FACTORS OF ENVIRONMENTAL SUSTAINABILITY IN AFRICA, ASIA, AND LATIN AMERICA

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OBJECTIVE

- To find how economic, sociopolitical, and geographic factors affect environmental sustainability in traditionally non-western regions

ENVIRONMENTAL SUSTAINABILITY

- The maintenance of natural capital
- Output Rule
- Input Rule
- Operational Principles

LITERATURE DEALING WITH THE ECONOMIC PERSPECTIVE

- Suggests that higher GDPPC correlates with better environmental sustainability
- Widely accepted and tested theory
- Studies rarely target traditionally non-western regions

LITERATURE DEALING WITH THE SOCIOPOLITICAL PERSPECTIVE

- Suggests that better environmental sustainability is a result of a more active and educated population and government
- Involves many factors
- Based mainly on theory rather than solid statistical evidence

LITERATURE DEALING WITH THE GEOGRAPHICAL PERSPECTIVE

- Suggests that countries will perform similarly to neighboring and high contact countries
- Suggests that the agricultural productivity correlates positively with environmental sustainability
- Sustainability is dependent on the resources available to its population

DEPENDENT VARIABLE

- Environmental Performance Index- EPI
  - Quantitative measurement of how close countries are to environmental policy goals
  - Published in 2010 with data from 2008
  - Uses 25 indicators from 10 policy categories
  - Redone every two years with current data

INDEPENDENT VARIABLES

- Economic Perspective
  - GDP growth as a percent
  - GDPPC
- Sociopolitical Perspective
  - Government effectiveness
  - Literacy rates
  - Voice and accountability
- Geographical Perspective
  - Cereal yield (kg per hectare)

LINEAR REGRESSION ANALYSIS

Independent Variables	Percent of EPI Explained			
	Africa, Asia, and Latin America	*Africa*	*Asia*	*Latin America*
GDP Growth %	-.189**	.042	-.250	-.324*
	(.198)	(.374)	(.279)	(.533)
GDPPC (by thousands)	-.235**	.086	-.350*	-.326
	(.108)	(.703)	(.125)	(.620)
Government Effectiveness	.342**	.417**	.392*	.682**
	(1.98)	(3.281)	(2.753)	(4.685)
Literacy Rates	.278**	.203	.044	.340
	(.051)	(.082)	(.085)	(.223)
Voice and Accountability	.038	-.295*	.190	-.429*
	(1.334)	(2.381)	(2.017)	(.223)
Cereal Yield (kg per hectare)	.226**	.369**	-.019	.272
	(.011)	(.001)	(.001)	(.002)
Constant	43.65**	39.15**	59.27*	33.67*
F	13.79	5.76	2.64	4.22
Adjusted R^2	.443	.497	.186	.585
Number of Cases	116	44	47	25

Note: β of regression reported with standard errors in parentheses.
*p< .1, **p< .05

RESULTS FOR TRADITIONALLY NON-WESTERN REGIONS

- Negative correlation- GDP growth, GDPPC
- Positive correlation- government effectiveness, literacy rates, cereal yield
- No significant correlation- voice and accountability

RESULTS FOR AFRICA

- Government effectiveness and cereal yield both have significantly positive correlations
- Voice and accountability indicates negative correlation though only significant at the .1 level

RESULTS FOR ASIA

- GDPPC suggests a negative correlation though at a .1 significance level
- Government effectiveness indicates a positive correlation at a .1 significance level

RESULTS FOR LATIN AMERICA

- Government effectiveness is positively correlated and is the strongest variable
- GDP growth and voice and accountability are both negatively correlated though only at the .1 significance level

CONCLUSIONS

- This research strongly suggests that a stronger economy does not lead to a higher level of environmental sustainability for these regions
- Education, government effectiveness, and cereal yield are variables to increase
- Each region has its own needs, there is no one answer