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# Public Sector Centralization and Productivity Growth: Reviewing the German Experience

Alexej Behnisch, Thiess Büttner, and Dan Stegarescu

ZEW

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# Nontechnical Summary

Centralization in the public sector is often regarded as an unfavorable and hard-to-avoid tendency in the course of economic development associated with inefficient government expansion. Nevertheless, restraining the federal level comes at a cost, if federal government activities are important for a country's ability to coordinate public sector activities. This seems particularly relevant within the context of economic integration among local and state jurisdictions as, for instance, in the case of European integration. As emphasized in the literature on fiscal federalism, there are certain government functions where the effect of a government's policy decision is not confined to its own jurisdiction. Instead, in presence of high mobility of goods and factors, local policy decisions might exert external effects on other jurisdictions and the efficient supply of public services requires coordination among local and state governments. Possibly, but not necessarily, coordination of policies is achieved by the assignment of responsibilities to a central institution. From this perspective, it seems reasonable to argue that public sector centralization could be an important precondition and a driving force of economic growth. In order to empirically explore the role of (de-)centralization for growth this study focuses on the historical record of Germany from its foundation as a federal country in the 19th century to the present day.

The hypothesis of a stimulating impact of centralization on growth is laid out in a theoretical model emphasizing the role of benefit spillovers from public inputs between lower level governments. It turns out that as compared to a setting without coordination among governments, a central planner's solution would imply an increase in spending on federal public goods which benefits productivity and, under certain conditions, the rate of productivity growth.

To explore the link between economic growth and the vertical structure of the public sector empirically, two related, but distinct, approaches are employed. First, to assess the quantitative development over the long range, the analysis hypothetically assumes that at the time of its foundation, Germany displayed an inefficient, decentral structure of the public sector. With this presumption the analysis asks whether the development is consistent with a beneficial role of centralization. This is done by comparing the development of the public sector in terms of size and vertical structure with the development of productivity growth. A review of the development of the public sector, and, in particular, of the share of federal government expenditures, as an indicator of the share of federal goods supplied, in fact documents a significant secular – although stepwise – process of centralization from Germany's foundation until the 1970's. At the same time a significant increase in total factor productivity growth is indicated from growth accounting. A co-movement of productivity growth and centralization is also suggested by an inspection of specific policy areas, which are commonly regarded as playing a particularly important role for productivity growth. Whereas in the area of science and education the federal expenditure share still remained small, until the 1970's public expenditures on transport and communication have been incurred increasingly by the federal level. Hence, although the descriptive evidence is not revealing the direction of causation, it can be stated that the pattern in the development of the public sector and of productivity is consistent with a stimulating impact of centralization on economic growth.

A second, more analytical approach, then, explores whether in fact the development of the federal system over the course of time has led to an efficient vertical structure with regard to productivity growth. More specifically, it asks whether in modern, post-war Germany a different vertical structure would have contributed to higher growth. The results of the regression analysis confirm a significant positive impact of the federal expenditure share on productivity growth after World War II. This suggests that a higher share of federal expenditures or, respectively, a smaller share of the state level, would have led to even higher rates of productivity growth.

Since fiscal federalism in Germany after World War II is characterized by complex connections between governments at all fiscal tiers, a higher share of federal public goods supplied may not only be brought about by higher federal expenditures but also by means of coordination among jurisdictions. As the analysis nonetheless shows a positive significance of federal government expenditures or, respectively, a negative significance of state government expenditures, it, therefore, indicates that the coordination of policies among state level governments as part of the cooperative federalism is not efficient with regard to productivity growth. Indeed, the negative impact found for the state level expenditures might be interpreted as an indication that the role of the state level in the German system of fiscal federalism is inefficient.

Of course, by focusing on efficiency with regard to productivity the current study has excluded many other possible government objectives. If state governments as compared to the federal government are more involved with the provision of public services other than public inputs, the current vertical division of responsibilities might well be efficient with respect to other objectives. However, given frequent criticism about disincentives of the German system of fiscal federalism, it seems nevertheless important to state that, whatever the objectives are, according to the empirical results the current structure of the public sector entails cost in the sense of foregone productivity growth.

# Public Sector Centralization and Productivity Growth: Reviewing the German Experience[†]

**Alexej Behnisch[‡], Thiess Buettner[§], Dan Stegarescu[¶]**

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## Abstract

The paper examines the role of the vertical structure of the public sector for economic growth in Germany in a long–term perspective. A theoretical model shows that, due to spillover effects of public service provision across lower level governments, federal government activities could have substantially contributed to productivity growth. A review of the German experience starting in the last quarter of the 19th century shows that the overall development is consistent with a stimulating role of the federal government in general and in specific areas like, for instance, transport and communication. However, a further empirical analysis of the period after World War II raises doubts about the efficiency of the vertical structure of the public sector with regard to productivity growth, since the results indicate that a smaller budget share of the state level would have benefited growth.

**Keywords** : Public sector centralization, public inputs, economic growth, fiscal federalism

**JEL Classification** : H72, H77, O11

**Corresponding author:**
Thiess Buettner
Zentrum für Europäische Wirtschaftsforschung (ZEW)
L 7,1
D-68161 Mannheim
Phone: +49/621/1235-183
Fax: +49/621/1235-223
E-mail:buettner@zew.de

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[‡]London School of Economics and Political Science (LSE)

[§]Zentrum für Europäische Wirtschaftsforschung (ZEW) and Universität Mannheim

[¶]Zentrum für Europäische Wirtschaftsforschung (ZEW)