 350 minutes and the minimum was 19 minutes. The corresponding number for average duration in June was 425.9 minutes (7 hours 6 minutes), with the standard deviation 557.4 and minimum 30 minutes. The median time inside the yard in June was 180 minutes (3 hours). The distribution of this time is given in Figure 10a. The corresponding figure for June is given in 10b. We had double peakedness in June data, which has vanished entirely now. The current data is skewed to the left, but has a single peak.

(i) Time to go from ICD to Nagdhunga (Kathmandu)

We found that, on average, it took trucks 1994 minutes (33 hours, 14 minutes) to reach Kathmandu from ICD. The maximum recorded time was 4525 minutes; the minimum recorded time was 722 minutes and the median 1426 minutes. The average time observed was lower this time compared to both in June and March. In June, the average time for trucks to arrive at Kathmandu from ICD exit was 2205.6 minutes (36 hours, 45 minutes), with the standard deviation being 1931.6 minutes. The median time was 1257 minutes (20 hours, 57 minutes). The June data was smaller than what we recorded in March. The distribution, as given in Figure 8a, has a normal like look and is right skewed.

We were not sure why the June data showed a decrease in duration for the trip from Birgunj to Kathmandu for trucks going from ICD to Kathmandu especially because this data went in the other direction for the trucks coming from custom yard to Kathmandu. We suspected from our observation that smaller trucks carried most of the loads this time compared to the trucks that carried loads in March. The time decrease in festival season has also been observed for trucks leaving custom yard for Kathmandu.

The fluctuation in travel times are probably partly explained by the nature of Nepalese transportation in our opinion. During the festival season, many people are traveling and it is usual to see trucks and buses crowded with passengers. This obviously increases travel time for everyone. On the other hand, the weather is good, and hence a major delaying factor in transportation is removed. These two forces act in opposite direction. During the festival seasons, we suspect the trucks leaving from custom yard also pick up passengers, though it is obviously illegal. The container trucks leaving ICD are less likely to do so, however.

(j) Time to go from Custom Yard to Nagdhunga (Kathmandu)

The average time for the trucks to arrive from custom yard to Kathmandu is 2943 minutes (49 hours, 3 minutes). The maximum recorded time was 10359 minutes (about 7 days), the minimum was 682 minute, median time was 2164 minutes and the standard deviation was 2280 minutes. The corresponding average number for June was 3163.1 minutes (52 hours, 43 minutes) and the standard deviation is 2230.5 minutes. The median value for June was 2205 minutes, (36 hours, 45 minutes). Their distribution (Figure 9a) shows slight double peakedness and a long tail at the right and is similar to the distribution observed in June (Figure 9b).

(k) Time to go from Nepal to India

The average time was 34 minutes. The maximum was 243 minutes, the minimum for this was 1 minute and median time was 18 minutes. The corresponding average number for June was 122.7 minutes, with standard deviation being 251.1 minutes. The median time was 54 minutes. The distribution, as given in figure 11a, is single peaked and has, like others, a long tail and is more or less similar to the one observed during June survey.

Indian custom does not have a yard. There is a small parking area to the north of Indian custom. The owner of that yard charges for parking. Whenever Indian custom decides to inspect goods, it uses the same parking yard, but such inspections are said to be very rare.

The weather during this survey period was temperate. Birgunj was reasonably hot. The temperature was around 35 degree Celsius during the day time. Unexpectedly, rain had arrived due to Phailin and there was some rain in Dhading and Kathmandu side as well. Due to this, some of the roads were observed to be muddy in Narayanghat-Mugling section near Dashdhunga where road construction is also going on. Long queues of vehicles were also seen because of road repair work in the hills of Naubise, near Kathmandu and due to which the road movement was limited to only one side of lane. However, the road construction was temporarily halted at the latter days of our survey.

Political activities were recorded during this time as well because of the announcement of election. One candidate was killed in Bara district, near Birgunj, the sole incidence of violence so far in the election. It caused some disturbance in the vicinity of survey area and must have contributed to some delay for trucks going to Kathmandu. However, politics, as observed by many, is very peaceful this time around with few rallies and a lot lesser violence.



SECTION 12

Problems Faced During the Execution of the Project

No problems were recorded.

Just like in the past survey period, custom officers and all other officers in Nepalese side helped us in carrying out the survey. Custom officer in Birgunj Ram Hari Aryal, Inspectors (esp Laxman Shrestha), Custom officer Achyut Shivakoti, ICD's head of finance Ram Babu Sah , CEO V. Mohan were extremely helpful. We also received help from the head of Everest Bank's branch in custom yard, Naresh Sharma who provided our student remarkable access. Maiti Nepal, an organization that works to monitor women smuggling in border areas, also provided one of our students a space and a chair to sit in their observation post so that she didn't have to suffer scorching sun (they had helped us similarly in March also). They far exceeded our expectations in terms of cooperation.



Post	Number of Vehicles
Dryport IN	814
Dryport OUT	185
Export Nepal side	3198
Export India side	1997
India Raxaul	2039
India Duncan	1464
Entry Pt of Yard	3126
Initial Verification	1242
Inspection	744
Bank Payment	681
Transloading	502
Exit Pt from Yard	3873
Thankot	4387

