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China's Booming Economy – Does the Federal Order Foster Growth and Employment?

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Abstract:

China's economic growth is astonishing and leads to expectations that China might become the economic giant of the future. Possibly, one reason behind the Chinese boom might be relevant for Germany as well. The federal order of a nation state may account, at least to a certain extent, for its economic growth. While the importance of economies of scale and external effects are often stated and mentioned as justifying reason for centralisation and large jurisdictions, the advantages of decentralisation and jurisdictional competition are hardly recognised. It is the main objective of this paper to assess the link between federalism and economic growth. In doing so, we will elaborate on the main growth effects of federal orders shaped in a particular manner, discuss the theoretical approach by explaining the growth impact of a market-preserving federalism in detail and look at the practise of market-preserving federalism in several states, for example in China and Germany. Subsequently, we present empirical evidence showing the correlation between federalism and economic growth, again concentrating on China and Germany.

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Content:

1. Introduction

China's economic growth is astonishing and leads to expectations that China might become the economic giant of the future. Possibly, one reason behind the Chinese boom might be relevant for Germany as well. The federal order of a nation state may account, at least to a certain extent, for its economic growth.

While the importance of economies of scale and external effects are often stated and mentioned as justifying reason for centralisation and large jurisdictions, the advantages of decentralisation and jurisdictional competition are hardly recognised. This also holds true for the growth potential of federal orders, though the experiences of the last 400 years show the possible positive economic effects of a certain kind of federalism. For most of the time, states subject to competitive federalism were the wealthiest ones. By the beginning of this 400-year-period, the Netherlands was in the leading position, then Great Britain, de facto federal at that time, set the pace, and finally, the USA and Switzerland became the richest countries.

It is the main objective of this paper to assess the link between federalism and economic growth. In doing so, we will elaborate on the main growth effects of federal orders shaped in a particular manner (chapter 2). Following this, we discuss the theoretical approach by explaining the growth impact of a market-preserving federalism in detail (chapter 3). Afterwards, we look at the practise of market-preserving federalism in several states, for example in China and Germany (chapter 4). Subsequently, we present empirical evidence showing the correlation between federalism and economic growth, again concentrating on China and Germany and showing the writer's own econometric results (chapter 5). Finally, this article concludes with a summary and some political suggestions, referring also to employment perspectives. (chapter 6).

2. Federalism as a Growth Machine

Decentralised federal orders may accelerate economic growth as a result of several effects. For all of them, institutional competition plays a key role.[1] When important competences are placed on a decentralised territorial level and the jurisdictions are small, then the institutional competition is strong and policies are even more important for the success of a jurisdiction. In

[1] See Hayek (1939) for early thoughts about the correlation between competitive federalism and economic growth.

order to perform well in institutional competition, mobile factors of production (such as capital and highly qualified workers) have to be attracted by a proper political menu which includes regulation and the provision of public goods.[2] Institutional competition is important in motivating politicians and bureaucrats, as it is assumed that they only partly pursue the interests of the citizens. Instead, they also seek for political rents. [3]

In the private sector, competition is regarded as a means to initiate discipline among the economic actors. Competition forces managers as agents to bear the interests of companies as their principals in mind.[4] In a similar way, this may also apply to jurisdictions and political actors:[5] When there is institutional competition among them, politicians as agents of their voters face a stronger pressure to pursue an efficient policy. If they are not successful, politicians are confronted by the threat of not gaining reelection and of losing the mobile factors of production.

Voters and mobile factors of production have the opportunity of comparing between the conditions in different jurisdictions. For investors, it is decisive where they can earn the highest net return on capital, which is influenced by the political menu offered by the various jurisdictions. The more competences being assigned to a decentral level, the higher the number of parameters that are subject to this "beauty contest" between the regions. Political agents can be punished for misbehaviour via the exit-option, if citizens and investors have the choice of other places with other political menus to turn to.

Oates and Schwab (1988, 1991, and 1996) developed a whole class of models showing the efficiency enhancing impact of institutional competition. These models draw an analogy between competitive federalism and perfect competition on private markets. In these models, governments compete for the mobile production factor capital, which serves as an employer and as a tax basis. Because of institutional competition, political decision makers go after an efficient volume of public output and competitive tax rates. In these models, the invisible hand of the market works in a similar fashion as in the private sector and directs the decisions in an efficient way. Admittedly, these models are subject to restrictive assumptions.

