# **World Bank: 'Model of Amazon Deforestation, Trade and Labor Market Dynamics'**

Targeted News Service

January 13, 2023 Friday 8:30 AM EST

Copyright 2023 Targeted News Service LLC All Rights Reserved

**Length:** 637 words

**Byline:** Targeted News Service

**Dateline:** WASHINGTON

**Body**

(TNSrep) -- The World Bank issued the following policy research working paper (No. 10163) in November 2022 entitled "Model of ***Amazon*** ***Deforestation***, Trade and Labor Market Dynamics".

The working paper was written by Charly Porcher and Marek Hanusch.

Here are excerpts:

\* \* \*

Abstract

This paper develops a dynamic spatial equlibrium model of ***Amazon*** ***deforestation***, accounting for trade and labor markets dynamics. It uses this model to study the impact of local sectoral shocks and policies on ***deforestation***. Conditional on the assumptions on key parameters, the analysis suggests the following: 1) an increase in external commodity demand increases ***deforestation***; 2) agricultural productivity gains within the ***Amazon*** region likely increase ***deforestation*** (but reduce ***deforestation*** in the rest of the world) 3) manufacturing productivity in urban centers in the ***Amazon*** region decreases ***deforestation***, especially if manufacturing firms have short rural value chains and if complemented by investments in education and training and measures to attract skills; 4) reducing transport costs increases ***deforestation*** unless it sufficiently supports higher export competitiveness of urban production; and 5) industrial policy focused on raising urban productivity, especially in sectors with short rural value chains, can reduce ***deforestation***. The paper then discusses how policies aimed at increasing local sectoral productivity in the ***Amazon*** region could complement other measures specifically aimed at protecting the forest. Among such measures are incentivizing governments to designate undesignated public forests, enforcing forest protection laws (command and control), incentivizing afforestation, and creating alternative liveli-hoods for farmers in rural and urban areas.

\* \* \*

Conclusion

This paper offers a novel view of the micro-foundations of ***Amazon*** ***deforestation*** that puts at the forefront the forward-looking motives of ***deforestation***. When the future price of land is high, individuals engage in ***deforestation***, even if the short-term returns to agricultural activity are low. The ***deforestation*** decision interacts with individuals' dynamic migration and occupation choices and affects the spatial equilibrium in the ***Amazon*** region.

The change of perspective is relevant for policy. ***Deforestation*** is both a consequence of an expectation of increased agricultural production (due to greater agricultural demand and agricultural productivity) and a defensive strategy of less productive farmers who come under competitive pressures. This calls for an increased focus on the transition of less productive farmers into alternative rural or urban activities in order to reduce ***deforestation*** pressures. The model also shows that ***deforestation*** is not simply a rural problem. Regional trade and migration linkages offer a role for urban productivity growth in curbing ***deforestation***. The ***Amazon***'s structural transformation will lead to higher urban productivity, providing promising economic alternatives to rural individuals. This will help reduce ***deforestation***, especially if urban sectors have limited connections to agricultural value chains. Infrastructure is critical for both rural and urban productivity growth. Yet, improved market access for agriculture also increases pressure for ***deforestation***. This analysis suggests that a focus on urban competitiveness can be an effective counteracting force. The analysis offers some guidance by testing the theoretical effectiveness of various compensation mechanisms. The current analysis is based on parameter estimates from the literature; future steps will calibrate it to actual data.

\* \* \*

The working paper is posted at: https://documents1.worldbank.org/curated/en/099329011022242501/pdf/IDU0c70e2b6904bc5044f00ab57083ff92196da8.pdf

Copyright Targeted News Services

MSTRUCK-8042038 MSTRUCK

**Load-Date:** January 14, 2023

**End of Document**