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## ADB Working Paper Series on Regional Economic Integration



### On the Use of FTAs: A Review of Research Methodologies

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Shintaro Hamanaka  
No. 113 | May 2013





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## Contents

|   |    |
|---|----|
| Abstract  | iv |
| 1. Introduction   | 1  |
| 2. Six Problems in Measuring the Use of FTAs  | 1  |
| 2.1 Indicator Selection   | 1  |
| 2.2 Timing  | 2  |
| 2.3 Specification   | 3  |
| 2.4 Counting  | 3  |
| 2.5 Data Source   | 3  |
| 2.6 Aggregation   | 4  |
| 3. Findings in Existing Studies: Different Results or Flaws in Methodology?             | 5  |
| 4. Reasons for Non-Use  | 6  |
| 5. Summary and Future Research Agenda   | 8  |
| References  | 11 |
| ADB Working Paper Series on Regional Economic Integration                               | 16 |
| Figure  |    |
| 1. Various Indicators of the Use of FTAs  | 13 |
| Tables  |    |
| 1. FTA Utilization Rates Based on Thailand's Certificates of Origin for Exports in 2009 | 13 |
| 2. Tariff Structure for Intra-ASEAN Trade in 2001-03                                    | 14 |
| 3. Share of Zero MFN Imports and Preferential Imports in 2008                           | 14 |
| 4. FTA Utilization for Products with High MoPs in 2005: Thailand's Export               | 15 |

## **Abstract**

There has been much confusion, rather than debate, on the use of free trade agreements (FTAs). Unfortunately, a large part of the confusion is caused by the absence of consensus on the meaning of key terms such as the “utilization rate” and “usage rate” of FTAs, and the lack of knowledge on upward or downward biases from various information sources regarding the use of FTAs. Rather than making an original empirical contribution, this article reviews existing studies on the issue and attempts to identify the relevant methodologies for assessing the use of FTAs.

*Keywords:* Free trade agreements (FTAs), utilization of FTAs, impacts of FTAs, margin of preference (MoP)

*JEL Classification:* F13, F15

## 1. Introduction

There has been much confusion, rather than debate, on the use of free trade agreements (FTAs). Unfortunately, a large part of the confusion is caused by the absence of consensus on the meaning of key terms such as the “utilization rate” and “usage rate” of FTAs, and the lack of knowledge on upward or downward biases from various information sources regarding the use of FTAs. It is critically important to consider the policy implications of use or non-use of FTAs based on an accurate understanding of the relevant empirical studies. This short article attempts to make a contribution to the literature by identifying the relevant methodologies for assessing the use of FTAs. Rather than making an original empirical contribution, this article intends to assess the actual use of FTAs by reviewing several key recent studies, with special consideration of the indicator and bias problems.

Economically speaking, the non-use of FTAs is a peripheral question (Pomfret 2011). The real problem of FTAs is trade diversion and trade deflection caused by their use. While the the “spaghetti bowl” literature on FTAs developed by prominent trade economists such as Bhagwati and Kruger in the 1990s (for example, see Bhagwati and Kruger 1995) set an analytical focus on the use of FTAs (inefficient trade and production caused by the use of FTAs), recent analysis on FTAs in Asia tend to consider the non-use of FTAs as the problem to be tackled. Even if use or non-use of FTAs were an issue, especially from the policymaking perspective, we should bear in mind that the fundamental criteria for examining the impacts of FTAs are their welfare implications. We should not forget the possibility that policies to facilitate the use of FTAs may lead to inefficient production systems or networks, and inefficient trade flows, brought about by the trade diversion and deflection effects of FTAs.

This paper is structured as follows. Section 2 examines six measurement problems on the use of FTAs that impact the interpretation of results from studies on the use of FTAs. Section 3 reviews findings in existing studies and considers the real status of the use of FTAs in Asia in light of these six measurement problems. Section 4 examines the reasons for non-use of FTAs, with a special reference to the margin of preference (MoP). Section 5 sets forth a future research agenda on the use of FTAs, which is essential for drawing up good FTA policies.

## 2. Six Problems in Measuring the Use of FTAs

### 2.1 Indicator Selection

It is essential to distinguish among several indicators to measure the use of FTAs. However, in order to examine various indicators, we first need to understand the tariff structure, more specifically, the relative level of MFN and FTA rates for each import. The difference between these two types is called the margin of preference (MoP). We first need to know the size of each portion of trade in Figure 1: (i) Portion C: dutiable imports with an MoP; (ii) Portion D: dutiable imports without an MoP (FTA and MFN rates are the same positive rate); and (iii) Portion F: non-dutiable imports (MFN rate is already zero).