[2] See Weingast (1995), p. 5.
[3] Buchanan has shown, that it is problematic to assume a benevolent government.
[4] See Holmstrom and Tirole (1989).
[5] Several models show, that institutional competition may limit inefficiencies: See Epple and Zelenitz (1981); Courant and Rubinfeld (1981); Inman and Rubinfeld (1979).

In a federal order with decentral structures, the voice option can also be deployed in a more target-oriented way:[6] The achievements made by politicians can be evaluated by comparing the performances of different regions.[7] When they do not have this possibility of comparison, citizens would have to assess political input rather than political output before voting or raising their voice. Because politicians are better informed than citizens about the circumstances of their politics, political actors are in this case able to generate political rents instead of only pursuing the citizens' interests. It is difficult for citizens to realise this, because they are not as well-informed as political actors.

The effects of the PISA (Programme for International Student Assessment)-study on German school policy give an impression of the positive effects associated with federal competition between different regions. Thanks to this OECD study, different approaches to school policy can be compared not just in terms of input, but also regarding political output, as the performance of the pupils differs enormously between the German federal states (Bundeslaender). On average, pupils in the South-West (Bavaria, Baden-Wuerttemberg) and in the South-East (Saxony, Thuringia) were much more successful than in the remaining federal states. As the PISA-study makes the political output of school policy transparent, those federal states that perform badly are forced to compare themselves with the more successful Bundeslaender. Since the PISA-"shock" hit the country, centralised exams and grades for behaviour (as features of the more successful federal states) are being introduced throughout the German Bundeslaender.

In order to conclude: Institutional competition provides an opportunity for comparisons to be made between political outcome in the own region with the outcomes in other regions. By doing so, institutional competition strengthens the voice option of voters. In addition, institutional competition gives investors and citizens the opportunity to escape from an institutional framework and policies that are not favourable. As politicians and bureaucrats can be sanctioned more easily via exit and voice option, they are put under greater pressure to opt for an efficient policy and renounce political rents instead.[8]

Hence, in a federal order with institutional competition, the federal states are not just being handed over additional competences, they also recieve the incentives to use these competences in a manner that makes their region as attractive as possible. In theory, this

[6] See Berthold (1998), p. 349.
[7] See Besley and Case (1995).
[8] See Weingast (1995), p. 3: Federalism limits public interventions.
See Qian and Weingast (1997), pp. 3-5, p. 9.

mechanism leads to a higher efficiency level and boosts economic growth. A federal order with institutional competition motivates political agents not to impair the market mechanism (federalism works market preserving), to offer public goods as efficiently and effectively as possible, to develop innovative policies and to use their political scope in order to respect regional characteristics.

In this article, we focus on the ability of a market-preserving federalism to prevent that the market mechanism is being impaired. After approaching this issue from a theoretical point of view, we will have a look at the experiences of different countries, including China and Germany. Finally, we will give an overview of the empirical evidence concerning the relation between federalism and economic growth. All stated effects, not only the market preserving function of federalism, may lead to higher growth rates. In particular, we focus on our own empirical study for the German Bundeslaender.

3. Market-Preserving Federalism in Theory

Protected property rights are important for the economic success of a region as they keep the incentives to invest, to accumulate capital and thereby boost economic activity. Therefore, economic growth and wealth are being fostered.[9] The requisite to protect property rights sounds easier than it is in a practical sense. Weingast sees it as a principle dilemma of economic systems that "a government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens".[10]

In theory, different mechanisms exist to limit a state's interventions into the sphere of private property and the interaction between its citizens. A democratic constitution, horizontal separation of powers or laws altogether are imperfect to reach this goal, not only because of political defects and imperfections of the electoral process.[11] Hence, something else is needed to preserve the market mechanism. Weingast respectively Qian and Weingast see competitive federalism as another opportunity to limit the interventions of the public and hereby foster the

