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Forest transition in developing countries : analysis of the level of forest cover at the turning point using a Heckman truncated model procedure

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The forest transition refers to the change from decreasing to increasing in the forest area of a country. Where the forest cover reaches its minimum is called the turning point. At this point, the country does not deforest anymore. This paper studies the probability of occurrence of a turning point for a developing country, and then explain the level of forest remaining at this moment. Indeed, it is be strongly policy relevant and interesting to consider which variables determine the forest cover at the turning point. Why do some countries experience a turning point at 10% forest cover while other ones experience it at 30%? This paper allow to progress on the comprehension of the cumulative nature of deforestation along the development process. Moreover, it can help to strengthen public policies to fight against deforestation, by transposing the results to countries that have not yet observed a turning point, and thus affect the right variables to make the turning point occur earlier in time and higher in forest cover. Since only some countries are observing a turning point, the existence of a selection bias must be taken into account. A Heckman truncated model procedure is used.