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How the Trade Facilitation Agreement can help reduce Trade Costs for LDCs*

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The recently concluded Trade Facilitation Agreement (TFA) provides an ideal opportunity to narrow the scope of AFT activities to heed the call for "managing for Development results" (MfDR). The paper review the evidence on trade costs by different country groupings distinguishing between LDCs and Landlocked LDCS (LLDCs) including new estimates of time in transit for international parcel data that is measured relatively accurately. This review is accompanied by new estimates that provide support for allocating a greater share of AFT funds towards LDCs and particularly towards Landlocked LDCs (LLDCs), both groups showing higher trade costs than comparators and less progress in reducing trade costs since 1995. On average, time in customs for imports and exports are also significantly higher for both groups than for their respective comparators.

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•••/••• LDCs and LLDCs have systematically lower values for the components in the new OECD Trade Facilitation Indicator (TFI). New estimates suggest that a successful implementation of the TFA, defined as moving halfway towards the frontier value of the TFI for the respective country grouping could reduce trade costs for imports of LDCs by 2.4% and by 4.5% for LLDCs. Estimates of time in transit for parcels sent by post are also higher for LDCs than for other developing countries. Even though there is more to trade costs than customs management, monitoring implementation of the TFA would be part of the Istanbul Program of Action and a stepping stone towards the concrete trade performance targets that have lacked in AFT activities so far.

1. Aid-for-Trade: Where do we stand?

The AFT initiative launched in 2005 was part of the MDGs (goal 8 'developing a global partnership for development') with as objectives, a rules-based, open, multilateral trading system, improved market-access including duty-free, quota-free (DFQF) market access for Least Developed Countries (LDCs), and above all reduce poverty by half in 2015 relative to 1990 level, a target that has been reached in most countries. Now that the Sustainable Development Goals (SDGs) have been adopted by the UN General Assembly in September 2015, the main trade performance objective with a target is the doubling of the global share of LDC exports by 2020 (already part of the Istanbul Program of Action (IPoA)). Now that WTO members have endorsed the TFA agreement signed in Bali in 2013, what is the role of AFT? In Melo and Wagner (2015), we focused on the trade-enhancing and poverty-reducing effects of AFT that were an objective of the MDGs. Here we focus on the benefits from a successful application of the TFA: a move towards results-based AFT and an evaluation of the benefits from reduced trade costs with a focus on (LDCs) and Land-locked Least Developed Countries (LLDCs).

At around $40 billion disbursed a year, AFT is about 30% of Official Development Assistance (ODA) financial flows to developing countries and what is entered as Trade Facilitation in the OECD's Credit Reporting System (CRS) only accounts for about one percent of AFT disbursements. In a recent paper (Melo and Wagner (2015)) we find a lack of correlations between disbursements and the DB business data or the OECD Trade Facilitation Indicators (TFI) of the functioning of customs discussed here. If anything, trade facilitation disbursements are directed more often than not towards countries that are the closest to the TFA targets as captured by a recent OECD TFI index covering all aspects of the functioning of customs. Neither is the geographical pattern of disbursements of Trade Facilitation disbursement significantly correlated with any of the usual proxies of trade facilitation (DB time in customs, LPI).

The evidence surveyed here suggests that a shift in trade facilitation disbursements towards LDCs and LL-LDC would provide the highest returns for AFT funds. Successful implementation of the TFA would reduce uncertainty related to trade, streamline market access procedures and would provide greater transparency at customs, all factors leading to lower transaction costs. Higher trade volumes would then be an engine of growth and poverty reduction.

Starting from this background, Section 2 summarizes evidence on the importance of trade costs highlighting their importance for LDCs and LLDCs. The objectives and the rationale for the TFA are presented in section 3. Section 4 reviews the evidence on the effects of trade facilitation on trade costs and gives new estimates for country groups, focusing on LDCs and LLDCs. Section 5 concludes.

Table 1: AFT and Outcomes by country category in developing countries: (Averages per country group over 2005-2011).

