
Governance and socio-economic drivers of deforestation

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Aim of the study

- **Support the development of efficient RED(D) incentives in the tropics**
- **By relationships between deforestation and national socio-economic and governance indicators**
- **Through statistical analysis in FAO world regions**

State-of-the-art

- **Socio-economics:**
 - Population growth increases deforestation
 - Rising income reduces deforestation
- **Governance:**
 - A nation with poor governance may fail to achieve country's development and
 - may be inapt to enforce controls on forests use

FOREST AREA CHANGE

ACTIVITIES (Demand for productive land): Agricultural expansion, Wood extraction, Plantations, Cattle ranching, Infrastructure extension

Direct drivers

AGENTS (of deforestation): cultivators, logging and mining companies, farming corporations, forest concessionaires, ranchers, etc

Capacity

Demand for agricultural and forest products and energy

Education

Population, income

SOCIOECONOMIC FACTORS
(demographic trends, economic growth and development, etc)

Demand drivers

POLICY AND INSTITUTIONAL FACTORS
(policies on economic development, governance, property rights regimes, corruption, etc)

Structural drivers

Incentives, regulation, enforcement

Methodology

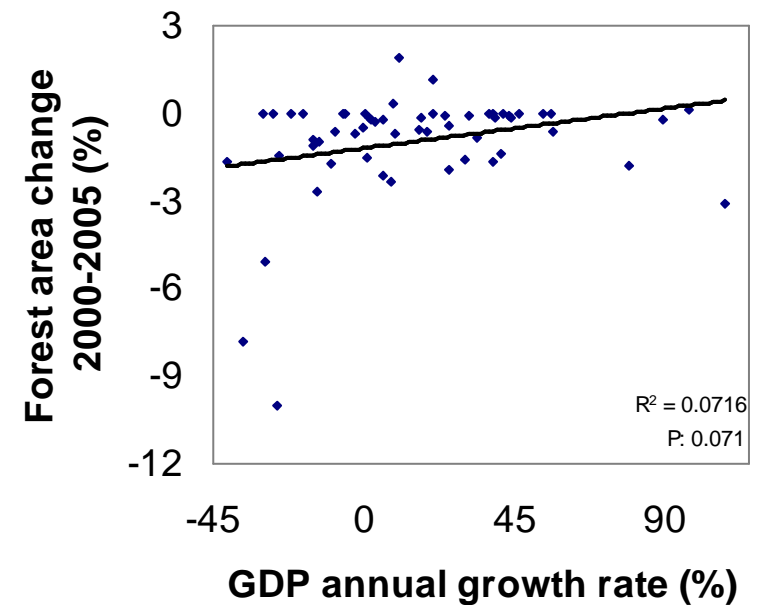
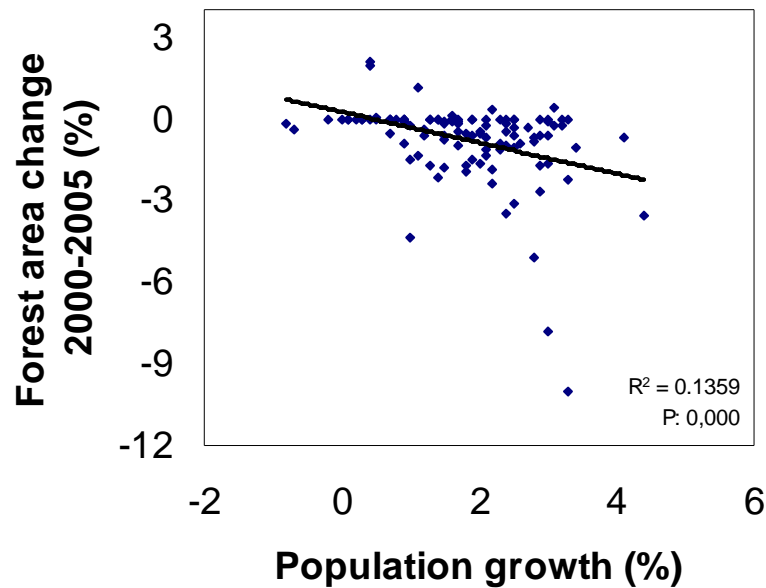
- A multi-country regression model is developed in “two-stage procedure”:

1st stage Deforestation is a function of the **demand drivers** (8 socio-economic variables) through a cross-sectional study (period 2000-2005)

2nd stage The significant demand drivers are analyzed as a function of the **structural drivers** (13 governance variables) for all years from 2000 to 2005