Table 1 Total Number of Observations in the Posts

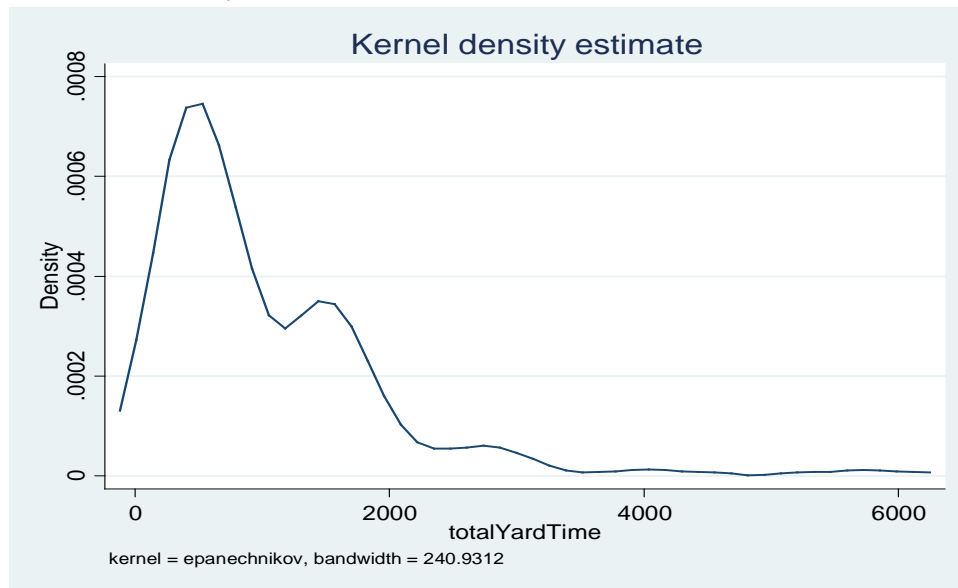
Variable	Mean(in Minutes)	Standard Deviation (in Minutes)	Min	Max
Total Time Inside Custom Yard	1163 [954.8](1040)	910.46	123	6004
Dryport to Kathmandu	1994 [2205.9](3306)	1267.6	722	4525
Yard Exit to Kathmandu	2943.4 [3163.1](2249)	2280.3	682	10359
Nepal To India (export)	34.8 [122.7](103.6)	42.73	1	243
India (Duncan side) to Nepal Border	30.44 [96.9] (110.81)	42.63	1	186
India (Raxaul side) to Nepal Border	37.3 [77.43](63.8)	79.65	1	527
Initial Verification inside Yard	35.76[31.8]	49.62	1	310
Inspection	11.98 [35.5]	17.57	1	85
Bank Payment	10 [4.0]	8.13	1	72
Transloading	129.9[140.5]	63.97	2	318
Time Inside Dryport	233.33 [425.9](223.9)	87.25	19	350

Table 2 Summary Statistics of Time Required (Numbers in brackets are mean from June survey and numbers in parenthesis are mean from March Survey, where applicable)



Figure 2 Density Estimate for the time spent inside the Nepalese Custom Yard

(a) For October Survey



(b) For June Survey

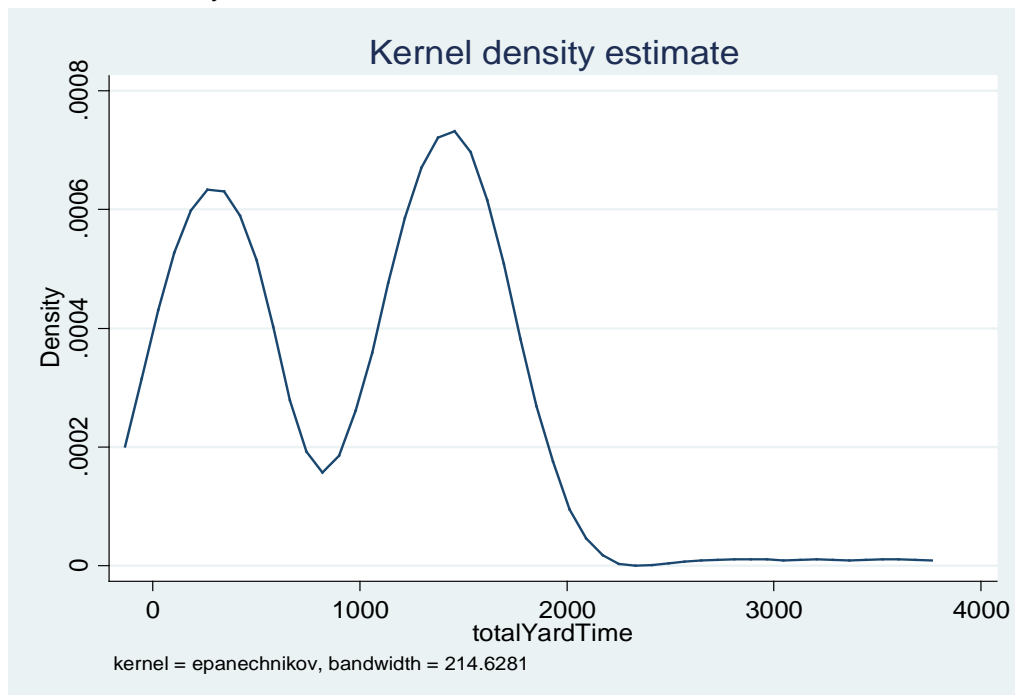
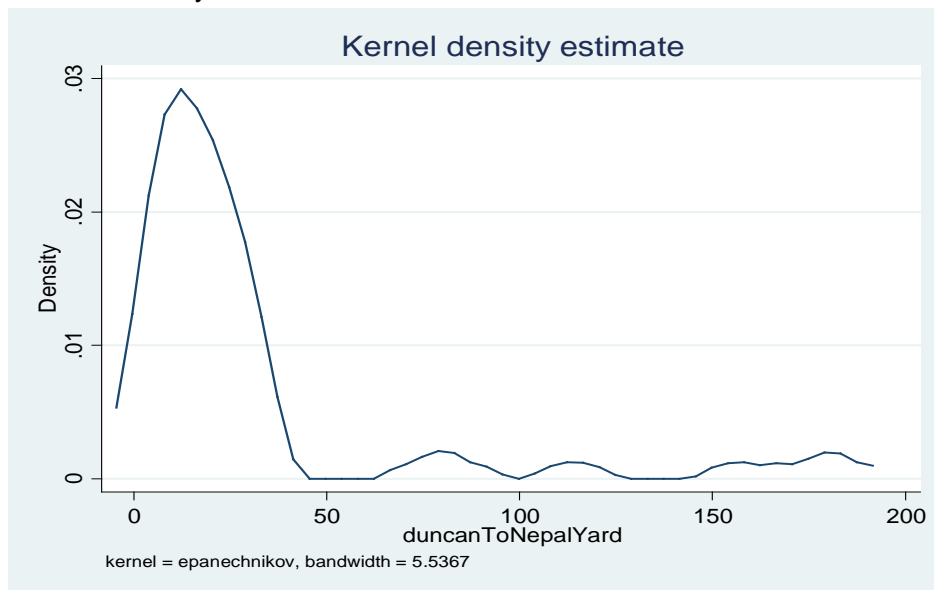




Figure 3 Kernel Density of time to arrive at Nepal custom from the end of the queue in Duncan