Country categories *(number of countries in parenthesis)*	GDP^{pc}	GDP^{pc} growth	HR[a] (PG[b])	AFT^{pc}	AFT / GDP	WGI[c]	Avg Trade Cost[d]	Trade Cost 2010[e]
Column	1	2	3	4	5	6	7	8
Landlocked LDC [LLDC](16)	507	3,9%	72,3 (35.3)	21,5	3,7%	-0,72	319.1	95.4
Non-landlocked LDC [non-LDC] (33)	1192	2,3%	66,5 (31.9)	34,2	3,4%	-0,78	273.9	93.2
Landlocked non-LDC [LL] (14)	2067	4,5%	20,7 (7.7)	19,7	1,2%	-0,65	289.7	109.1
Other Developing [DC] (87)	4833	2,6%	21,4 (8.2)	29,2	0,8%	-0,17	198.9	95.9

Source: Melo and Wagner (table 1)OECD-DAC, WDI and Povcal.net. Includes LIC, LMIC and UMIC according to the World Bank classification.
Notes:
[a] HR is the head-count ratio is the proportion of the population below 2$/day;
[b] PG is the poverty gap ratio i.e. the percentage of the population under the poverty line.
[c] WGI is a Worldwide Governance Indicators (average score between -2,5 and +2,5 of the 6 indicators of the (Voice and Accountability, Regulatory Quality, Rule of Law, Political Stability and Absence of Violence, Government Effectiveness and Control of Corruption).
[d] Authors' construction based Arvis *et al.* (2013). Trade costs relative to the trade costs of the 10 countries with the lowest trade costs (normalized to 100).
[e] Trade costs normalized to 100 on 1995-1996 average.

2. Reducing trade costs should be the key objective for AFT

Table 1 gives summary indicators of trade-related performance during the early AFT period across country groupings. The group averages reveals large differences in average indicator values between Landlocked LDCs [LLDCs] and non-landlocked LDCs [non-LLDCs] and also with the other two groups. Over the period, average per capita income of LLDCs is half that of non-LLDCs, itself half that of LL non-LDCs, itself half that of other developing countries (col. 1). LLDCs and non-LLDCs had respectable growth rates (col.2), the highest poverty rates (col. 3) and, on average high AFT disbursements (cols. 4 and 5). Governance indicators are lowest for both LDCs groups (col.6). Finally, average trade costs are highest in absolute terms for landlocked countries in their respective groups (col. 7) and the decline in average trade costs appear to be less for LL countries (they even increase for the LL- non-LDC group (col. 8). Take as an example the Istanbul Program of Action (IPoA) which calls for a doubling of the share of LDC exports in global trade by 2020. A rough extrapolation suggests that reaching this target would then require that trade costs fall approximately twice as fast for LDCs as for competitors of LDCs in world markets.

Three components of trade costs have been scrutinized in models estimating the volume of trade: (i) geography (i.e. size, terrain natural infrastructure like water ways, country size, landlocked etc…); (ii) 'hard' infrastructure (roads, rail, ports, airports); (iii) 'soft' infrastructure (border-related costs like customs administration and document preparation, border-related policies like tariffs and NTMs in both domestic and destination markets, and obehind-the-border policies like communications and regulatory policies). Of these, (ii) and (iii) are up for improvement by directed AFT. While proxies for both the 'hard' and 'soft' components of trade costs are found to have an impact on the volume of trade, as discussed in Melo and Wagner (2015), there is controversy on their relative importance and on the distribution of AFT between 'hard' and 'soft' infrastructure (about 10% of AFT disbursements go to soft infrastructure). In any case, improving the soft institutional and regulatory infrastructure, including the functioning of customs administrations as targeted under the TFA will require less funding but is an integral part of trade costs.

3. Objectives and Rationale for the Trade Facilitation Agreement

Fortuitously for AFT, the signing of the Trade Facilitation Agreement (TFA) in December 2013 suggests a rather clear road map for where AFT should be focused: identify the measures that will contribute most to reducing red tape and increase predictability in customs clearance (fees, formalities, transit). Requiring publication of procedures to clear goods will strengthen GATT article V on Transit. The obligation to issue advance rulings in a reasonable time-bound manner will strengthen GATT article X on transparency. Pre-shipment inspections to determine tariff classification and customs valuation will be forbidden as will be the introduction of measures making the use of customs brokers mandatory.

