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# Public spending structure, minimal state and economic growth in France (1870–2010)

François Facchini <sup>a,b</sup>, Elena Seghezza <sup>c,\*</sup>

- a University of Paris 1. France
- <sup>b</sup> Centre d'Economie de la Sorbonne, Paris 1, France
- <sup>c</sup> University of Genoa, Genoa, Italy

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#### ABSTRACT

There is now a vast literature on the effects of the various functional components of public spending on growth. This contribution focuses on the effects of the composition of public spending on growth with reference to France for the period 1870–2010. Using a new database we show that the only functional component of expenditure that clearly contributes to the growth of French output is the expenditure which is aimed at the protection of property rights. Public interventions in support of the economy, on the other hand, have no impact on growth. In the area of social spending, only health expenditure contributes to output growth. In the case of France the empirical evidence therefore seems to confirm not only the crucial importance of the protection of property rights high-lighted by neo-institutional theory, but also Smith's minimal state hypothesis: the restriction of the size of the state and the delimitation to its essential functions tends to favour output growth.

#### 1. Introduction

The literature on the effects of public spending and its components on growth is now extensive. Its most recent developments focus on the implications of the individual components of public spending on long-run growth. This research direction has been driven mostly by the endogenous growth hypothesis, according to which public spending, if it is "productive", has positive repercussions on growth in as much as it positively influences total factor productivity (TFP), in other words the portion of output not explained by the amount of input deployed in production. <sup>1</sup> In the context of "productive" spending the function of stimulating growth derives above all from the components of expenditure, such as education, that encourage innovation. <sup>2</sup>

The main limitation of the endogenous growth hypothesis is that it fails to take into account transaction costs. In particular, the incentive to innovate can only exist if there is an institutional framework designed to protect property rights. This is in line with the neo-institutionalist hypothesis that growth depends crucially on the protection of property rights (Smith, 1776; North, 1990; Acemoglu et al., 2005). In this approach capital stock determines economic growth in the long run but is itself determined by the ability of the state to reduce all risk of

expropriation. There are at least two different ways in which adequate protection of property rights contributes to higher growth. On the one hand, it leads to an increase in expected profits and hence in the demand for investment goods, while on the other hand, it acts as a disincentive to individuals to devote themselves to non-productive spending.

This paper seeks initially to demonstrate empirically that the spending component assigned to the protection of property rights positively influences growth. The positive repercussions of this component on growth in part offset the negative components of overall spending. As shown by both the Solow hypothesis and the endogenous growth hypothesis, and as confirmed by numerous empirical contributions, as recourse to taxes has distortionary effects on spending, overall spending leads to a fall in investments and growth.

The second step of this contribution is to verify the plausibility of the theory of the minimal state, namely whether growth would benefit from restricting the size of the state and from the state focusing on performing its minimal functions, which consist essentially in the protection of property rights. This second point would be confirmed if the empirical analysis showed that the functional components of public expenditure other than those that serve the protection of property rights would have only a weak impact on growth.

E-mail addresses: francois.facchini@univ-paris1.fr (F. Facchini), seghezza@unige.it (E. Seghezza).

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<sup>\*</sup> Corresponding author.

<sup>&</sup>lt;sup>1</sup> See, among others, Barro (1990).

<sup>&</sup>lt;sup>2</sup> See Aghion and Howitt (1992).

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These hypotheses are verified with reference to France for the period 1870–2010. For this purpose we have constructed a uniform dataset for this country using several sources. The results of the empirical analysis, especially if they meet expectations, should offer some policy indications.

The paper is structured as follows. Section 2 review the empirical literature on the composition of public spending and growth with particular attention to the role of property right protection. Section 3 presents the data and the method. In Section 4 the empirical test is outlined and explained. Section 5 carries out some robustness checks. Based on the results of the test, section 6 comments on the public finance strategy of future French governments.

# 2. Composition of public spending and growth: the role of protecting property rights

There are two conflicting views on the relationship between public spending and growth. According to the Keynesian view, also in its more recent formulation, higher levels of public spending tend to enhance economic growth. Since it leads to an increase in domestic demand for goods and services, it stimulates investments and in this way helps boost output and employment.

Set against this is the neoclassical view according to which public spending has a negative impact on growth both because it crowds out private investment by leading to an increase in domestic interest rates, and because it leads to an increase in taxes with distortionary effects on the allocation of resources.<sup>4</sup>

The empirical literature on the connection between public spending and growth, both in more distant,  $^5$  and more recent contributions,  $^6$  has come to the basically consensus view that, at least in advanced countries, an increase in spending and government size reflect negatively on growth.  $^7$ 

In recent times, the emergence of the hypothesis of endogenous growth has led academics to focus on the repercussions on growth of the individual components of public spending. According to this hypothesis, as is known, i) the stock of public capital may be considered as a third input in the production function, and ii) it may have an influence on total factor productivity because it finances pure, non-rival public goods, able to generate positive externalities on the production. Conversely, social transfers (social security, economic subsidy, pensions, etc.) are unproductive, and influence growth negatively (Aschauer, 1989; Barro, 1990, 1991). Government consumption has no direct effect on private productivity but tends rather to reduce private saving. Thus, in endogenous growth models the distinction between productive and unproductive government expenditure is crucial. In this perspective Barro (1990) shows that "productive expenditure fosters growth, while Devarajan et al. (1996) reaches the opposite conclusion. However, this last contribution refers to 42 developing countries, that is countries with different characteristics than advanced ones.