(a) For current survey



(b) For June

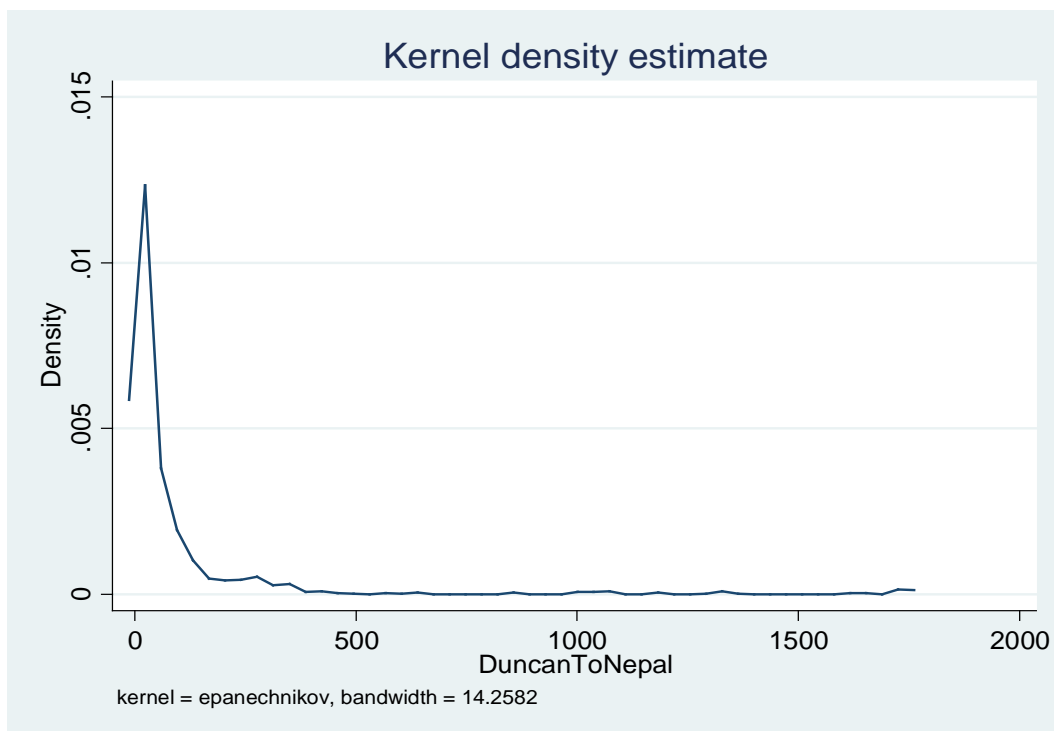
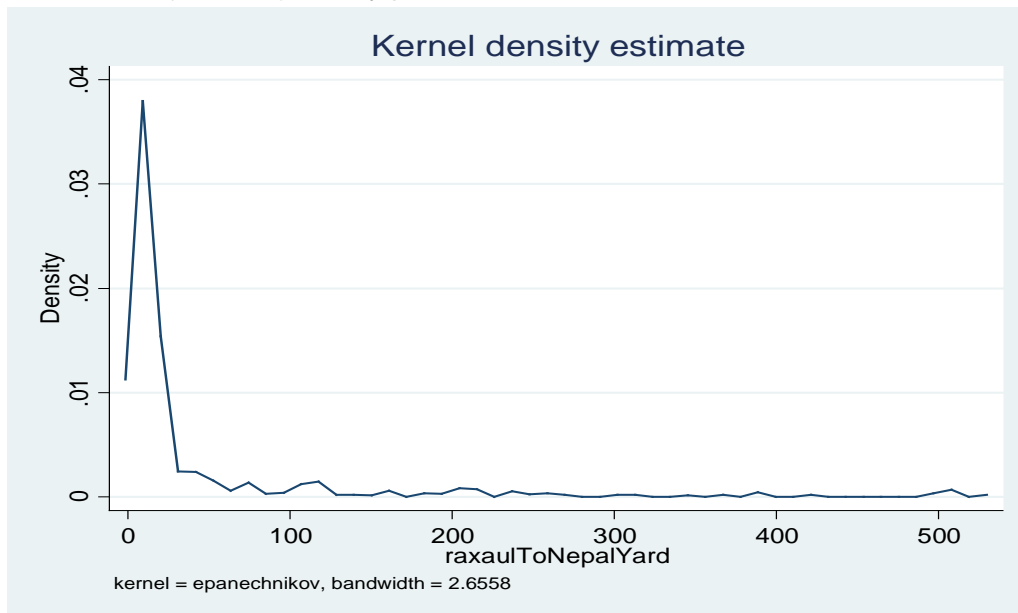




Figure 4 Kernel Density for trucks arriving from Raxaul to Nepal

(a) For current (October) survey period



(b) For June

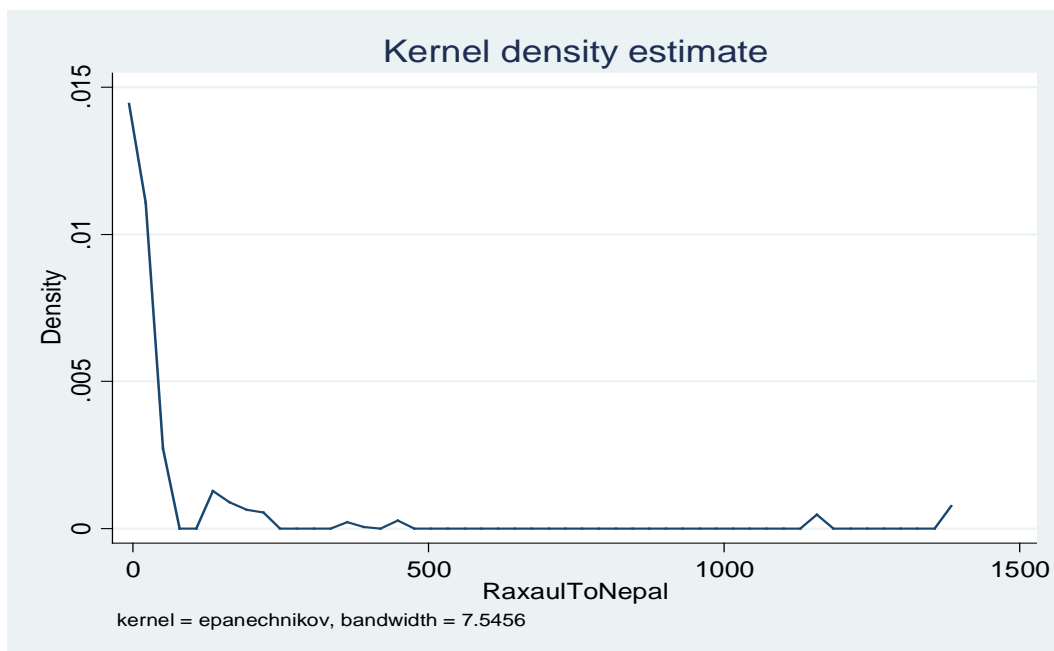
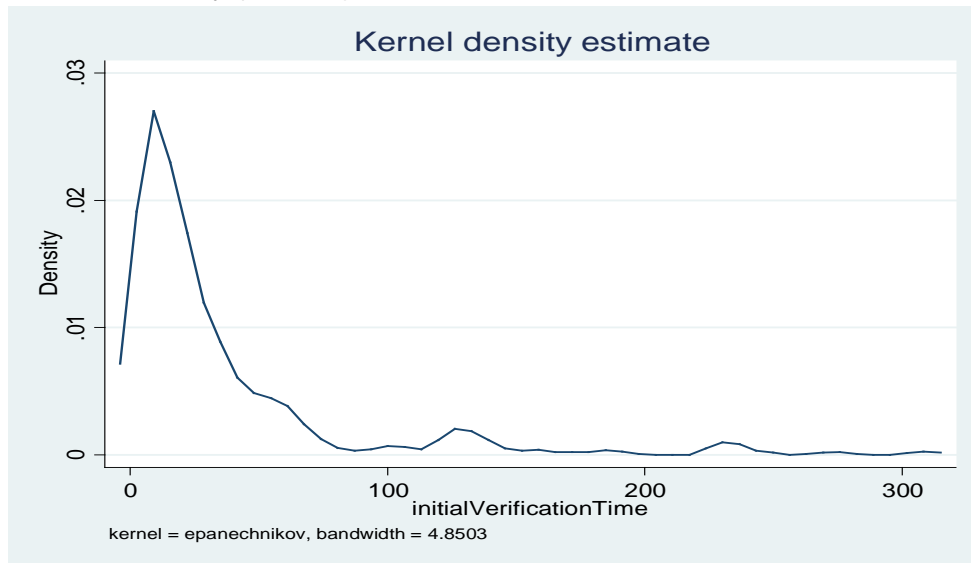