While many researchers tend to simply say “no MoP imports,” it is important to note that both Portions D and F fall under this category, and each can have very different policy implications.

Note that the distinctions between Portions C, D, and F are based on tariff structure, not the behavior of traders. Only Portion C (dutiable imports with an MoP) is eligible for FTA preferences. Thus, this portion is divided into two components, resulting from traders’ behavior: (i) dutiable imports that actually use FTA preferences (Portion A), and (ii) dutiable imports that do not use FTA preferences (Portion B).

Though easily obtainable, the utilization rate of an FTA, which is the share of dutiable imports that use an FTA (Portion A) as a part of total imports (Portion G), is a problematic indicator in assessing the effectiveness or usefulness of FTAs. This is because this indicator does not exclude the trade under portion F (a zero MFN rate) from the analysis. One should note that FTA preferences cannot materialize at the onset when the MFN rate is already zero; moreover, a zero MFN rate creates a favorable situation in that there is no need to use, or even sign, FTAs. Thus, low utilization is not necessarily bad.

The utility rate is the share of dutiable imports that use FTAs (Portion A) over total dutiable imports (Portion E). Because obtaining the utility rate is easier than the usage rate, the utility rate is sometimes used as a proxy of the usage rate.<sup>1</sup> But unlike the usage rate, because Portion D (dutiable imports without an MoP) is included, the utility rate is deemed a good indicator to assess the usefulness of an FTA. When Portion D is large (Portion C is small), one could question the usefulness of such an FTA because traders cannot use it.<sup>2</sup>

The usage rate is the most suitable measurement of the effectiveness of FTAs because this is the ratio of goods actually imported using FTA preferences (Portion A) over goods that are eligible for FTA preferences (Portion C). Imports that do not have an MoP are irrelevant in assessing whether FTAs are effective or not since they cannot use FTAs for those items.<sup>3</sup>

## 2.2 Timing

There are two types of time lags that significantly affect the use of FTAs at an early stage: (i) implementation lag and (ii) recognition lag. It is erroneous to assume that all tariffs are lowered immediately when FTAs come into effect. Tariff reduction sometimes starts with the early harvest program, which would be implemented before the enforcement of an FTA. When an FTA comes into force, tariffs for many imported items are cut, but tariff reduction of sensitive products is usually given a longer timeframe. The

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<sup>1</sup> In order to compute the utility rate, we need to identify Portion E, namely, total trade minus Portion F, which is easily obtainable. However, identifying not only Portion F but also Portion D is necessary to compute the usage rate.

<sup>2</sup> The coverage rate, which is defined as  $C/(C+D)*100$ , is a good indicator to assess the quality of an FTA.

<sup>3</sup> However, traders sometimes use an FTA for importing products that do not have an MoP. This is perhaps because just getting a preferential C/O is easier than checking if certain products actually have an MoP.

implementation lag is the period between the enforcement of an FTA and the actual timing when Portion D items are moved to Portion C (depending on traders' choice whether the items are actually moved to Portion A or B). Thus, the utilization rate and utility rate are positively affected by the implementation lag, but the impact on the usage rate by this factor is uncertain.

Another type of lag is recognition lag. It may take some time for traders to understand the benefits of using FTA preferences and actually start to use the FTA. This is the issue regarding the actual timing when imports are moved from Portion B to A. Thus, all three rates are positively affected by the recognition lag.

### **2.3 Specification**

What we need to know is the level of use of a specific FTA with regard to trade between contracting parties, not a certain country's total trade. For example, in assessing the use of an FTA for Country A's imports from Country B, we need to know the share of preferential trade in Country A's imports from Country B, not the share of preferential trade in Country A's total imports from the world. In short, we need to obtain data to produce Figure 1 for each bilateral trade flow, not a certain country's total trade. The important analytical implication here is that we should compare the use of FTAs across various FTAs, not across countries.

It is important to distinguish between imports and exports as well. For traders in Singapore that mainly deal with imports, the use of FTAs tends to be very low because the Singapore's tariff is zero for almost all products on an MFN basis. However, use of FTAs may become an issue for Singaporean traders that engage in exporting.

### **2.4 Counting**

We usually use trade value to assess the use of FTAs. While both trade value and the number of tariff lines can be used to identify the size of Portions C, D, and F—since they are determined by tariff structure—only trade value is suitable to measure Portion A, namely, dutiable imports that actually use FTAs.