Other measures should also improve transparency. For example, requests for revised charges will not be acceptable prior to publication of the new charges. Agencies and authorities in charge of border control will be obliged to cooperate and coordinate activities as has already started with the establishment of 'One-stop border posts'. Best practices on Trade Facilitation recommended by the World Customs Organization included in the revised Kyoto Convention of 2006 on Trade Facilitation will require member states to establish and maintain procedures that will help expedite the release and clearance of goods in transit. These best practices are laid down in a detailed article that also obliges Member States to allow (to the extent possible) traders to make payments electronically for duties, fees and other customs charges.

By focusing resources on Least Developed Countries (LDCs), especially Landlocked LDCs (LLDCs), AFT should contribute to the post-2015 development agenda in several ways.

Technical assistance. The TFA explicitly recognizes that technical assistance will be required for some LDCs that will then link their commitments to the receipt of technical assistance and support for capacity building. To this effect the TFA has designed three categories of commitments: A for immediate implementation, B for a date after a transitional period and C after a transitional period during which implementation capacity will have been acquired through technical assistance. A permanent Committee on Trade Facilitation at the WTO is to replace the Negotiating Group on Trade Facilitation that hosted the negotiations leading to the TFA and a TFA Facility has already been set up at the WTO in 2015.

The TFA is rules-based. LDCs should be the greatest winners of a rules-based World trading System. Signed by all WTO members, the TFA is rules-based rather than discretionary with specified appeal and review procedures. This gives the TFA a sense of country ownership that was identified as one of the key Paris principles on AFT but which was found to be lacking in the case-study reviews [1]. It is also in the spirit of the outcome of the Busan Partnership for Effective Development Cooperation which concluded that " (…) country-led and country-level results frameworks and platforms will be adopted as a common tool among all concerned actors to assess performance based on a manageable number of output and outcome indicators drawn from the development priorities of the developing country. " (cited in OECD 2013, p.23).

The TFA objectives can be monitored relatively easily. Progress on many TFA objectives can be monitored by indicators lending themselves to targets (e.g. whether borders are

1. The five principles are: country ownership, alignment, harmonization, managing for development results, and mutual accountability.

open at the same times would be one among measures of border agency coordination, acceptance of electronic payments would be a measure of efforts to speed release and clearance of goods, etc…(see the list of indicators in the OECD Trade Facilitation Index (TFI) in figure 1 below). In turn, evidence is accumulating that these are targets leading to desired results for the AFT initiative.

Delays reduce trade volumes. Growing evidence from different approaches documents that delays as goods travel from factory to consumer reduce trade volumes. One day less in transit is equivalent to a 0.6 to 2.1 percentage point tariff reduction in tariffs in the destination country, that is a reduction in trade costs [2].

4. Potential Benefits from implementing the Trade Facilitation Agreement (TFA)

The principal focus of the TFA is to reduce the time it takes to cross-borders, that is time spent in customs. Figure 1 shows the density of the distribution of the time in customs for exports and imports in 2015 drawn from the Doing Business (DB) data base. The top of figure 1 compares the time-in-customs densities of Landlocked vs non-Landlocked for all (145) developing countries. The average number of days in import customs for Landlocked is (5.5) and for non-Landlocked (3.6) days. Comparing the shapes of the distributions is revealing: over 50 percent of non-LL developing countries spend 2 days or less in customs while for LL countries the corresponding figure is less than 5 percent while close to 10 percent spend 10 days or more in customs. A similar – but with less left-skewness – pattern holds for the comparison of LLDCs vs. non-LLDCs- For exports, the comparisons also reveal a similar pattern. Again, the average number of days in import customs for LDCs is higher (4.8) than for non-LDCs (3.7). Benchmarking the average LL and non-LL time estimates of figure 2 on Hummels and Schaur mean estimate (a one-day reduction in trading time is equivalent to a 1.3% reduction in trade costs), suggests that import-competing activities have a [3.9=(1.9+1.1)*1.3)] percent cost advantage relative to exporting in non-LL countries.