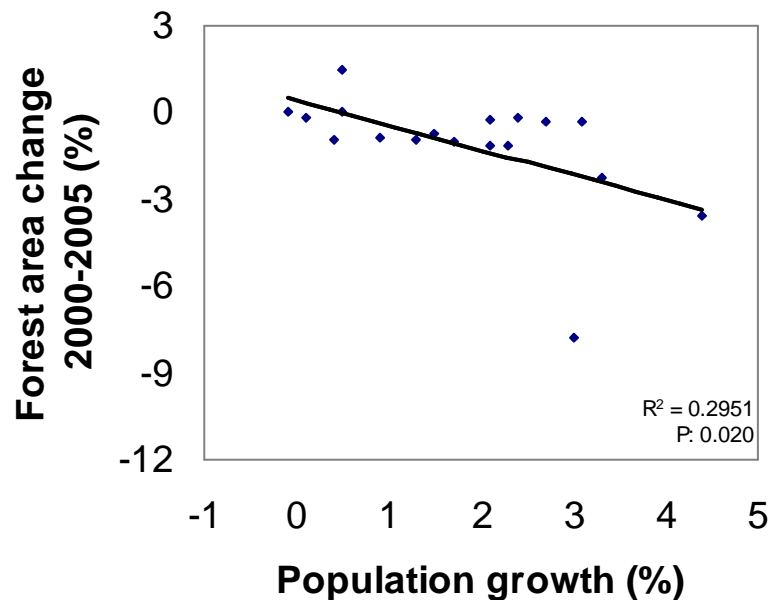
Results: 1st stage (socio-economic)

Tropical Countries (2000-2005)

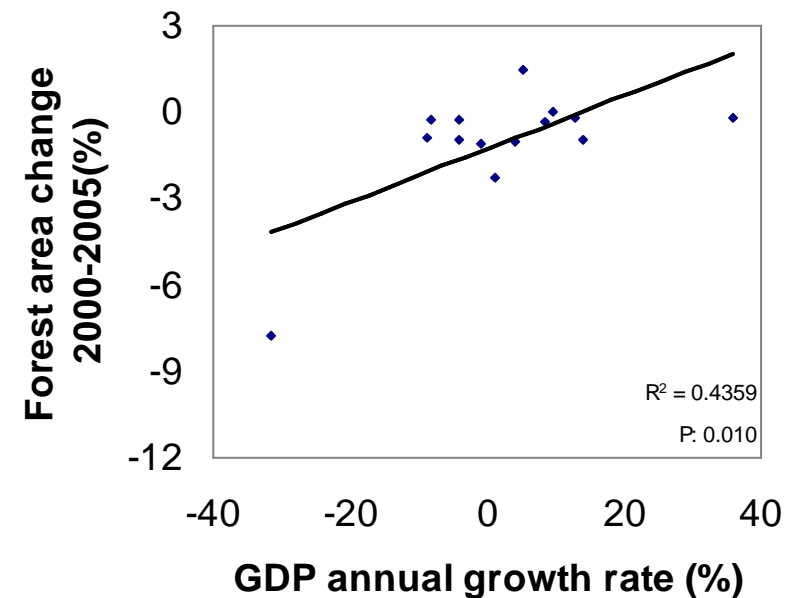


Results: 1st stage (socio-economic)