Some studies count the number of firms that use FTAs. In this case, one should note that there is a risk of over-estimation. This happens if researchers count the value for a firm as 1, and not .01, when only 1% of a firm's trade transactions use FTAs. In other words, if we obtain data through firms we should also ask how much of a company's trade uses FTAs (trade value) instead of simply counting the number of firms that use FTAs. When only 1% of a firm's trade uses an FTA and we count such a firm as 1, this leads to a serious upward bias.

### **2.5 Data Source**

In evaluating the level of FTA use, it is ideal to obtain data from customs offices since such data is generally accurate and comprehensive. Some customs offices publish data of imports conducted under FTAs. Outside Asia, customs' import data is usually used to examine the use of FTAs. In the Asia-Pacific, Australia is one of the few countries that

publish import data that distinguish between imports entering at MFN rates and preferential rates.

Another customs data source is the preferential certificate of origin (C/O) regarding the export data of preferential trade. Traders need to obtain a C/O to enjoy preferential access with partners. Thailand seems to be one of the few Asian countries that makes C/O-based data publicly available and most studies use this data source. Leelawath (2012) computes FTA utilization in the Association of Southeast Asian Nations (ASEAN) Free Trade Area (AFTA) using Thai export C/O data and finds that the situation varies across countries (Table 1).

Trade amounts based on C/Os are not necessarily the same as actual trade for two reasons. First, traders tend to overstate the value of exports to gain flexibility in doing business (Kohpaiboon and Jongwanich 2006, p. 11). Second, there is a possibility that trade is not actually conducted even if traders obtain a C/O. Thus, C/O-based utilization rates seem to have an upward bias. The fact that more than 3% of Thai exports to Singapore allegedly utilize AFTA supports this observation since 99.8% of Singapore's imports from ASEAN are already at zero MFN trade (Manchin and Pelkmans–Balaoing 2008, p. 222). Another important issue is that the upward bias that C/O data has seems to be growing. Thus, C/O data is not suitable for examining the recent change in the use of FTAs. (The following section includes a detailed discussion on upward bias).

Firm-level surveys are another useful information source, especially when customs data is unavailable. It is important to carefully craft the survey questionnaire to avoid the measurement problems mentioned above. First, on tackling the use of a specific FTA, the questionnaire could ask, for example, whether firms use the Australia–Thailand FTA (ATFTA), as opposed to a general question on whether firms use FTAs, which can lead to a significant upward bias.<sup>4</sup> Second, researchers should be mindful of counting and indicator selection problems. As previously discussed, rather than counting the number of firms that use FTAs for a small portion of trade transactions as 1, researchers should identify the share of trade that uses FTAs at the firm-level. Moreover, the share of zero MFN imports (and zero MoP imports, if possible) should be identified to assess the usage and utility rates of FTAs. Finally, the treatment of non-respondents may lead to a significant difference in survey outcomes.<sup>5</sup>

## 2.6 Aggregation

In the case of plurilateral FTAs (FTAs comprising three or more parties) such as AFTA, the use of FTAs in the aggregate would be an interesting research question. However, tariff structures are very different across countries. Thus, there should be careful interpretation of figures on the aggregated use of plurilateral FTAs. For example, Singapore's utilization of AFTA is very low since almost all its imports have a zero MFN

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<sup>4</sup> Envision a situation in which a certain firm engages in trade with 10 countries, and all of them have signed FTAs with the country in which the firm is located, but the firm uses only one FTA among the 10 available. In this case, the firm should be counted as 0.1 and not 1 provided that all imports of this firm have FTA preferences.

<sup>5</sup> It is reasonable to consider that non-respondents tend to be non-users of FTAs. If these are excluded from the analysis, there is an additional risk of overestimating the use of FTAs.

rate. Because Singapore is the largest trader in Southeast Asia, the aggregated (average) utilization rate of AFTA is significantly affected by this country. Only 9% of total ASEAN imports have an MoP (Table 2); this means that the overall utilization rate of AFTA cannot be higher than 9%.

### 3. Findings in Existing Studies: Different Results or Flaws in Methodology?

Richard Baldwin's often-cited paper on the use of FTAs in Asia contends that in AFTA the overall utilization rate was around 3% in 1999 (Baldwin 2008). While some may argue that this is extremely low, in fact, this is not a surprising figure if we properly understand the critical measurement problems discussed above. Moreover, studies that contend that FTAs are more widely used seem to have some methodological problems.