DB data is collected every two years from only a handful of freight forwarders in each country who are asked to report the time and cost for a 20' full container weighing 10 tons to cross the border [3]. Even though they are widely used, DB data are may not be representative of travel time nor of travel costs. Two other estimates, one covering all exports from a single country over a relatively long period, the other covering all parcel shipments from the Universal Postal Union (UPU) provide additional sources of comparison.

Using a data set covering all exports of Uruguayan firms over the period 2002-11, after controlling for unobserved heterogeneity both at the firm-year level (e.g. management changes) and at the firm-product-destination level, Volpe Martincus et al (2013) estimate that a 10% increase in the median time spent in customs is associated, on average, with a 1.8 percentage point reduction in the growth of firm-level exports.

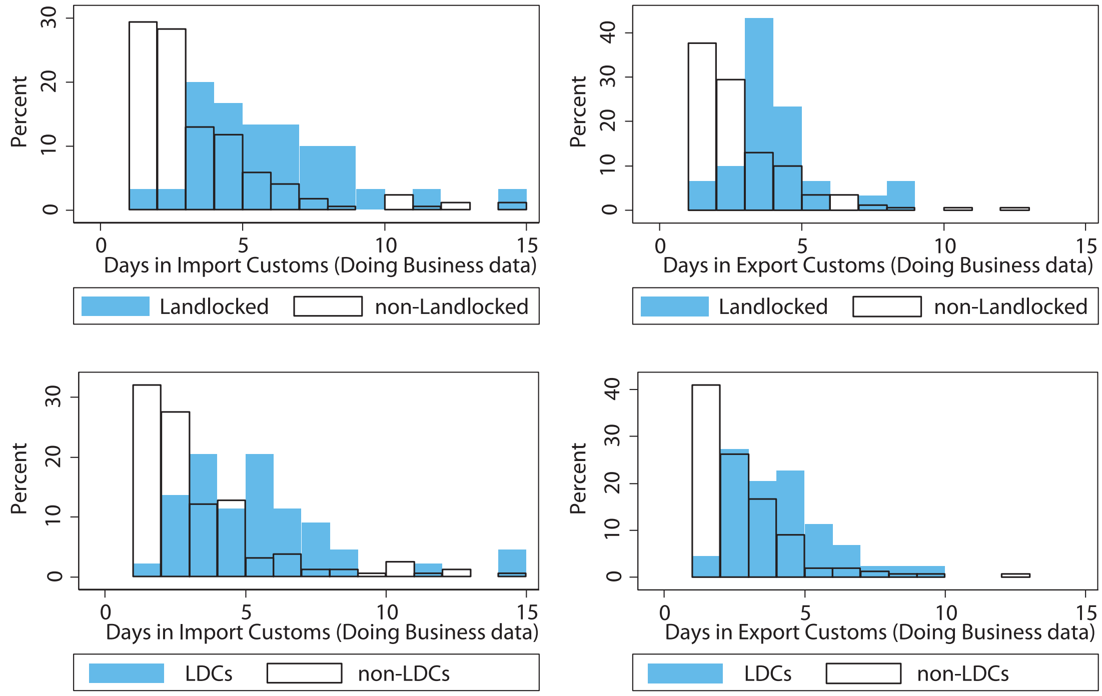
Figure 2 shows the kernel density estimates of the time in transit (defined as time between sorting facilities in origin and destination countries) time for packages up to 30kgs from a large sample of shipment covering many countries [4]. Average days in transit in parenthesis by income group are: High income (7.0) , LDCs (13.0) and other developing countries(9.7). Using the conservative mean estimate of Hummels and

2. Melo and Wagner (2015) summarize the evidence. The contributions in Cadot and Melo (2014) critically evaluate the evidence on the efficacy of the AFT initiative.