[9] See Landes (1999), p. 47 for the relevance of this condition: The dominating position of the Greeks and the Romans in the antiquity may partially be due to the fact that property rights were clearly defined and respected. This motivated the own initiative of the citizens and distinguished ancient Rome and Greece from empires farther in the East, such as Persia.
[10] See Weingast (1995), p. 1.
[11] See Weingast (1995), p. 2.

efficiency of an economic system. With their arguments, Qian and Weingast position themselves in the tradition of Hayek.[12]

It is to be added that a competitive federal order does not only prevent politicians by law from interventions, but in an actual, real way, giving them the incentives to abstain from public interventions. Laws cannot be as perfect as to regulate all possible situations. Besides, laws are subject to the imperfections of the political processes. As laws still have to leave freedom of action to political actors, politicians and bureaucrats can use their information advantage (compared to citizens) in order to generate political rents.[13] Hence, a political framework that motivates politicians to pursue efficient and effective policies because of their own interests is superior. The institutional framework has to be shaped in a manner that a real market economy constitutes a stable solution.[14]

In a system of market-preserving federalism, it stands in the own interests of political actors to secure property rights and the market mechanism, because inadequate market interventions are punished as mobile resources move away.[15] At best, in a federal system that is market preserving, only those economic restrictions survive which the voters are willing to pay for. [16] Without a federal order limiting restrictions in this way, it has to be feared that politicians seek political rents and, in order to achieve them, impair the competitive order. Even if politicians were benevolent, they would face the pressure of interest groups to correct market results. Hence, markets would be regulated and economic success charged too heavily.

In order to hold a dynamic economic development, the market mechanism should face as little hindrance as possible. In particular, incentives have to remain intact and the mechanism of sanctions needs to work by rewarding economic success and penalising unsuccessful economic actors. In order to do so, the state must not take away too much of the successfuls' gains. Even the possibility that property or gains might one day be confiscated reduces the readiness to invest and search for innovations. Besides, the burden of economic failure must

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[12] See Weingast (1995); Qian and Weingast (1997); Hayek (1960), chap. 12.
See McKinnon and Nechyba (1997) for further reasoning concerning federal orders with institutional competition.
[13] See Schmidt (1996).
[14] See Weingast (1995), p. 2; Olson (1990).
[15] See Qian and Weingast (1997), pp. 3-5, p. 9.
See also Landes (1999), chapter 3, especially p. 51: Europe's special position as continent that was dominating for centuries after the downfall of the Roman empire is also caused by the institutional competition for mobile factors of production such as workers. Also in European states, there actually was despotism, but federalism limited its powers: Europe was highly fragmented, and within the particular states, the power was split up between central mastery (often the crown) and regional powers. This territorial fragmentation made the sovereigns treat their subjects in an acceptable manner, as otherwise, they might move on to the land of another sovereign.

not be lifted away from those who fail, at least not by a large amount. The more the public is liable for the mistakes of private actors, the less important is it for private actors to avoid mistakes and dissipation. [17]

In order to have a federal order that can prevent these mistakes and fulfil a market preserving function, several conditions have to be met. The label “federal” may be misleading, because some states call themselves “federal”, though they are not. In the case of other countries, it is just the opposite, for example with China.[18] According to Riker, a political system is federal, if it meets two conditions: Firstly, the state has to be divided up into several levels in such a way, that at least two levels govern the same country and the same people. Secondly, the autonomy of each level needs to be institutionalised in a manner that no level can annul the competences of the other(s).[19]

Market preserving federal orders in the sense Weingast defines them form a subset of all federal orders, as they have to meet three additional characteristics. For the case that these additional conditions are fulfilled, Weingast predicts a functioning competitive order and higher growth rates. These five conditions do not only constitute a market-preserving federalism but also a competitive federalism and hence an intensive locational competition between the federal bodies. Weingast’s additional conditions are:[20] Thirdly, lower governments have the competences for fundamental economic regulations. Fourthly, a single market is assured, so that no trade barriers can be established. Fifthly, the lower governments face a hard budget constraint. This is the case, if it is not possible for their jurisdictions to print money, to indebt themselves heavily and if a bail-out on the expenses of other jurisdictions is unlikely to happen. These five conditions provide for intensive locational competition and constitute a market-preserving federalism with a functioning competitive order. According to Weingast, this is the ground for higher economic growth rates.[21]