Baldwin's figure (3%) is a utilization rate, which is naturally on the low side. Cheong (2008, p. 3) argues that the level of use of AFTA was as high as 30%–50% in 2006 in the case of Thailand when no MoP trade was excluded from the analysis, but also contends that this finding on the frequency of use of AFTA and Baldwin's observation are consistent for two reasons:<sup>6</sup> (i) Baldwin uses the utilization rate while the figure for Thailand is the usage rate, and (ii) Baldwin's figure is an aggregated figure for ASEAN that includes Singapore and Malaysia.<sup>7</sup>

Pomfret et al. (2010) conducted a detailed analysis on the use of FTAs based on Australian import data and computed both the utilization and utility rates of six FTAs signed by Australia.<sup>8</sup> This study clearly shows that the selection of indicators is critical in assessing the level of use of FTAs. The utility rate of all FTAs examined was above 80%, three of which recorded levels higher than 90%. Thus, as long as the MFN rate is positive, FTAs are widely used. The utility rate is likely to increase significantly when an FTA comes into force, because FTA preferences for some products will start to take effect. After a large jump in the utility rate upon enforcement of an FTA, the utility rate may continue to exhibit a slight increase for a couple of years, which can be explained by the recognition lag. They also found that the utilization rate is generally very low (three FTAs had utilization rates lower than 10%) and has a declining trend because more and more products have a zero MFN rate, and thus the need to use FTAs wanes.

The comparison of the studies on the use of ATFTA by Pomfret et al. (2010) and Chirathivat (2008) gives us some ideas on the issue of upward bias inherent with C/O data. The former study examines the utilization rate of ATFTA using Australia's import data and finds that the rate is around 55% in 2008, while the latter study finds that the utilization of ATFTA is as high as 72% in 2008, using Thailand's C/O data. It seems safe

<sup>6</sup> The implementation lag is another reason why Baldwin's figure on the utilization of AFTA in 1999 is low; the preferential tariff cut was ongoing in 1999 despite AFTA being signed in 1992.

<sup>7</sup> While 3% is often cited in other studies, in comparison, Baldwin's FTA utilization rates for other ASEAN countries are relatively high: Indonesia (5%), Philippines (8%), and Thailand (4%).

<sup>8</sup> For this paper, the term "raw utilization rate" refers to the concept of utilization rate, while the term "adjusted utilization rate" is used to refer to the utility rate.

to consider that the C/O-based utilization rate has at least as much as a 50% upward bias compared with import data.<sup>9</sup>

Assessing the recent trend of the use of FTAs, which is mainly affected by the time lag factor, is difficult because easily obtainable C/O data not only has an upward bias but its upward bias also seems to be growing. In fact, regarding the use of ATFTA, while Australian data suggest that the utilization rate has a declining trend (Pomfret et al. 2010), the data based on Thailand's C/Os show an increasing trend (Chirathivat 2008). This implies that the improvement in the rate of utilization of ATFTA based on the export C/O data does not necessarily mean actual improvement in FTA utilization. Thus, while the study by Leelawath (2012) suggests that the utilization of ATFTA is rapidly increasing, it seems reasonable to consider that the actual improvement in recent years is moderate.

Firm surveys that intend to assess the use of FTAs conducted so far in Asia seem to suffer from several methodological problems that result in serious upward bias.<sup>10</sup> First, some surveys have specification problems. They tend to simply ask firms whether they use FTAs. As a consequence, the share of firms that use FTAs tends to be high in countries that sign a large number of FTAs. While assessing the use of FTAs by comparing across FTAs is methodologically sound, surveys tend to compare the use across countries, thus the policy implications become unclear. Second, many firm surveys are hindered by the counting problem described in the previous section.<sup>11</sup> There is a need to design and conduct more methodologically sound firm surveys in the future to draw meaningful policy implications.

#### 4. Reasons for Non-Use

One of the reasons that is often mentioned for not using FTAs is that an MoP is low or zero. However, as we have already seen, it is critically important to look further into this as various cases fall under this broad category. There are three possibilities: (i) zero MFN (MFN rate = 0%), (ii) dutiable imports without an MoP (MFN rate = FTA rate > 0%), and (iii) small MoP.

The first and primary reason why FTAs are not used is that most imports in Asia already have a zero MFN rate, thus these products cannot be given any FTA preferences at the outset. Half of world trade is already subject to zero MFN rates, including Asia (WTO

<sup>9</sup> Hayakawa et al. (2009, p. 2) also argue that the utilization of AFTA is higher if the export side data is used (15%–20%) rather than basing it on import side data (11%–16%).

