Differential Pricing Analysis
Comments of the International Trade Practices Unit
(Ministry of Economy, Government of Mexico)

The following are our comments in regards to the Differential Pricing Analysis methodology, as requested by Federal Register / Vol. 79, No. 90 / Friday, May 9, 2014 / Notices:

I. Description of Differential pricing analysis

On May 9, 2014, the United States Department of Commerce (USDOC) requested comments[1] on the differential pricing analysis that at present applies in anti-dumping investigations and other reviews (including administrative reviews), to determine when it would be appropriate to apply an alternative comparison method in order to obtaining a weighted dumping margin.

According to the request for comments published at Federal Register, in the USDOC practice, previously it was applied the targeted dumping analysis at the request of either party, and once it had been proven the sufficiency of this allegation, they proceeded to determine the existence of patterns of differential pricing.

Unlike the *targeted dumping analysis*, the *differential pricing analysis*, does not require an allegation of targeted dumping and it may be applied at any stage of the proceedings.

This analysis evaluates all purchasers, regions and time periods[2] to determine if there is a pattern of prices that differ significantly.

The differential pricing analysis comprises two steps. In the first, the USDOC uses two tests: the Cohen's d test[3] and the ratio test,[4] to determine the existence of a price pattern that differs significantly.

If the above two tests demonstrate the existence of such price pattern, the USDOC will compare the dumping margin resulting from the application of the methodology of comparison between the weighted average normal value and individual export transactions (W-T) with the resulting from the application of the methodology for comparison between weighted averages (W-W). If the difference between the two dumping margins is significant[5], then the USDOC would conclude that the method of comparison W-W cannot take into account the differences observed in prices and, therefore, the alternative method would be appropriate.

II. Comments about *differential pricing analysis*[6]

In relation to the application of the differential pricing analysis, we note the following key issues:

a) The discretion of the USDOC while applying the differential pricing analysis for:

   i. Searching patterns of prices that differ significantly among purchasers, regions, or periods, without an allegation of targeted dumping.

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[1] *Differential Pricing Analysis; Request for Comments. Federal Register / Vol. 79, No. 90 / Friday, May 9, 2014 / Notices.* (Comments request).

[2] This analysis incorporates its own definitions of purchasers, regions and time periods.

[3] This test measures the standard deviation of an experimental group, compared to a control group.

[4] This test evaluates the proportion of the value of total sales representing transactions that passed the Cohen's d test.

[5] The USDOC considers that this difference is significant if:

   i) the outcome of dumping margin in one of the methodologies exceed the *de minimis* threshold, or

   ii) if there is a differential of 25% or more between the resulting dumping margin of the average-average method and the alternative method (if both margins exceed the *de minimis*).

[6] We have no information on what criteria is using the USDOC to apply differential pricing analysis.

ii. Performing that analysis at any stage of the proceeding.

b) Explanation about why the significant differences in export prices cannot be appropriately considered by applying the other methodologies provided by the article 2.4.2 of the ADA to calculate the dumping margins.

c) Inherent problems comparing sets of prices.

d) Nature of the Cohen's d test and how it is used by USDOC.

e) Application of the ratio test. Discretion in defining the thresholds for determining the applicable methodology

a) The discretion that the differential pricing analysis gives to the USDOC for:

i. Searching patterns of prices that differ significantly among purchasers, regions, or periods, without an allegation of targeted dumping.

As we mentioned before, to apply the targeted dumping analysis an allegation of a party on the existence of targeted dumping was needed, and upon the basis of the sufficiency of this allegation, the USDOC would apply the required analysis. However, the differential pricing analysis removed this requirement, which gives complete discretion to USDOC to search for differential pricing patterns on all export transactions among different purchasers, regions or periods.

This implies that USDOC has the opportunity to search systematically, differential pricing patterns on all transactions, and as a consequence, the finding of patterns of prices that differ significantly depends largely on the skill of the USDOC to find them. Obviously, that affects the predictability of the methodology negatively and consequently, also the certainty of the interested parties.

Once that USDOC locates transactions given at low or high prices, it can categorize them by purchaser, region or period, i.e. find a pattern that links them. In other words, the discretion to find differential pricing patterns on all transactions gives the USDOC the opportunity to first find the sales at low or high prices, and then find the corresponding patterns (purchasers, regions or periods). The USDOC also has the discretion to categorize transactions in groups of purchasers, groups of regions and groups of periods, and to assign them a differential pricing pattern.