Riker’s first condition (several levels of government) is of a definitional nature.[22] The second one (independence of the several governmental levels) characterises a stable federal order, which cannot be eliminated by one of the levels. Riker’s two conditions do not say anything about the allocation of competences concerning economic policy. In order to have a living federalism with locational competition, it is important that lower governments possess

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[16] See Qian and Weingast (1997), p. 10.
[17] See Qian and Weingast (1997), p. 2f; Weingast (1995), p. 2.
[18] See Williamson (1994).
[19] See Riker (1964), p. 11 for basic characteristics of federal orders.
[20] See Weingast (1995), p. 4.
[21] See Weingast (1995), p. 4 for further conditions.

substantial competences and that the central government has only limited scope for economic policy at its disposal (third condition). Eventually, it is all about economic policy, if institutional competition is to deliver its market preserving effect. The hard budget constraint (fifth condition) is necessary for forcing governments to run a sustainable fiscal policy. If there was a bail-out for highly indebted jurisdictions, then governments would not take the fiscal consequences of their decisions into account as seriously as necessary.[23] This would be of particular concern, if lower governments had important competences. Besides, a soft budget constraint tempts political actors to subsidise companies that are non-competitive.[24] In this way, a soft budget constraint may impair the market mechanism.

McKinnon (1997) examined the significance of Weingast's last condition, the hard budget constraint. According to him, it is crucial to segregate the responsibilities for monetary and fiscal policy. An independent monetary policy is important in order to strengthen the budget constraint and prevent governments from financing deficits by monetised debt.

The individual US States can hardly rely on a bail-out like the German Bundeslaender. Besides, they have no access to the financial resources of the central bank. Hence, the US States face a hard budget constraint. As a bail-out is unlikely to happen, ratings and interest rates differ much more in accordance with the financial strength than is the case with the German Bundeslaender.[25] When US States impose on themselves tougher deficit rules, they can benefit by paying lower interest rates.[26] Due to these capital market mechanisms and interest rate differentials, the fiscal authorities of the US States are obliged to pursue a responsible fiscal policy.[27] As financial resources are limited due to budget constraints, US States have less scope for subsidising companies. Therefore, the market mechanism remains unspoiled and resources are being directed by market powers into those enterprises that are highly competitive.[28]

As the federal government of the USA has direct access to the central bank whereas the US States have not, it is of specific importance in the USA that many competences are assigned to decentralised jurisdictions as they face a harder budget constraint.[29] In Canada and Germany however, the budget constraint for lower governments is softer because there is a

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[22] See Weingast (1995), pp. 3-5 for the analysis of the five conditions.
[23] See Weingast (1995), p. 4; McKinnon (1997); Wildasin (1997) for the relevance of a hard budget constraint.
[24] See Berthold, Fricke and Kullas (2005), p. 109.
[25] See Wildasin (1998) for the importance of a no-bail-out-rule, which insures fiscal discipline.
[26] See Poterba and Rueben (1997).
[27] See McKinnon (1997) for this paragraph.
[28] See Qian and Weingast (1997), p. 7.
[29] See McKinnon (1997).

voluminous financial equalisation and in Germany, there is a considerable chance for a bail-out to occur.[30]

When Riker's and Weingast's five conditions are fulfilled, no government has got monopoly power concerning economic policy. Governments of jurisdictions have only limited facilities of restraining economic activity, as mobile factors of production would simply move on to jurisdictions in which these constraints do not exist. This imposes costs on the jurisdictions which lose factors of production and invokes discipline concerning economic policy.[31] Hence, federalism limits economic rent-seeking and possibilities for logrolling.[32]

4. Market-Preserving Federalism in Practise

4.1 England versus France

Weingast regards market-preserving federalism as the key to England's industrial revolution in the 18th century, to the USA's way to the economic top of the countries in the 19th century and currently to China's booming economy.[33] In the 18th century, England was federal, even though it did not call itself federal.[34] National as well as local governments had their own, undivided competences. The national government only had limited power to regulate the economy in the particular regions.