<sup>10</sup> For example, see Kawai and Wignaraja (2010). Their claim that “FTAs are more widely used than originally expected” does not seem to be valid because of the methodological problems included in their study (e.g., indicator selection, specification, and counting problems). For example, they counted the number of firms by asking: “do you use FTAs?” The Japan External Trade Organization (JETRO) survey also had this type of problem until 2009, but it recently changed the methodology and started to ask about the use of specific FTAs.

<sup>11</sup> De Mel et al. (2011) confirm that the usage rate of FTAs becomes very high when the rate is based on the number of firms, compared against actual trade amounts.

2011). As we already discussed, utilization rates tend to have a declining trend since more and more products are falling under zero MFN (Pomfret et al. 2010).

Although we need to analyze each bilateral trade flow (specificity problem) as discussed above, country-level aggregated data can give us a rough idea of the tariff structure, especially the size of zero MFN trade. As Table 3 shows, Asia is taking the lead in achieving zero MFN trade. There are no tariffs for almost all imports into Singapore and Hong Kong, China. The shares of zero MFN trade in Japan and Malaysia are around 80%, much higher than in Organization for Economic Co-operation and Development (OECD) countries other than Japan. The People's Republic of China (PRC) has levels higher than that in the US, while Thailand and Indonesia are similar to the US in terms of the share of zero MFN imports. This means that Asian countries are creating a situation in which there is no need to use FTAs. Moreover, there is only a small economic incentive to sign FTAs with Asian countries, with the notable exception of Republic of Korea (KOR).

The second case is that MFN and FTA rates are the same positive rate (portion D). In reality, however, portion D is not that large: about 10% for Singapore, Malaysia, and Thailand in terms of intra-ASEAN trade even in 2001–03, as indicated in Table 2 above. However, this portion is larger in the case of Indonesia (around 20%) and the Philippines (around 30%).

Even if portion D is small, it is important to distinguish between the two scenarios that could lead to such a situation because these have very different policy implications. First, there is a possibility that FTA and MFN rates are the same because the quality of the FTA is poor (e.g., the FTA does not bring additional tariff cuts). Second, FTA members could decide to cut tariffs on an MFN basis. Though there are more empirical studies showing these two scenarios leading to dutiable imports without MoPs, Menon and Melendez (2011) made a useful analysis of this issue based on the AFTA experience. They argue that more than 80% of preferential tariff reduction is multilateralized in Singapore, Malaysia, and Brunei Darussalam, and more than 60% in Indonesia and the Philippines. Thus, as far as major Asian countries are concerned, overemphasizing the fact that Asian traders cannot use FTAs because of their poor coverage seems to be misleading.<sup>12</sup>

The third case is that the MoP is small. But this begs the next logical question: compared against which benchmark? When there are other duty exemption schemes which are more attractive than FTA preferences, it is understandable if traders do not use FTAs.<sup>13</sup> In this case, the benefit of availing of MoPs is smaller than the use of other duty exemptions. Then, the situation becomes very similar to having zero MFN, because there is no need for traders to use FTAs. Another possibility is that the benefit is smaller than the cost of availing the MoP. Traders compare the tariff-saving effects of FTAs and transaction costs of using FTAs to decide whether or not to use them. Transaction costs mainly include those related to information gathering and administrative burdens. There

<sup>12</sup> Preferential tariffs are not multilateralized in the case of Viet Nam, Cambodia, and the Lao People's Democratic Republic. See Menon and Melendez (2011).

<sup>13</sup> There is a possibility that another FTA is used when more than two FTAs can be used for a particular type of bilateral trade.

is no consensus on the size of an MoP that is large enough to encourage the use of FTAs. In the case of the Generalized System of Preferences (GSP), recent quantitative studies find that preferences are not widely used if the MoP is below 5% (Francois et al. 2005, Amiti and Romalis 2006).

Kohpaiboon and Jongwanich (2006) examined the utilization of AFTA in relation to MoPs at the 2-digit commodity level, using Thai export C/O data in 2005, which may have some upward bias. In the case of Malaysia's imports from Thailand, 23 commodity lines have MoPs of more than 10%. For those tariff lines, AFTA is widely used; the weighted average utilization rate of the commodities with MoPs greater than 10% is 52.4%, which is much higher than the overall utilization rate (Table 4). Thus, while it may be true that low MFN rates in Asia lead to a small appetite for using FTAs (WTO 2011), one should recognize that FTAs are more frequently used when MoPs are large (e.g., more than 10%).