Figure 5 Initial Verification Time Distribution

(a) For current survey (october)



(b) For June Survey

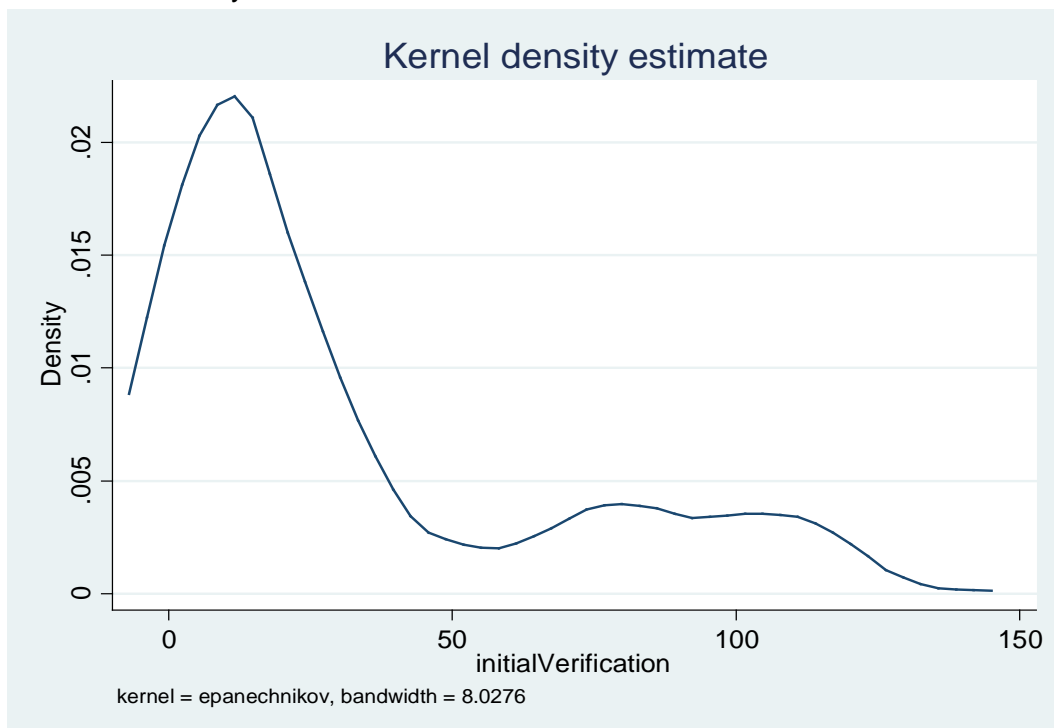
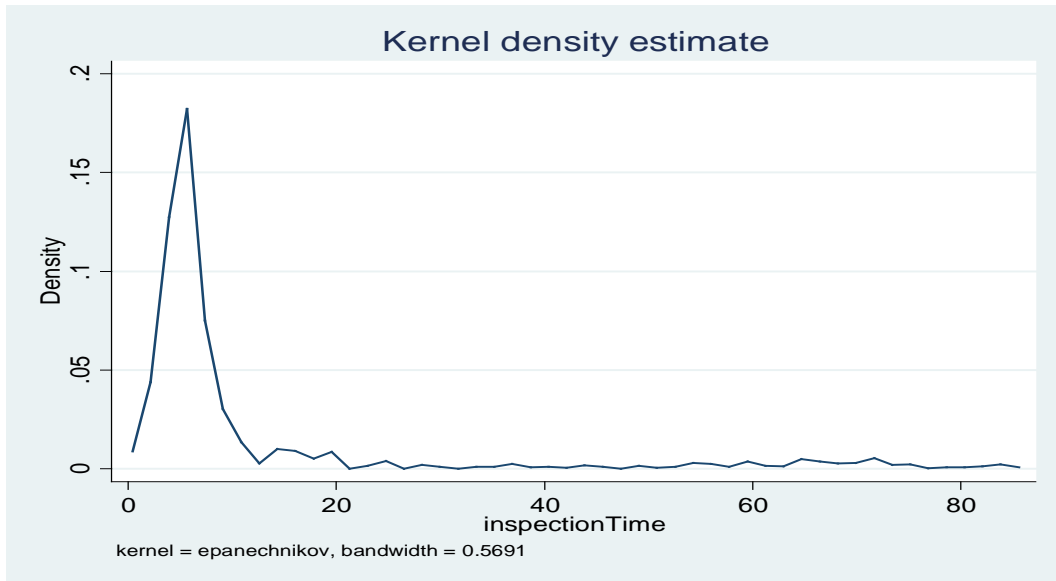