In nearly all commercial centres, the production process was controlled by local regulations. It was up to local authorities, whether the regulations were more or less restrictive. As economic historians emphasize, it was crucial for the industrial revolution that regulations were not too strict in certain regions.[35] Consequently, the industrial revolution initially took place in the North, where the regulations were less severe, and not in the established economic centres of the South.[36] As other British regions wanted to get rid of their competitive disadvantages compared to the North, they deregulated as well. The mechanisms

[30] See Qian and Weingast (1997), p. 7.
[31] The higher the mobility, the higher are also the economic costs of inefficient restrictions at the expenses of mobile factors.
[32] See Weingast (1995), pp. 5f.
[33] See Weingast (1995), pp. 6f, p. 18.
[34] See Weingast (1995), pp. 6-8, describing the industrial revolution in England and its causes.
[35] See Mokyr (1988).
[36] See Ashton (1955).

of institutional competition as competition for mobile factors of production described above fuelled deregulation throughout the country.[37]

In contrast to England, France was heavily regulated in the 18th century, as interest groups like the guilds managed to use the central government for their aim of having an identical level of high regulations in the whole country. Because the French rural areas were also highly regulated, the established economic powers in France did not face any unpleasant competition.[38] Due to this monopoly of regulatory power, the industrial revolution in France started several decades later than in England.

4.2 USA

The USA is another prominent example that market-preserving federalism limits governmental interference and helps economic activity to develop freely.[39] The American constitution gives and gave a wide scope for individual economic policy to the states.[40] Hence, it is often impossible for interest groups to use the federal government in order to implement certain regulations which protect their particular interests. As the US States competed and compete against each other, they were also not able to have their economy highly regulated, as this would force the mobile factors of production out of that state. These market preserving mechanisms made the USA develop into the world's largest single market with legally protected property rights and a low regulation level. Due to this favourable institutional framework, each of the US States could specialize according to its comparative advantages and trade became increasingly important. It was the decisive foundation for America's economic boom in the 19th century that the American constitution limited the scope of federal and state governments to regulate the economy. This lead the USA to the economic top of the world.

As the federal order can be changed or abolished, stability of federalism is an important issue. The population's acceptance of the federal order is crucial. Indeed, the American population accepted federalism during the 19th century. Most Americans were deeply suspicious about the activities of the federal government. They were afraid that Washington could introduce legislation, which fostered the other region (the Northern respectively the Southern states) and

[37] See Weingast (1995), p. 8.
[38] See Root (1994).
[39] See Weingast (1995), pp. 8f and Weingast (1993) showing the growth effects of federalism in the USA.
[40] See Aranson (1991).

discriminate against the own one. In order to prevent this, the citizens of both regions, the North and the South, wanted to see the competences of the federal government restricted.[41]

4.3 China versus States in Eastern Europe

Market-preserving federalism boosts China's economy as well. The Chinese central government reformed the administration and, by doing so, limited its own power. These reforms were designed in such a way, that met Riker's and Weingast's five conditions for market-preserving federalism. Particularly decisive was the willingness of the central government to renounce the control over local economic policy. Many local authorities used their scope for prudent economic reforms and deregulated. It is these regions with a fairly free economy that benefit from the highest growth rates.[42]

This makes China an ideal example for the advantages of federalism. China's economic reforms, carried out to a great extent by local authorities and provinces, specifically focussed on economic freedom, more than in Eastern Europe and the states of the former Soviet Union, where reforms were usually administered by the central governments. The central governments in the states of the former Soviet Union kept considerable scope for discretionary interference. This made business and the influence of the administration on it quite unpredictable and hindered economic activity as well as investments. Consequently, growth rates are considerably lower than in China.[43]

4.4 Germany

In contrast to China, to the USA and Britain in the 18th century, Germany's federal order provides an example for a cooperative rather than a competitive and market-preserving federalism.[44] There's virtually no institutional competition concerning the regulation of goods and factor markets, especially concerning the labour market, the social systems and the constitutional rules governing public finances. The institutional framework in these fields is mainly set by the federal government. Hence, inefficient regulations are not placed under