Eastern and Southern Africa



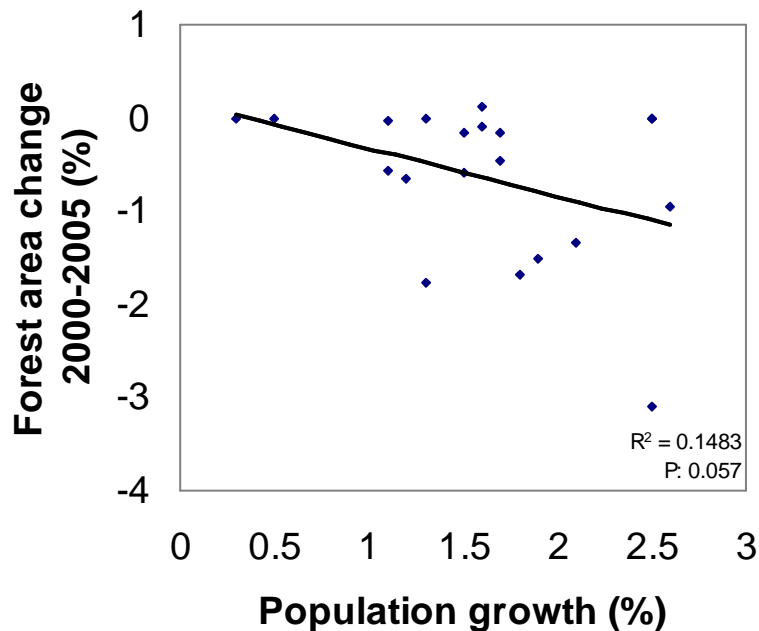
Eastern and Southern Africa



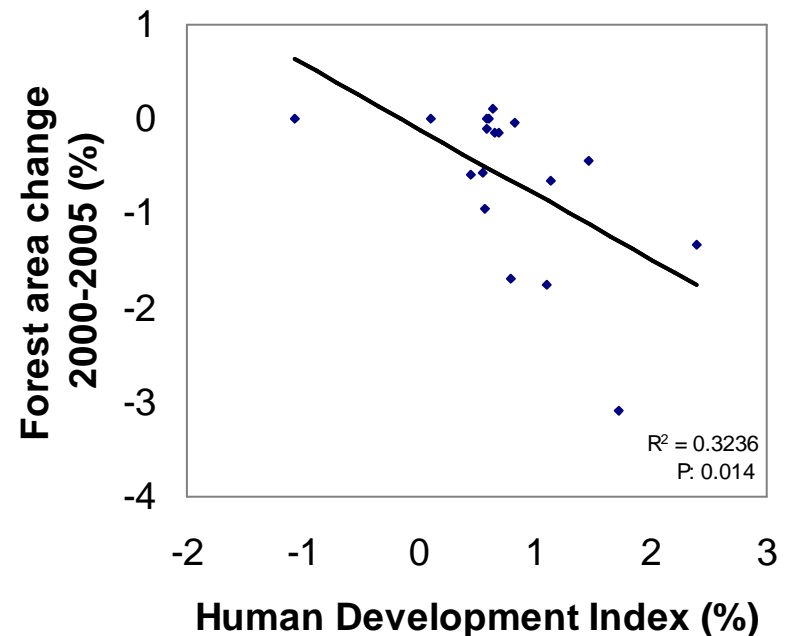
Due to a low level of human development, increase of income in this region may influence to decrease of deforestation

Results: 1st stage (socio-economic)

South and Central America



South and Central America



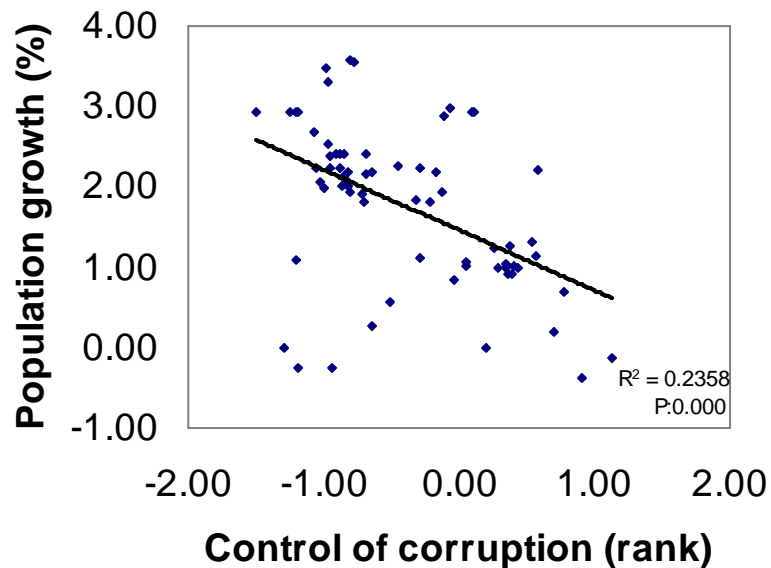
Rising of development may increase demand for agricultural and forest products, hence enhance deforestation

Discussion: 1st stage (socio-economic)

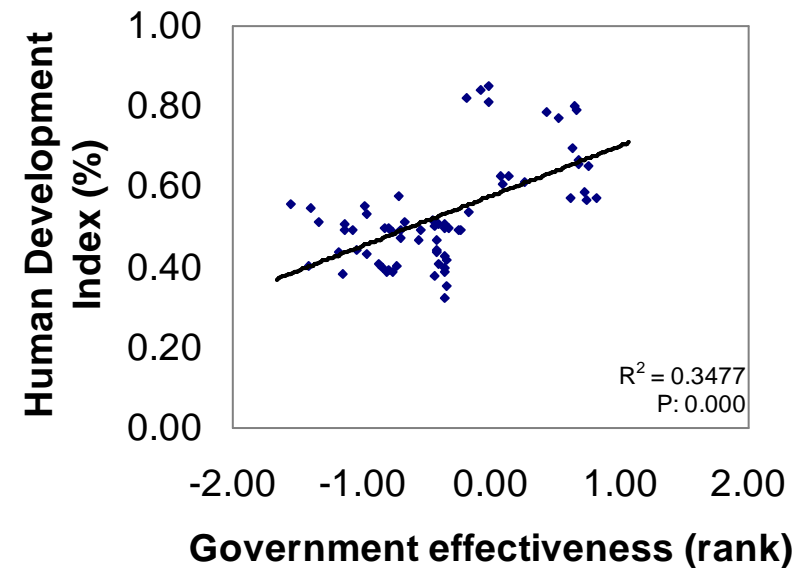
- Increase of income has conflicting effects on forest conversion: it can provide other ways for subsistence and/or rise demand for agricultural and forest products
- Population growth can not be considered the determinant driver of deforestation: low human development and the unfair distribution of income may work as external variables