Figure 6 Inspection Time distribution

(a) For current survey(October)



(b)

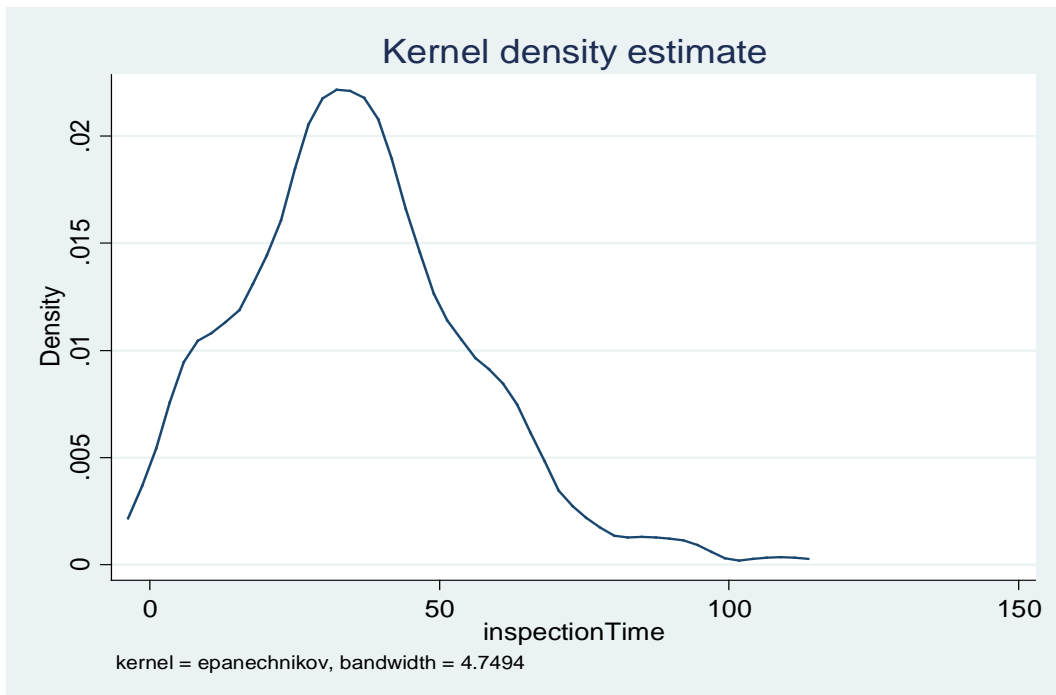
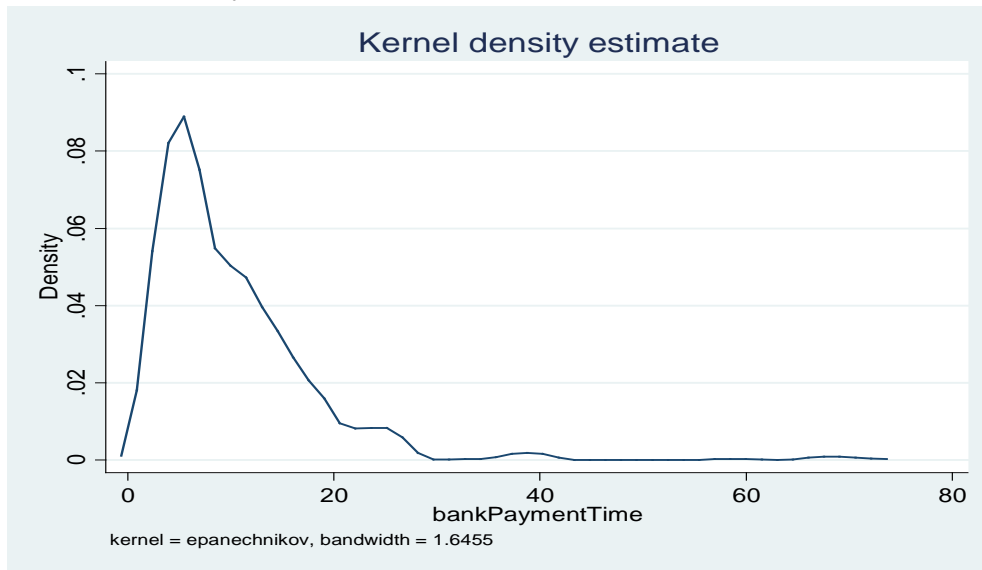




Figure 7 Bank Time (Time to pay at the bank inside the yard)