Now, according to the article 2.4.2 of the WTO Anti-Dumping Agreement (ADA) the use of the W-T methodology is used exceptionally, when the other two comparison methodologies may not adequately consider the differential pricing pattern. We understand that there is nothing in the ADA that indicates that even though the requirements for the application of the W-T methodology are met, the W-W and T-T methodologies would still be preferable, given that such article simply grants the discretion to use the W-T methodology when the requirements are satisfied. Nevertheless, both the interpretation of the USDOC and the application of the differential pricing analysis will very likely have the practical effect of turning the exception into the general rule, which would be a very questionable outcome from our point of view.[7] In other words, the consequence of the USDOC practice is that the W-T methodology will normally be utilized unless the significant differences pattern is not determined (which seems very unlikely).

[7] From March to November, 2013, the USDOC applied the differential pricing analysis on 50 determinations. In 75% of those cases, significant price patterns were found. Ver http://www.captrade.com/2013/11/differential-pricing-the-new-targeting/

ii. Performing that analysis at any stage of the proceeding.

Previously, the "targeted dumping analysis" required that the allegation of the existence of "targeted dumping" was alleged in the initial stage of the proceedings, giving the parties a greater legal certainty. Instead, as we mentioned before, the "differential pricing analysis" allows the USDOC to find patterns of differential pricing at any stage of the proceedings, which means that USDOC can search in an exhaustive manner, significantly differential pricing patterns throughout the proceedings, which undoubtedly increases the chances of finding those patterns.

b) Explanation about why the significant differences in export prices cannot be appropriately considered by applying the other methodologies provided by the article 2.4.2 of the ADA to calculate the dumping margins

We observe that the second stage of the differential pricing analysis compares only the results obtained through the application of the average-transaction methodology to those obtained through the average-average methodology and determines that the significant price differences cannot be taken into account properly when the results of that comparison are different to a meaningful extent.

That is, the USDOC uses a methodology in which it applies zeroing, and compares its results to another methodology in which it does not apply zeroing. From our viewpoint, that could lead to the conclusion that such comparison is inherently biased. Almost surely, those results will be very different and therefore, the conclusion will be that the methodology that should be used is average-transaction. That is basically equal to utilize the result as one of the premises. In that respect, it is very difficult to deem as valid that the reason why the average-average methodology cannot be used is that it renders significantly different outcomes than those obtained by another methodology which utilizes structurally different elements, and that the presence of those differences is precisely what demonstrates that the methodology that should be used is the latter one.

On the other hand, the differential pricing analysis does not contemplate any mechanism to explain why the differences in export prices cannot be taken into account properly while applying the transaction-transaction methodology. In our opinion, that cannot be considered as compatible with article 2.4.2 of the Antidumping Agreement.

c) Problems inherent to the sets of prices subject to comparison

The point of departure to consider the application of an "asymmetrical" methodology to calculate dumping margins (average-transaction), is that a pattern of export prices which differ significantly (among different purchasers, regions or time periods) should be found. By definition, that pattern can only be different as compared to other prices. Thus, the first problem is how to determine which ones will constitute those other prices.

Now, we understand that there are no guidelines in that regard. Nevertheless, by a very basic sense of logics, fairness and predictability, we believe that arbitrary determinations should not be present. As a result, there should be a certain guideline to determine, at least, the characteristics of those other prices. Given that, as mentioned by the USDOC in the "Decision memorandum for the final determination of the antidumping duty investigation of xanthan gum from the People's Republic of China", all the export prices of the corresponding company are taken into account, we assume that the "other prices" are all the export prices excluded from the region, purchasers or periods of time to be analyzed.

In that regard, we observe that it is not clear what would happen if those "other prices" are skewed. In principle, we consider that in those cases it could not be validly determined that

the export prices related to a given region, purchasers or time periods follow a pattern which differ significantly so as to suggest the presence of "targeted" or "masked" dumping. In other words, if the objective is to determine the presence of a "bias" by comparing certain export prices to other export prices that could have their own "distortions", then the comparison by definition cannot be valid.

d) Nature of the Cohen´s d test and how it is used by USDOC.

The Cohen's d test is a measurement used to determine the size of the effect; it assesses the relationship between the averages of two groups, without indicating whether the apparent relationship between the two sets of data reflects a relationship with all the information. That is, when this test is applied to two sets of prices, it will indicate the relationship between the averages of both groups without reflecting the true relation to total sales.