3. Difficulties in assessing the reliability of DB data are discussed in Hallward-Dreier and Pritchett (2015).

4. The figures are drawn from an estimation of approximately 30 million bilateral parcel shipments averaged over a sample of 167 countries for 2013-14. Except for some European flows, shipments are by air. See Boffa (2015).

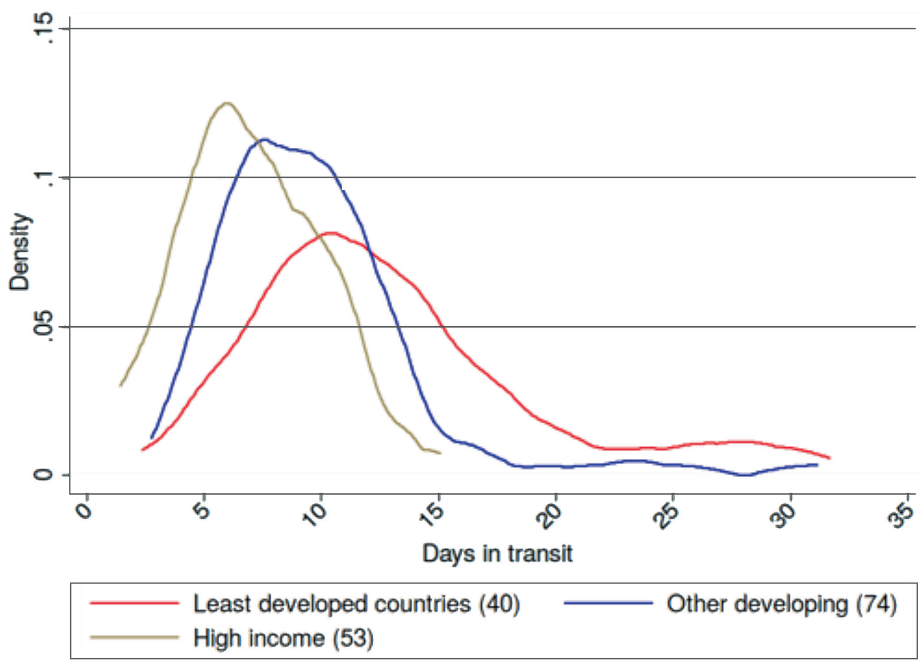
Figure 1: Days in Customs for Imports (left) and exports (right) by category: [LL vs. non-LL] (top) and [LDCs] vs. [non-LDCs] (bottom).



	Landlocked	non-Landlocked	LDCs	Non-LDCs
Median time in import customs (in days)	5	2	5	2
Median time in export customs (in days)	3	2	3	2

Source: Author's calculations from Doing Business (2015).

Figure 2: Kernel Estimates of time in transit for International parcels



Source: Authors' calculations from Boffa (2015).

Schaur (2013) of 1.3% per cent equivalent additional costs from an extra day in transit, implies that LDCs face, on average, an extra 4.2% trade cost for parcel shipments above those for other developing countries [5].

