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## WILL CARBON COSTS DISRUPT THE COMPETITIVE LANDSCAPE?

In last February's *O Papel* edition, we read an article from Dr. Sergio Leitão, attorney and Director at *Instituto Escolhas*. This article warned of the negative impact that GHG (Greenhouse Gas) emission taxation can have on the economy. But, are these taxes inevitable right now that the "save the Earth" concept has been fully accepted at the Climate Conference in Paris, in which 190 countries participated?

So, how will this affect the pulp and paper industry? For sure, some companies will be penalized for exceeding whatever levels will be set in the future. But is it conceivable that some companies might actually benefit from carbon taxation?

Let's consider a "local play," like the tissue market in Brazil. Some mills have a solid advantage over others in terms of GHG Emissions (*Figure 1 - the FisherSolve*<sup>™</sup> *Carbon Benchmarking analytics shows the carbon footprint of every mill and machine*).

If we assume linear taxation (the same per-ton cost across all tons), carbon taxes would not cause any significant change in the competitive situation within the country. Considering a carbon tax of USD \$20/ton, the per-ton-of-paper cost difference between the lowest and highest emitter will be only USD \$16 per ton of paper and most assets remain in their pre-tax cost quartiles.

However, this might not be the case when we broaden the competitive landscape to include international trade. Let's see what kind of impact carbon taxes would have on a Brazilian mill shipping tissue to the United States. After all, Suzano has announced two new tissue machines located at their highly-competitive pulp mills in Mucuri and Imperatriz. While they may serve the domestic Brazilian market at first, at some point, they may want to consider exporting. Would carbon taxation help or hinder them?

Today, considering producers in the 2nd cost quartile of both countries (delivered to Baltimore), there is no clear cost advantage for any player (**Figures 2 and 3**). Therefore, there is little international trade.

But a low-cost Brazilian mill that also had the tail winds of a carbon tax could have a significant advantage over a large portion of the United States tissue industry (**Figure 4**).

One reason is the larger carbon footprint of the typical American mill. If carbon taxes in Brazil and the United States are applied the same way at the same rates, American mills will suffer a greater competitive disadvantage.

In the evolving world of tissue, there are disruptive changes underway, such as the introduction of advanced production technologies, carbon taxation, and a trend towards integration with world-class pulp mills. These trends have the potential to change the tissue landscape from a local business to a far more globalized one.



Figure 1. A tax of \$20 per ton of carbon would create only a \$16 per ton of paper betwen the best and the worst Brazilian mills



Figure 2. A tax of \$20 per ton of carbon would create a \$60 deifference per ton of paper between the best Brazilian mill and the worst U.S. mill. The Brazilian mill have a \$30 per ton advantage over the average U.S. mill



Figure 3. Today, the average Brazilian mill considering delivering tissue to the U.S. has no particular advantage