This test is generally used to measure the presence of a social phenomenon in a particular population group. In that regard, even Cohen himself defines this type of testing (effect sizes) as "*the degree to which the phenomenon is present in the population"* [8]. The most common applications for this test are found in the medicine and psychology fields.

Of course that, by applying the Cohen's d test what would be measured is the size of the effect in terms of standard deviations, between two averages. However, it seems possible that the results obtained therein have absolutely no meaning beyond showing the distance between those two averages. We fail to see how the probability of existence of targeted or masked dumping could be justified with that tool.

In other words, by measuring the size of the effect through the Cohen's d test, the distance in standard deviations between the averages of two groups of prices would be found but that result would only show a magnitude without any meaning in addition to that distance itself. Therefore, it appears that what the differential analysis is trying to do is to give that magnitude an additional meaning without any basis other than the discretion that the USDOC claims to do it, given that it merely considers that the export prices with a Cohen's d coefficient equal to or exceeding the "large" threshold pass the Cohen's d test and depending upon the percentage their value represent on the value of the total sales, the USDOC can apply the average-transaction methodology. Thus, the USDOC utilizes the Cohen's d test to determine whether there are patterns of prices that differ significantly, without any justification other than its discretion.

Likewise, it seems very difficult –and the USDOC does not explain it– to understand the logical nexus between the results of the application of the Cohen's d test, and the conclusion of the existence of patterns of prices that differ significantly, in the context of an antidumping proceeding. In fact, the way in which the Cohen's d test is applied and the interpretation of its results makes that finding such pattern becomes practically a results-oriented and almost arbitrary exercise.

In that respect, the USDOC does not explain how would the differential pricing analysis consider the important variations in prices of merchandises subject to seasonality (like agricultural products). In any of those cases apparently the USDOC could focus on the time periods in which the prices plunge disregarding the context of that phenomenon, which almost surely would lead to conclude the existence of patterns that differ significantly by time period and then, it would be likely that the average-transaction methodology would be applied and consequently, the zeroing. Likewise, given that the USDOC could determine the existence of

[8] Breaugh, James A., *Effect Size Estimation: Factors to Consider and Mistakes to Avoid*. Journal of Management. College of Bussiness Administration, University of Missouri. 2003.

such patterns when the export prices are very high (and that could have as consequence the application of the average-transaction methodology and the zeroing), it would be likely to calculate dumping margins higher than those that would have been calculated if such prices had not been that high. In other words, the differential pricing analysis could get to the extent of calculating a higher margin of dumping precisely because the export prices were higher (especially because the ratio test does not consider the sales volumes but only their value).

While it is true that the Cohen's d test is a recognized and accepted statistical tool, its utilization is not indiscriminate. To use it appropriately, it is necessary that the data analyzed meets certain requirements. The interpretation of the results rendered by such test can cause trouble when the universe of data being analyzed is not simmetrical or is not within certain defined ranges. In the differential pricing analysis, we see no evidence that the USDOC makes sure that those requirements are met.

In that respect, the estimations on the size of the effect make sense only when there is certainty that the two sets of data to be compared are reasonably similar on study design features that might increase or decrease the effect size. If such reasonable similarity does not exist, then it would be impossible to know if the difference in size effect is a result of the differences in the methodology or a result of the sets of data being compared. Likewise, if one of those sets of data is based upon reliable information and the other one contains distortions, the outcome of the comparison would have no meaning.

e) Application of the ratio test. Discretion in defining the thresholds for determining the applicable methodology.

The USDOC uses this test to assess the magnitude of the significantly different prices for all sales as measured by the Cohen's d test.

This test evaluates the proportion of the value of total sales representing transactions that passed the Cohen's d test, and based on the percentage obtained, it will be determined whether the application of an alternative methodology is justified. The following table summarizes the proportion test.

Percentage of total sales that represent the sales that passed the Cohen´s d test	Applicable methodology
66% or more	W-T methodology to all sales
More than 33% and less than 66%	W-T methodology to sales that passed the test Cohen´s d test
	W-W methodology for sales that failed the test
Less than 33%	W-W methodology

On the other hand, we observe that USDOC distinguishes in one of the thresholds (33% and 66%) between the sales that passed the Cohen's d test and sales that did not. Nevertheless, without any apparent justification, it does not do it for sales within the threshold of 66% or more.