Kohpaiboon and Jongwanich (2006) also noted that commodities recording very small utilization rates usually have very small trade values. Traders tend to pay MFN tariff rates when the amount of trade is very small, rather than seeking preferential access. Other than those cases, the products that have very low utilization rates are mainly limited to two commodity groups:<sup>14</sup> (i) intermediate products of apparel<sup>15</sup> and metals,<sup>16</sup> and (ii) food-related products.<sup>17</sup> In the former case, for example, many ASEAN countries have a duty exemption (drawback) scheme for imported intermediate products for export purposes, including fabrics and metals, with which many traders are more familiar than FTAs.<sup>18</sup> In the latter case, the fact that many firms in food-related industries are located in rural areas seems to be a disadvantageous condition when considering the use of FTAs, in addition to the relatively small size of firms in these industries.<sup>19</sup> There is also a possibility that traders intentionally decide not to use FTAs in order to save time for perishable imports.

## 5. Summary and Future Research Agenda

While the use or non-use of FTAs is a peripheral question from the macroeconomic perspective, the proliferation of studies on the use of FTAs in various qualities may cause confusion on the issue, especially from the policy perspective. Based on the

<sup>14</sup> In addition to the two groups, the utilization of AFTA for ready-to-wear clothes—HS 61 (articles of apparel, knitted) and HS 62 (articles of apparel, not knitted)—is low for Indonesia and the Philippines, but not for Malaysia. Though further study is required, a likely explanation is that another FTA such as the ASEAN–People's Republic of China FTA (ACFTA) is used for apparel products that use materials from, for example, Thailand and People's Republic of China, to which ACFTA, but not AFTA, is applicable.

<sup>15</sup> HS 60 (knitted or crocheted fabrics).

<sup>16</sup> HS 72 (iron and steel) and HS 73 (articles of iron and steel).

<sup>17</sup> HS 21 (miscellaneous edible preparations) and HS 22 (beverages, spirits, and vinegar).

<sup>18</sup> In the case of Malaysia, see <http://www.matrade.gov.my/ja/malaysian-exporters/services-for-exporters/exporters-development/exports-assistance/duties-and-sales-tax-exemption>

<sup>19</sup> There are general explanations of why FTAs are not used in the case of food and agricultural imports—such as low MoPs, a lack of information, and high costs of documentation for SMEs—but these do not explain why the utilization is particularly low in the food and agricultural sector. For a detailed discussion on the utilization of FTAs for food and agricultural products, see Taratorn et al. (2008, p. 17).

examination of various studies, what we know so far can be summarized as follows. Overall, Asian FTAs are not widely used and FTA utilization rates are very low among Asia countries largely because Asia's trade is already dominated by zero MFN trade. Thus, it is safe to consider that FTAs do not have substantial impacts on real economic activities. However, it is also true that FTAs are actively used for products that have a positive MoP; therefore, FTA usage rates are high. There are three main cases in which FTAs are not used even when the FTA rate is substantially lower than the MFN rate (a positive MoP): (i) the transaction value is extremely small, (ii) a duty exemption outside of an FTA has already been availed, and (iii) time-sensitive products (e.g., perishable goods).

Several items should be included in any future research agenda. First, detailed data collection and examination of various imports in terms of tariff structure and the use of FTAs should be conducted at the bilateral level, using actual import data. In other words, each of Portion A (dutiable imports that actually use FTA preferences); Portion B (dutiable imports that do not use FTA preferences); Portion D (dutiable imports without a MoP, MFN rate = FTA rate > 0); and Portion F (non-dutiable imports, MFN rate = 0) in major bilateral trade flows (e.g., Thailand's imports from Malaysia) should be identified. This contributes to the accurate calculation of the utilization, utility, and usage rates of a specific FTA. While this is a very basic analysis concerning the design of trade policies, thus far, no substantial research has been conducted as far as publicly available data is concerned.

Second, careful examination of dutiable imports without a MoP, namely Portion D (MFN rate = FTA rate > 0), is necessary. It is critically important to know why there is no MoP. One possibility is that the quality of the FTA is poor and does not bring any additional tariff reductions to the MFN tariff rate. If this is the case, the policy implication is that some improvement in the quality of FTAs may be necessary. Another possibility is that FTA countries multilateralize FTA preferences to all countries on an MFN basis. In this case, a low utilization (utility and usage) rate is good news and does not call for any policy action.

In terms of data sources, there is an urgent need to verify the upward bias that C/O data may have compared against the import side data. Because traders can easily obtain C/O for exports that are not ultimately exported and/or inflate the value of exports written in the C/O certificate, which is allowed for business flexibility, accurately measuring the use of FTAs using C/O data is becoming difficult. Understanding the business practice of obtaining a C/O is necessary. Anecdotal evidence suggests that the issuance of a C/O has gotten easier recently, which seems to lead to the growing upward bias of trade transactions based on C/O data. Thus, it is critical to understand the magnitude of the growing upward bias of C/O data, if researchers opt to use C/O data to examine FTA use. There is a possibility that what is actually facilitated is the issuance of a C/O, not the use of FTAs.