(a) For October survey



(b) For June Survey

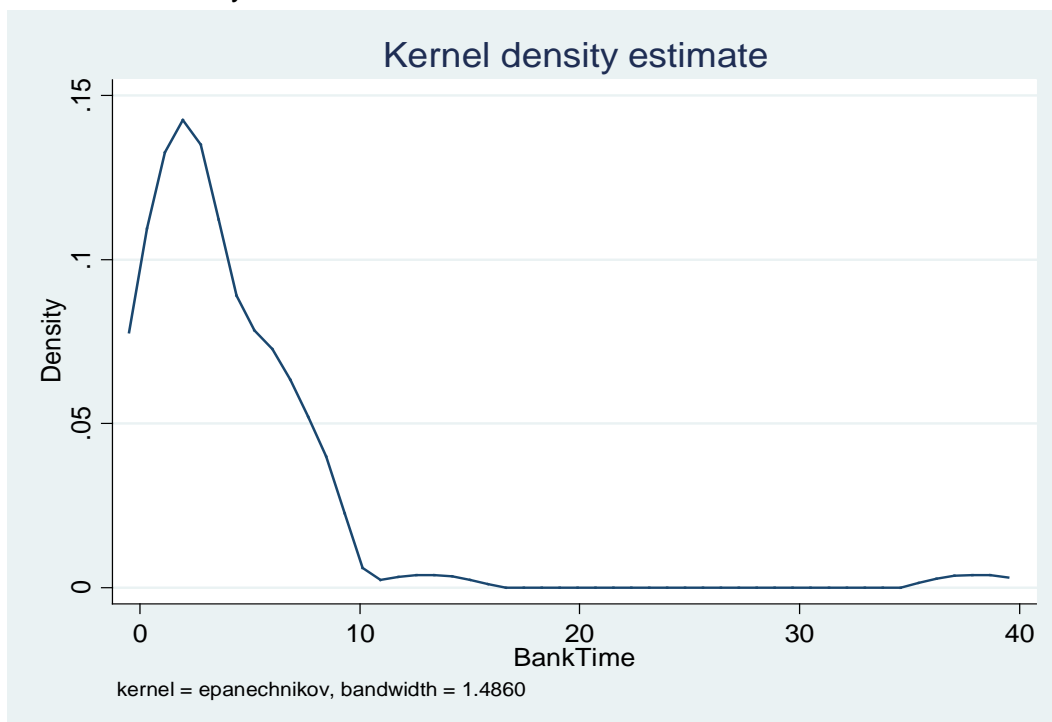
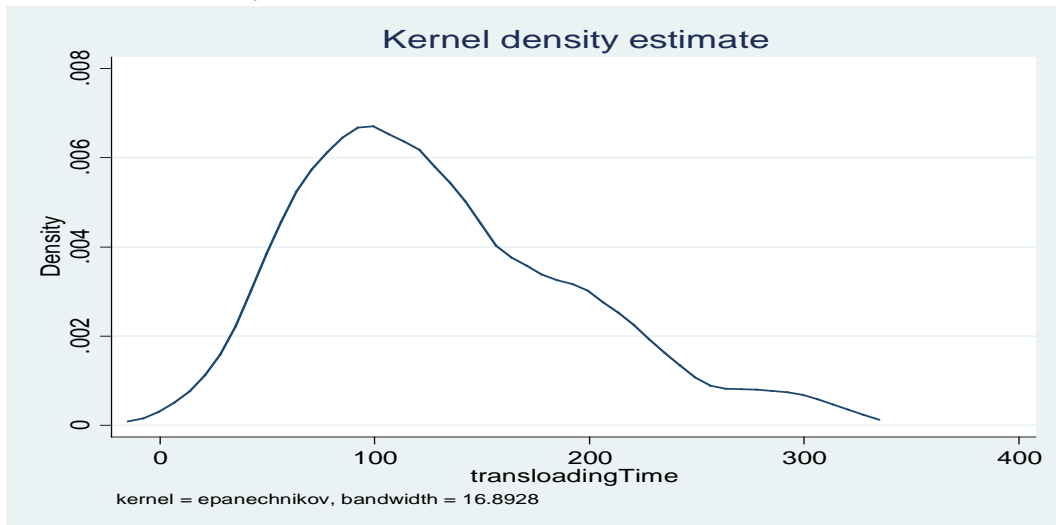




Figure 8 Transloading time inside the yard

(a) For current survey



(b) For June survey

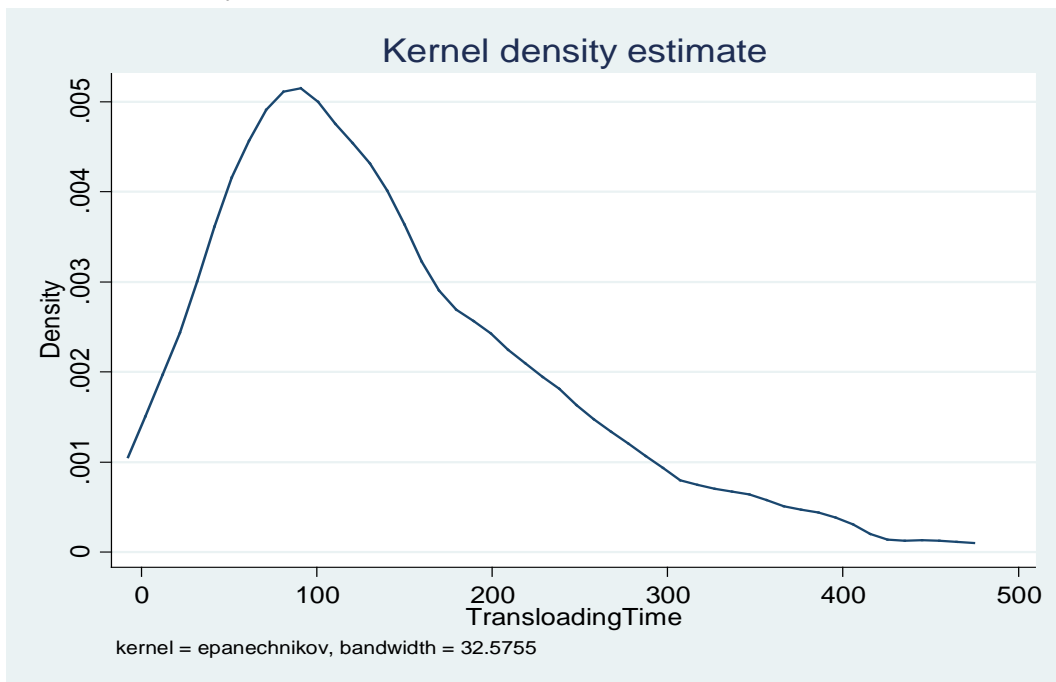
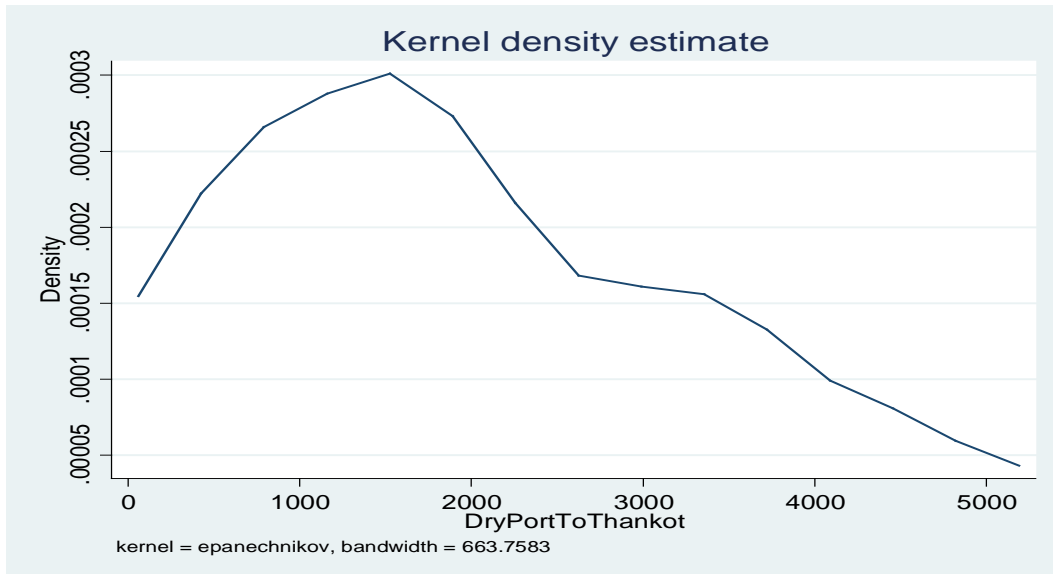