Within the Keynesian literature the distinction between productive and unproductive spending is less usual. Reference is made to it in some neo-Kaleckian contributions. These contributions come to the conclusion that, while unproductive spending, for example, increases in public salaries or pensions, definitely have positive effects on growth, an increase in public capital expenditure has uncertain effects.

This conclusion, however, is regarded as worthy of criticism since the neo-Kaleckian hypothesis is based on the assumption that the rate of capacity utilization is variable. This assumption implies that the equilibrium rate of utilization may diverge from the target rate of the firm. Thus, neo-Kaleckian models are said to suffer from so-called "Harrodian instability".  $^8$ 

The endogenous growth hypothesis, according to which certain types of public capital expenditure have positive effects on growth, has been confirmed in various empirical papers. Various scholars have tried to empirically analyze the growth effects of expenditures focusing on the functional categories of spending (e.g. expenditures for military purposes, education, health, justice, infrastructure, etc.).

Health and education support the development of human capital and individuals' productivity. Given that better health appears as a significant determinant of a country's economic growth (Bloom et al., 2004), health expenditures are supposed to be growth-inducing. A positive impact of health expenditures on growth is found in the empirical analyses provided by Gyimah-Brempong and Wilson (2004), who focus on north African countries, and in those by Rivera and Currais (1999), and Beraldo et al. (2005), who focus on OECD countries. Romer (1990) and, more recently, Blankenau and Simpson (2004), emphasize the effects of education on growth. In some papers, then, also the interdependence between the various components is taken into account. For example, good health levels improve children's ability to attend school and thus the productivity of spending on education. 10

Remaining within the context of endogenous growth, a large body of research has explored the possible relationship between infrastructure spending and total factor productivity (and resulting economic growth). Seminal works in this field are those by Aschauer (1989), showing that private and public capital are complementary, by Munnell (1990), showing that labour and public capital are also complementary, and by Garcia-Mila and McGuire (1992), who demonstrate that road facilities contribute to economic growth. Their argument is that an increase in infrastructure spending has positive effects on the productivity of both private capital and labour, as well as generating growth of output and income. Easterly and Levine (2003) support the thesis of a positive impact while no support is given in, among others, Bose et al. (2007). Canning and Pedroni (1999) analyze the effects of infrastructure spending on growth and find an inverted U-shaped relationship with some countries on either side of the growth-maximizing level.

Despite numerous empirical papers supporting it, as shown by Aghion and Howitt (1995; p. 117) the fundamental limitation "... of endogenous growth theory ... is its lack of attention to institutions and transaction costs". Indeed, in the market equilibrium model, entrepreneurs have little incentive to invent because there is a free-rider problem. An entrepreneur invents a technology which reduces the production cost of a good. His technology can be used by other entrepreneurs. Nonetheless, sharing his knowledge is not in the interest of the innovator because technology will increase competition and production and will eventually bring prices down. His innovation is good for society and the consumer but bad for him. The public good nature of innovation explains the property solution or the enforcement of intellectual property rights.

The protection of property rights is important not only with regard to the protection of intellectual property, but also in a wider context because it reduces transaction costs<sup>11</sup> of exchanges. In this way it enables a more efficient allocation of resources.

Although classical economics, from Smith to Marx himself, attributed crucial importance to the protection of property rights, only recently

 $<sup>^{3}</sup>$  See among others Rowthorn (1982), Dutt (1990) and Marglin and Bhaduri (1990).

<sup>&</sup>lt;sup>4</sup> A third view with respect to the main views mentioned can be found in contributions according to which the expansion of public spending has a positive influence on growth up to a certain threshold, but then becomes negative beyond that threshold. See Barro (1990) and Armey (1995).

<sup>&</sup>lt;sup>5</sup> See, among others, Cameron (1982), Landau (1983), Marlow (1986).

<sup>&</sup>lt;sup>6</sup> See, among others, Afonso and Furceri (2010), Romero-Avila (2008) and Folster and Henrekson (2001). A survey of the literature can be found in Bergh and Henrekson (2011).

<sup>&</sup>lt;sup>7</sup> See Bergh and Henrekson (2011) for an overview.

<sup>&</sup>lt;sup>8</sup> See Skott (2012) and Hein (2016).

<sup>&</sup>lt;sup>9</sup> For a survey, see Zagler and Durnecker (2003).

<sup>&</sup>lt;sup>10</sup> See Agenor and Blanca (2006).

<sup>&</sup>lt;sup>11</sup> Very rightly Dixit (1998) has made a distinction between transaction cost economics (TCE) and transaction cost politics (TCP). TCE involves i.) the costs of being informed about a potential exchange (information cost), plus ii.) the costs of moving from a seller to a buyer (transport cost) and iii.) the costs of legal protection. TCP, on the other hand, are the costs of the definition and enforcement of the political contract or the costs of the structure of governance.

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