A carefully crafted survey should be conducted to identify the reasons for not using FTAs. As discussed, existing surveys have several methodological problems, such as asking the question "do you use FTAs?" without specifying which FTAs. Interview methods should be utilized to identify why a specific FTA is not used despite its MoP in order to



avoid obtaining answers such as “there is no FTA preference.” In other words, surveys and interviews that focus on the usage rate (not utilization rate) are necessary. In addition, respondents’ answer that “there is no information on FTAs” should be carefully assessed because there is a possibility that there has not been a MoP from the beginning. (Just because respondents suggest that an information barrier is the problem, we should not consider that an information barrier is the reason for actual non-use.) Furthermore, “why not trade although there is no tariff?” should be a good question to be considered, in addition to “why not use an FTA?”

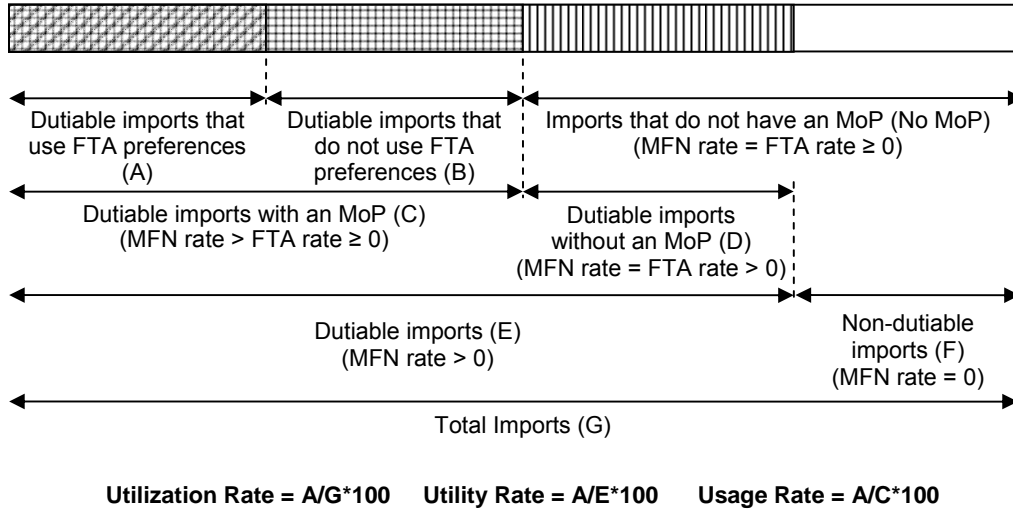
Finally, as discussed at the outset of this paper, what is important is the welfare implications of FTAs, not the use or non-use of FTAs. In order to consider the welfare implications of FTAs, it is important to identify whether the impacts of FTAs are limited to the tariff-saving effects on existing trade flows or if FTAs lead to new trade transactions. In the latter case, whether new trade is materialized by trade creation effects or trade diversion and deflection effects should be examined. This can be identified by conducting detailed corporate interviews.

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**Figure 1: Various Indicators of the Use of FTAs**



Source: Author's illustration based on Plummer et al. (2010).

**Table 1: FTA Utilization Rates Based on Thailand C/O Exports in 2009**

| Economies                        | Utilization Rate |
|----------------------------------|------------------|
| Brunei Darussalam                | 5.8%             |
| Indonesia                        | 51.7%            |
| Malaysia                         | 20.8%            |
| Philippines                      | 58.6%            |
| Singapore                        | 3.5%             |
| Cambodia                         | 2.8%             |
| Lao People's Democratic Republic | 3.0%             |
| Myanmar                          | 1.7%             |
| Viet Nam                         | 54.7%            |

Note: C/O = Certificate of Origin

Source: Leelawath (2012).

**Table 2: Tariff Structure for Intra-ASEAN Trade in 2001–03**

| <b>Economies</b> | <b>Positive MoP<br/>(Portion C)</b> | <b>Dutiable without MoP<br/>(Portion D)</b> | <b>Zero MFN<br/>(Portion F)</b> |
|------------------|-------------------------------------|---|---------------------------------|
| Indonesia        | 41%                                 | 23%   | 36%                             |
| Malaysia         | 30%                                 | 3%  | 67%                             |
| Philippines      | 30%                                 | 33%   | 37%                             |
| Singapore        | 0.1%                                | 0.0%  | 99.9%                           |
| Thailand         | 54%                                 | 11%   | 35%                             |
| <b>Total</b>     | <b>9%</b>                           | <b>3%</b>                                   | <b>88%</b>                      |

Source: Manchin and Pelkmans–Balaoing (2008, p. 222).