Figure 9 Time distribution from the exit point of the Dryport to Nagdhunga(Thankot, Kathmandu)

(a) For current survey (October)



(b) For June survey

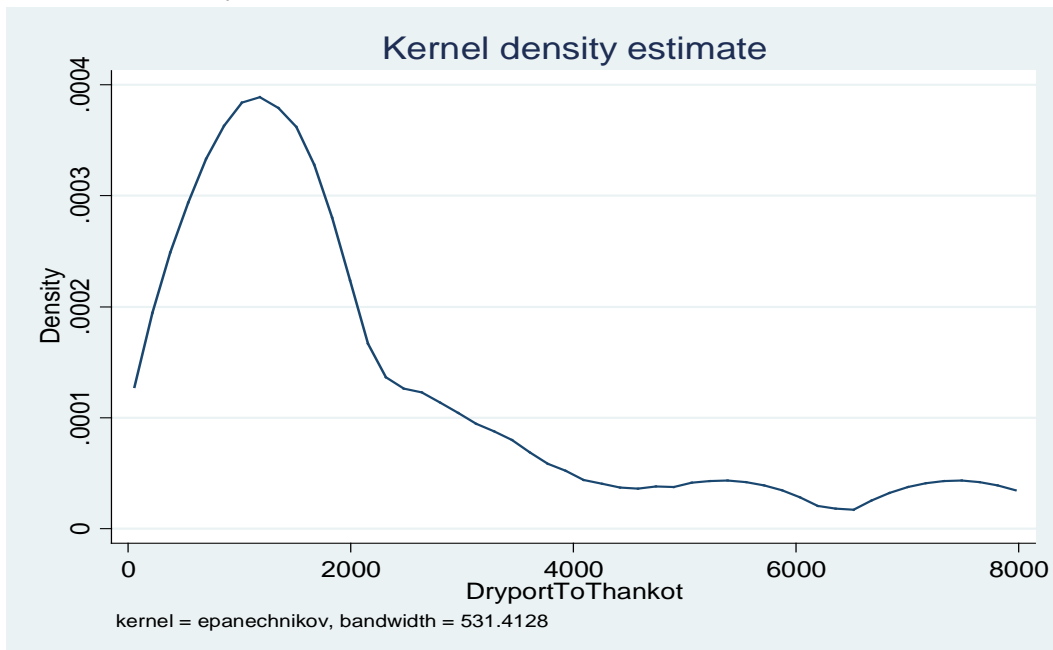
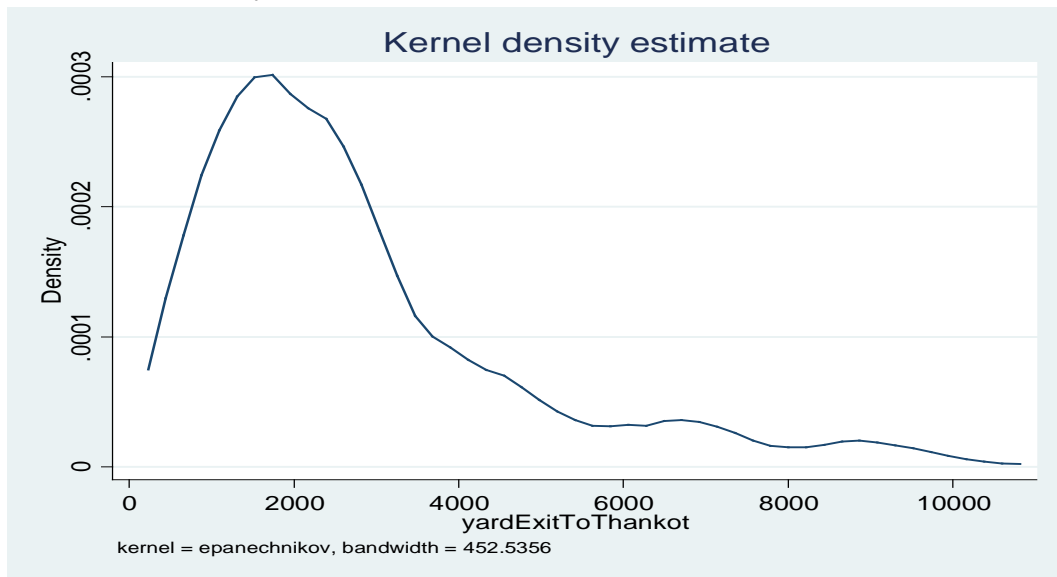




Figure 10 Time distribution from the custom yard exit to Nagdhunga(Thankot, Kathmandu)