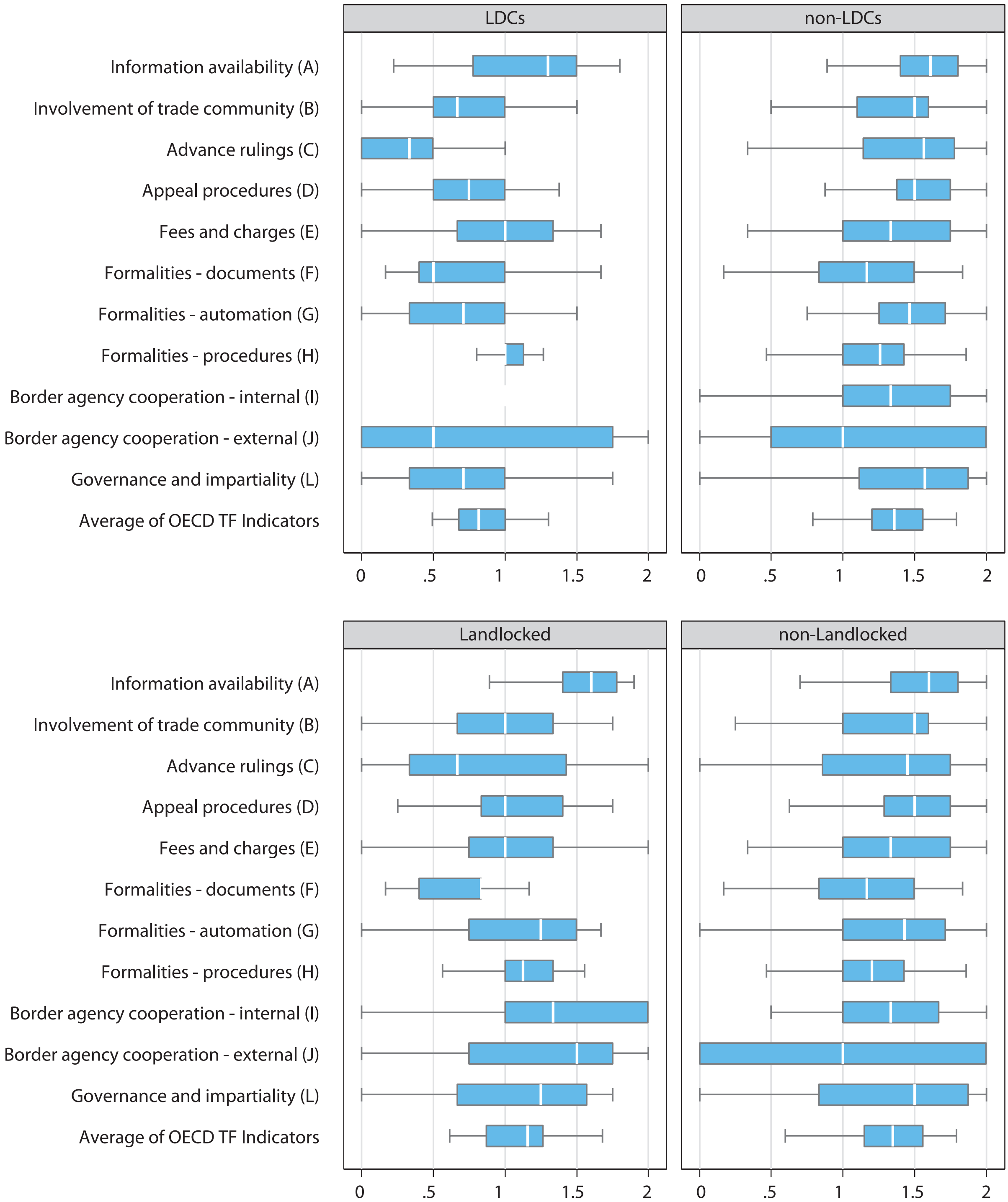
After the signing of the Trade Facilitation Agreement (TFA) in December 2013, the OECD has produced and released a series of 11 Trade Facilitation measures Indicators (TFI) for 187 countries following closely the targets highlighted by the TFA. Currently this is the most detailed catalogue of the policies and procedures used in border management agencies around the world and arguably the best we have to closely assess more closely the trade cost handicaps faced across different group of countries. Figure 3 shows the distribution of each one of these measures averaged over countries classified over country. Comparing again LDCs with non-LDCs and LL with non-LL countries, reveals that the values for the LDC group are again systematically lower for each indicator than for the non-LDC group, though not always significantly so. For some categories like advance rulings, the differences between the groups is large, a pattern that is also apparent when the comparison is between LL and non-LL countries. As expected, on average, border cooperation is greater for LL than for non-LL countries. The values for the governance &impartiality indicator are also lower for LDCs than non-LDCs and for LL than non-LL.

Two measurable outcome variables of interest to monitor for AFT activities are time in customs and export volumes and their characteristics. Evidence reviewed in Melo and Wagner (2015) suggests that trade facilitation expands both existing exports (intensive margin effect) and create new trade flows (extensive margin effect). Reduced time in transit is the second source of reduction in trade costs to be expected from implementing the TFA since, according to logistics professionals, time savings in customs is the preferred summary indicator of the private sector trade costs associated with clearing goods at the border. These gains should be greatest for countries with the greatest times in transit.