**Table 3: Share of Zero MFN Imports and Preferential Imports in 2008**

| <b>Economies</b>           | <b>Preferential<br/>Trade<br/>(Portion A +<br/>Duty Exempt<br/>Trade)</b> | <b>Non-<br/>Preferential<br/>Trade<br/>(Portion B + D –<br/>Duty Exempt<br/>Trade)</b> | <b>Zero MFN<br/>(Portion F)</b> | <b>NA</b>   |
|----------------------------|---|--|---------------------------------|-------------|
| Singapore                  | 0.0%  | 0.0%   | 100.0%                          | 0.0%        |
| Hong Kong, China           | 0.0%  | 0.0%   | 100.0%                          | 0.0%        |
| Japan                      | 6.0%  | 12.5%  | 80.4%                           | 1.1%        |
| Malaysia                   | 4.5%  | 10.2%  | 78.0%                           | 7.4%        |
| European Union             | 16.9%   | 26.1%  | 56.5%                           | 0.5%        |
| Canada                     | 35.4%   | 9.1%   | 55.4%                           | 0.1%        |
| People's Republic of China | 5.8%  | 41.7%  | 48.4%                           | 4.2%        |
| United States              | 23.1%   | 33.7%  | 42.8%                           | 0.4%        |
| Thailand                   | 7.2%  | 53.6%  | 39.2%                           | 0.0%        |
| Mexico                     | 48.1%   | 10.3%  | 38.1%                           | 3.4%        |
| Switzerland                | 53.9%   | 7.7%   | 38.2%                           | 0.2%        |
| Indonesia                  | 24.3%   | 33.3%  | 37.7%                           | 4.6%        |
| Republic of Korea          | 9.5%  | 59.2%  | 30.2%                           | 1.2%        |
| <b>World Total</b>         | <b>16.3%</b>  | <b>30.2%</b>   | <b>52.3%</b>                    | <b>1.2%</b> |

Source: Carpenter and Lendle (2010).

**Table 4: FTA Utilization for Products with High MoPs in 2005: Thailand's Export**  
(HS digit in parentheses)

|   | Malaysia             | Indonesia        | Philippines      |
|---|----------------------|------------------|------------------|
| Total number of tariff lines with MoPs above 10%                | 23                   | 12               | 9                |
| Utilization rate: 0.0%–10.0%                                    | 2 (36*, 45*)         | 3 (6*, 80*, 92*) | 3 (10, 46*, 93*) |
| Utilization rate: 10.1%–20.0%                                   | 1 (22)               | 2 (21, 62)       | 1 (62)           |
| Utilization rate: 20.1%–30.0%                                   | 2 (39, 73)           | 1 (95*)          | 1 (61)           |
| Utilization rate: 30.1%–40.0%                                   | 3 (60, 72, 76)       | 1 (61*)          | 0                |
| Utilization rate: 40.1%–50.0%                                   | 0                    | 1 (73)           | 0                |
| Utilization rate: 50.1%–60.0%                                   | 0                    | 1 (57)           | 2 (57, 63*)      |
| Utilization rate: 60.1%–70.0%                                   | 3 (63*, 69, 70)      | 0                | 1 (87)           |
| Utilization rate: 70.1%–80.0%                                   | 4 (61, 62, 68, 87)   | 0                | 0                |
| Utilization rate: 80.1%–90.0%                                   | 4 (58, 64*, 65*, 83) | 2 (46*, 87)      | 0                |
| Utilization rate: 90.1%–100%                                    | 4 (46, 66*, 67*, 96) | 1 (67*)          | 1 (66*)          |
| Weighted average utilization (tariff lines with MoPs above 10%) | 52.4%                | 82.9%            | 59.0%            |
| <b>Overall utilization</b>                                      | <b>20.6%</b>         | <b>43.0%</b>     | <b>37.7%</b>     |

Note: HS = Harmonized System; HS digit with \* means that its share is zero.

Source: Author's compilation based on Kohpaiboon and Jongwanich (2006).

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## **On the Use of FTAs** A Review of Research Methodologies

There has been much confusion, rather than debate, on the use of free trade agreements (FTAs). This article reviews existing studies on the issue and attempts to identify the relevant methodologies for assessing the use of FTAs.

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