(a) For current survey



(b) For June survey

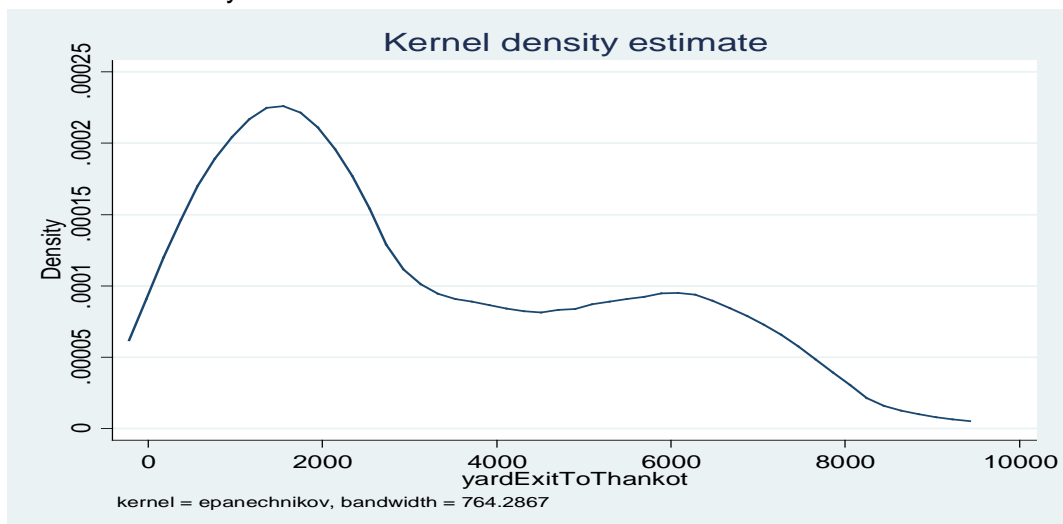
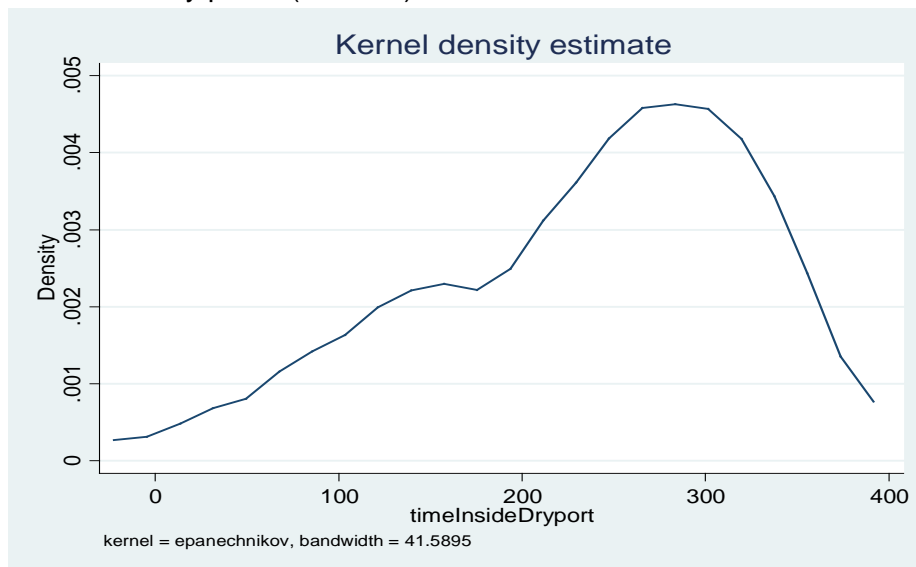




Figure 11 Time distribution for total time inside Dryport

(a) For current survey period(October)



(b) For June

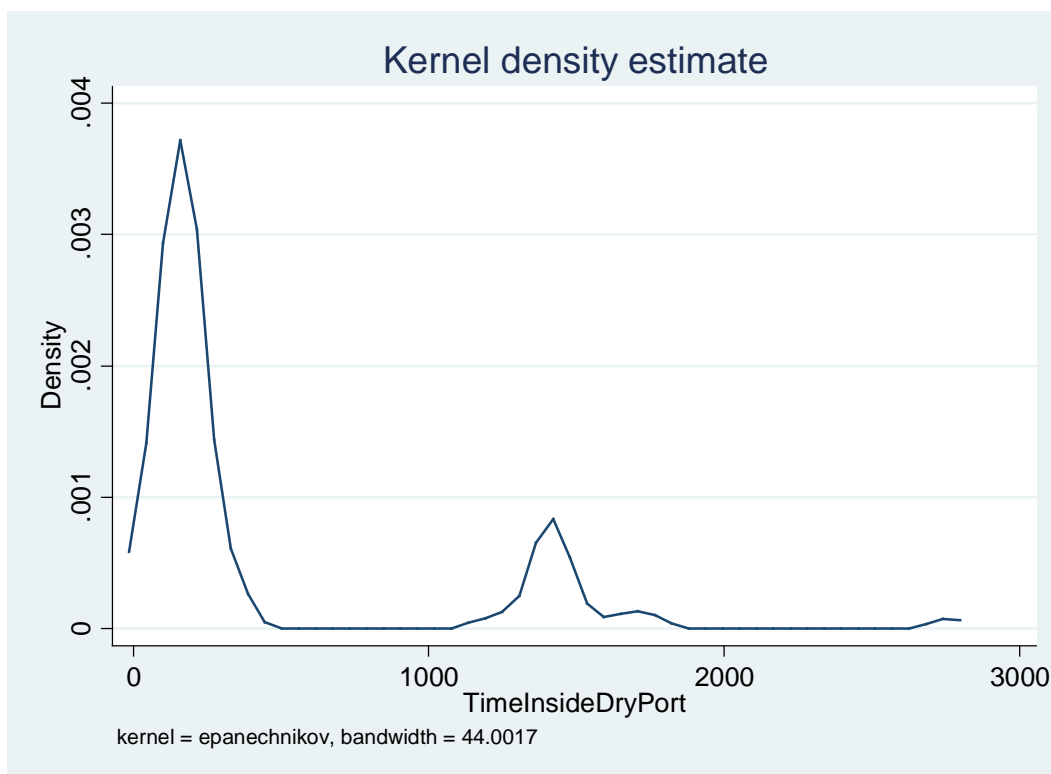
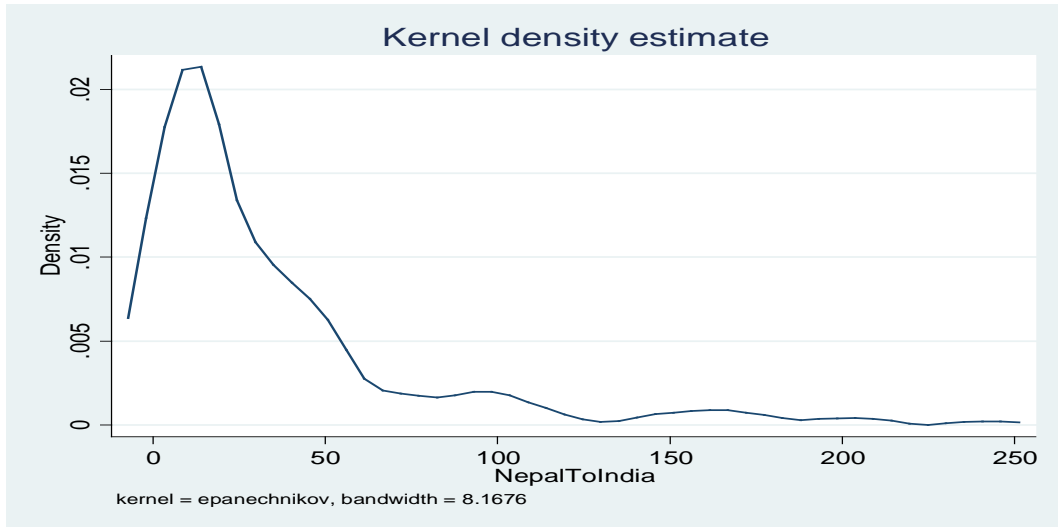


Figure 12 Time to go from Nepal to India

(a) For October survey



(b) For June survey

