

## **AN ECONOMETRIC ANALYSIS OF THE VALIDITY OF WAGNER'S LAW AND PUBLIC EXPENDITURE IN RAJASTHAN STATE**

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### **Abstract**

This paper provides new evidence on the validity of Wagner law in Rajasthan, the largest state in India by using provisional data during 1970-2014. The six versions of Wagner law have been employed in order to investigate the long run relationship between the Real State Government Expenditure and the Real Net State Domestic Product in order to explain temporal increases in the ratio of spending on National Income. There are several advantages of using provisional data, firstly one of the suppositions of Wagner's hypothesis is the occurrence of peace and stability, Wagner did not consider the effect of wars on public spending. The deployment of regional data is in accordance to the peace and stability supposition since local governments do not incur defence spending. Secondly, Wagner's hypothesis is premised on a supposition of similar cultural and institutional arrangements. Rajasthan was a state in the process of industrialisation and experienced a positive economic growth with increased government spending because of the rising demand for changes. These changes took place in law and order, in the welfare services. Other important assumptions of the law are the increase in population density and urbanization that led to increased state (public) expenditures, and on economic regulation. In order to investigate the relationship between GDP and government spending (Wagner's law), we used the following econometric techniques: the Dickey and Fuller (1979) and Phillips and Perron (1988), the Quandt and Andrews (1993) and Bai and Perron (1998), two unit root tests which allow structural changes, the Johansen (1988) and Engle-Granger (1987) cointegration approaches and finally the Granger (1969) causality tests. This is the first attempt

of an empirical analysis of the validity of Wagner's law in Rajasthan by using data span which covers a long period and includes six different versions of the law. The long data set ensures the reliability of our results in terms of statistical and economic conclusions. Our research extends the work of previous researchers engaged in this topic which used econometric techniques without examining for single or multiple structural breaks. We deployed the Johansen cointegration technique and the Engle-Granger approach in order to examine if there is a long run relationship between the tested variables in the 5 different versions of the law and we found that the tested variables are cointegrated. Furthermore, we calculated the income elasticities by using both the cointegration approaches. The results of all tested versions are in accordance to the theory and provide support of the validity of Wagner's law. Our empirical results from the Granger Causality and VECM indicate that causality is running from income to spending in all versions, hence provide support of the validity of Wagner's law.

**Keywords:** Wagner's Law, Public Expenditure, Unit root, Cointegration, Causality analysis

**JEL Classification:** H52; C22; O23; E62