Benchmarking costs from times in transit. After controlling for structural factors (GDP), and for policy variables affecting trade costs (LPI and WGI indexes), using the TF index constructed as an average of the 11 indicators displayed in figure 2, Melo and Wagner (2015, table 4) estimate the reduction in trade costs from improvements in values of the TF index that might result from implementing the TFA. Measurement is for time in customs for a 20' foot container from the DB data reported in figure 1. Improvement is measured as the move of the median value of each group to the best performance of its group. For example, if the median value of the TFI indicator for the LDC group were to reach the frontier value for the LDC group, the median number of days in customs for the LDC group would be reduced by 1.8 days equivalent to a percentage reduction in trade costs of 2.4% (=1.8*1.3).Corresponding estimates is 3.0% for the LL developing group and 4.5% for the LL LDC group.

5. This is a very rough estimate since it assumes that the average distance to partners is the same for LDCs and other developing countries. However, since parcels are homogeneous and since freight rates are negotiated multilaterally (rather than bilaterally), it is likely that the difference in average times in transit between the groups mostly capture delays in the receiving countries.

Figure 3: Distribution of the scores of the OECD TFI (interquartile range across country groupings)



Source: Melo and Wagner (figure 3) from OECD (2015).

5. Concluding remarks

The unfolding post-2015 agenda is more about broad goals of development that includes a numerical target of 7 percent growth for LDCs. This target of higher growth is in contrast with the MDGs where growth was only an indicator. As argued by Prichett (2015), this shift in the agenda towards higher across-the-board aspirations reflects changes in the relation between donors in rich countries and developing countries. This change of focus is favorable to the growth-oriented TFA objectives reviewed here. Taking implementation of the TFA seriously would lend itself to this measurable target approach.

The estimates reported here are only rough orders of magnitude, but all the evidence points towards higher trade costs for LDCs and even higher trade costs for LL LDCs. In the fierce competition characterizing our globalized world, these are not insignificant estimates. For example, an objective might be to reduce by one-third the time in customs for imports and exports by a specified date. This focus would have a double benefit: mobilizing support in donor countries and answering the call for Managing for Development Results (MfDR) repeatedly mentioned in the biennial OECD-WTO reviews. Even though there is more to trade costs than customs management, monitoring implementation of the TFA would be a stepping stone towards the concrete trade performance targets that have been lacking in AFT activities so far.

The review of the evidence and new estimates reported here provide support for redirecting a greater share of AFT funding towards LDCs and particularly towards Landlocked LDCs (LLDCs), both groups showing higher trade costs than comparators and less progress in reducing trade costs since 1995. These patterns are reflected in time in customs, the objective for improvement in the TFA. On average, time in customs for imports and exports are significantly higher for both groups suggesting that it will be difficult for them to meet the IPoA target of doubling the trade share of LDCs in world trade by 2020. Estimates reported here suggest that a successful implementation of the TFA proxied as a move of individual group members to the group frontier could reduce trade costs for imports by 2.4% for LDC and by 4.5% for LLDCs.

In conclusion, a refocusing of AFT towards the measurable targets called for by the TFA would be a step towards taking seriously the call for monitoring repeated increasingly loudly in the successive AFT biennial reviews. While not all AFT funding would go towards implementing the TFA, this focus would have a double benefit: mobilizing support and answering the call for Managing for Development Results (MfDR) which cuts across the pillars of Paris declaration pillars [6]. Even though there is more to trade costs than customs management, monitoring implementation of the TFA would be part of the IPoA and a stepping stone towards the concrete trade performance targets that have lacked in AFT activities so far.

6. Since 2012, the World Bank has a third lending instrument called 'Program for Results', the first to link directly disbursements to results. Up to 5% of World Bank lending can go through this instrument which is still in its early stages, but has apparently met with success. See Gelb and Hashmi (2014).

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