Results: 2nd stage (governance)

Eastern and Southern Africa

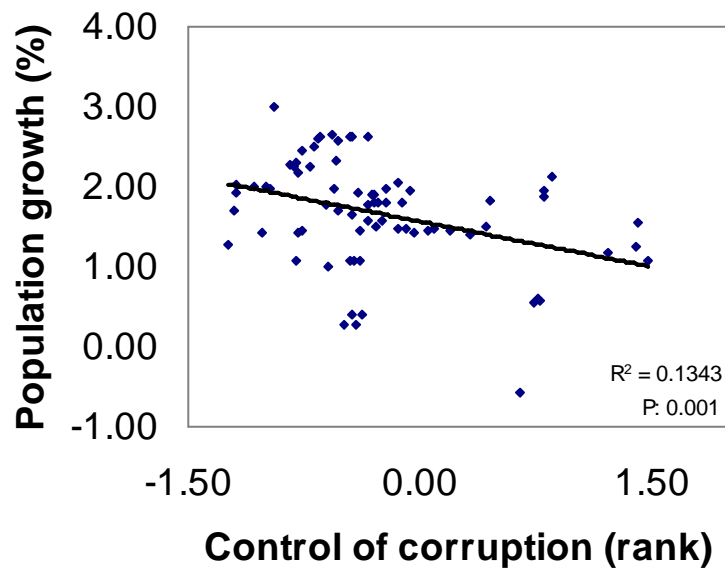


Eastern and Southern Africa

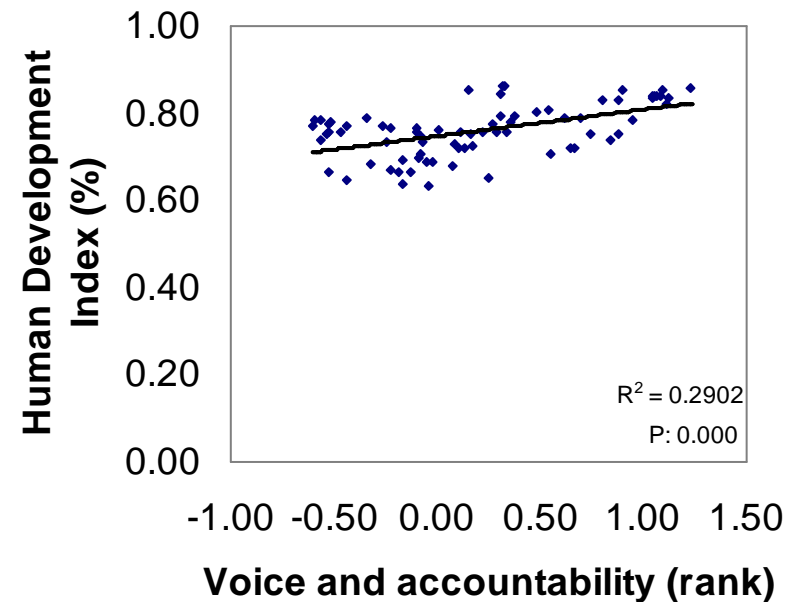


Results: 2nd stage (governance)

South and Central America



South and Central America



Discussion: 2nd stage (governance)

- **Corruption, political instability, government ineffectiveness, lack of democracy, badly designed property rights, and restricted access to market are all factors that hamper economic growth and human development**
- **These factors also make the “long-term investment” to conserve or sustainably use forests more risky and insecure, and hence lead to greater deforestation**

Conclusion

- **Economic development has to be hand in hand with good governance and human development**
- **To be successful and sustainable any mechanism, including RED(D), has to aim, at the same time**

(1) at the decrease of deforestation rate,

AND

(2) the implementation of policies to improve governance and social development

**Good governance and socio-economic
development need not only to be
prescribed;
they must be part of the whole process**

Results: 2nd stage (governance)

Tropical Countries (2000-2005)

