

论文

宁夏城市化与经济增长和环境压力互动关系的动态计量分析

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摘要:

文章首先分析了1985—2005年间宁夏城市化、人均GDP以及环境压力的变化趋势。基于此,运用协整检验、向量误差修正模型和Granger因果检验方法,通过分析城市化与人均GDP,以及环境压力变量之间的长短期因果关系及其强度,阐释了城市化与经济增长和环境压力在时序维度上的相互作用机制及其特征,结果表明:宁夏城市化与经济增长之间不存在Granger因果关系,两者之间还未形成良性互动;城市化与环境压力之间存在单向因果关系,城市化对环境压力的增大具有显著的正向效应,而且在短期内降低环境压力的难度较大。

关键词: 城市化 经济增长 环境压力 计量分析 宁夏

Econometric Analysis of the Dynamic Interaction between Urbanization and Economic Growth and Environmental Pressure: The Case of Ningxia

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Abstract:

The paper analyzed the evolutionary trajectory of urbanization ratio and economic growth in Ningxia for the 21 years from 1985-2005. And based on emergy theory,the paper evaluated the environmental pressures which were indicated by Environmental Load Rate(ELR) and Emergy Waste Rate(EWR) and respectively represent environmental pressure related to natural resource input and pollution emission. Secondly,by using the time-serial data of urbanization ratio,and per capital GDP and environmental pressure indicators,we applied the Co-integration Test,Vector Error Correction Model (VECM) and Granger Causality Relationship Test to examine the causal relationship between these variables (urbanization-economic growth and urbanization-environmental pressures). Thirdly,the relative strength of the causality is gauged by Variance Decomposition method which decomposes the total impact of an unanticipated shock to each of the variables beyond the sample period into proportions attributable to shocks in the other variables including its own,in the bivariate system. The results indicate that the urbanization ratio has been increasing constantly,and per capital GDP as well. At the same time,the Environmental pressure has been rising persistently. The findings of econometric analysis indicate that there is no Granger causality between urbanization and economic growth,and the beneficial interaction between them has not formed. For the relationship between urbanization and environmental pressure,temporal causality result was unidirectional causality from urbanization to environmental pressure. But the relative of strength of causality varies from ELR to EWR. Furthermore,it is very difficult to reduce the environmental pressure in the short run for Ningxia.

Keywords: urbanization economic growth environmental pressure econometric analysis Ningxia

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