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[41] See Weingast (1995), pp. 18f.
[42] See Weingast (1995), pp. 28f for this paragraph.
[43] See Qian and Weingast (1997), p. 6; Weingast (1995), p. 27.
[44] See Berthold and Fricke (2004), who analyse the intensity of locational competition in Germany. See Berthold (1998), pp. 345-356 for the following description of federalism in Germany and the negative effects of the German cooperative federalism.

pressure, because there is no institutional competition between the German Bundeslaender and factors of production cannot move on to jurisdictions with a more favourable framework. Thus, corporatistic solutions can survive and can be used to shift burdens onto the shoulders of others. Responsibilities are diminished by joint taxes, mixed financings and joint schemes.

On the labour markets, there is no institutional competition that forces the institutional framework and the collective labour agreements to match the specific regional conditions and to take a free-market approach. Instead, wage bargaining is *fairly* centralised, as trade unions and associations coordinate their activities all over Germany. This is induced by a high level of interdependence and important competences of the federal level. This institutional arrangement means that trade unions and other interest groups, which are coordinated at the federal level, encounter the legislative at the federal level, which holds the most important competences. Due to this setting, it is possible to use the centrally organised counterpart (government and as its counterpart trade unions and associations) for own interests and in order to pass on burdens onto other shoulders, as the corresponding other side is not affected by institutional competition, which would require efficient solutions. This institutional arrangement made it possible for trade unions in the 60s and early 70s to enforce a very high level of social welfare, ignoring its costs in terms of efficiency. During this period, there was an expansion of the systems of social security (unemployment insurance, health insurance and pension schemes). Labour market interference motivated by social goals was intensified (job protection, redundancy programmes, employee participation). Hereby, the trade unions managed to strengthen their position.

Trade unions and associations use the social welfare system to carry the burdens of changes in social structures. Especially the unemployment insurance system, but also other systems of social security which have to be funded have to pay for labour agreements that harm the employment level. Interest groups that wish to be protected against the hardships of institutional competition have the federal legislator as an appropriate addressee who may introduce regulations valid for the whole federal republic, thus eliminating institutional competition and protecting their own interests.[45] As there is no exit option for factors of production within Germany, more political interventions, that impair the market mechanism, are possible. Subsidies are paid to maintain employment in out-dated sectors of the economy. Industries with a promising future are often being supported as part of regional and structural politics, using financial aid and tax reliefs. Also certain German regions may use the federal legislator as the appropriate addressee for having their wishes fulfilled at the cost of others.

These public activities are expensive and the tax burden rises. Such policies diminish the market mechanism and the mechanism of sanctions. Economic failure is being compensated by the public and the incentives for efficient economic behaviour are being reduced, as economic gains are confiscated by high tax rates. This results in harm to the economic growth. All in all, the German cooperative federalism is hardly market preserving in Weingast's sense. As politicians and bureaucrats are not disciplined by institutional competition, the German federal order does not prevent political interventions into the economy from taking place.

5. Federalism and Growth – Empirical Evidence

Does a competitive decentralised federal order indeed foster economic growth, as the theory suggests? By using a regression, the correlation between decentralisation and economic growth can directly be tested. As an indicator for the degree of centralisation, usually the budget share of lower governments is used. This regressor is employed, because it is necessary to find a measure for decentralisation which can be parameterised. The budget share as parameter for decentralisation is afflicted with certain methodological problems. It simply reflects imperfectly the real degree of fiscal autonomy. Assuming the same budget share of lower governments, central legislation may be more or less limiting to them.[46] Nonetheless, this measure may serve as a guideline, whether jurisdictions on a decentral level have more or less autonomy and scope for individual politics.

5.1 Cross-Country Studies

First of all, we present some cross-country-studies before looking at the growth effects in certain states. Finally, we conduct our own econometric study for Germany. The authors of the few cross-country-studies testing the correlation between centrality and economic growth do not obtain uniform results. Huther and Shah (1996) analysed at the World Bank for 80 nations, which factors influence the economic strength of a nation. For nearly all of their assessed specifications, they found that a high level of decentralisation enhances the economic outcomes significantly. Kim (1995) records similar findings.[47]

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[45] See Blankart (1998), p. 554.
[46] See Feld, Kirchgässner and Schaltegger (2004), pp. 3f.
[47] See Oates (1999), pp. 1140-1141 for these studies.

Thießen (2003) is the only author who examines only developed economies. He also finds, that decentralisation of public spending leads to significantly higher growth rates. Other empirical studies however deliver contrasting results. If looking at the different studies in detail, some of the apparent contradictions disappear. Negative growth effects can be found, when developing countries are examined. This holds true for the work of Davoodi and Zou (1998). Woller and Phillips (1998) at least fail to show a robust correlation between decentralisation and economic growth for a few developing countries.

However, less developed nations do not offer an appropriate empirical background. Decentral structures in developing countries often reflect unstable institutions, political confusions and the decay of public order.[48] In cross-country-studies which do not examine developing countries, only growth stimulation effects of decentralisation can be observed.

5.2 Studies for China, the USA, Switzerland and Germany

Studies for single countries are not absolutely consistent, but still indicate that decentralisation accelerates economic growth. This holds true also for China: Jin, Qian, Weingast (1999) as well as Lin, Liu (2000) and Qiao, Martinez-Vazquez, Xu (2002) find, that fiscal decentralisation fosters economic growth. Zhang, Zou (1998) get contrasting results. However, Zhang and Zou do not make use of time dummies for their analysis. Taking China's vehement changes into account, this must be regarded as misspecification of the model.[49] Hence, the only valid studies for China are those that find a positive correlation between decentralisation and economic growth. For the USA, Akai and Sakata (2002) find the same relationship.[50]

For Switzerland, Feld, Kirchgässner and Schaltegger (2004) find, that those Swiss cantons enjoy higher growth rates that are characterised by a high degree of fiscal decentralisation: When the local authorities in a canton have a high share of the aggregate public income as well as of the aggregate public expenditure, growth rates are higher.[51] Kirchgässner (2005) shows that the constantly sluggish Swiss economic growth is not due to the federal order, but

[48] See Feld, Zimmermann and Döring (2003), pp. 370-373.
[49] See Feld, Zimmermann and Döring (2003), p. 368.
[50] See Feld, Zimmermann and Döring (2003), p. 369 for the studies which are listed in this paragraph.
[51] See Feld, Kirchgässner and Schaltegger (2004), p. 16.

due to other factors. Quite contrarily, direct democracy and tax competition support economic growth in Switzerland, according to Kirchgässner.[52]

Like Feld, Kirchgässner and Schaltegger (2004), we consider the German Bundeslaender and assess whether the budget share of the local authorities as parameter for decentralisation influences the economic growth. In order to do so, we use a panel estimation with data for all 16 German federal states concerning the period from 1991 to 2003. A panel estimation is needed to receive a sufficient number of data points. The observation period is limited by German Reunification.[53] In order to eliminate disturbing influences, we control for other influences on the regressand by using an estimation, which contains theoretically plausible influencing factors for economic growth and explains this regressand to a large portion. For this task, we use the estimation for the regressand "Wirtschaftswachstum" (economic growth) of our study „Die Bundesländer im Standortwettbewerb 2005".[54] In this study, we focused on political input and political output in the German Bundeslaender and employed regressions to assess the correlation between input factors and political output.

The governments of the German Bundeslaender have quite a limited, but nevertheless existing scope to influence the success of their federal states. Economic prosperity, employment, social security and public security can also be influenced by the governments of the German Bundeslaender. Thus, some German federal states are more successful in competing for mobile factors of production (qualified persons and investments). This is documented by our study "Die Bundesländer im Standortwettbewerb 2005", which followed the predecessor studies that were edited in 2001 and 2003.[55] These studies were conducted for the Bertelsmann Stiftung. An up-to-date study will be published during the year 2007.

The development of the different federal states is assessed by examining the three fields "Einkommen" (income, with GDP level and economic growth as parameters) "Beschäftigung" (employment, with unemployment rate and employment rate as parameters) and "Sicherheit" (security, with the parameters welfare recipients and uncleared criminal offences). In a second step, we evaluate, which factors are key to the success or failure of the

[52] See Kirchgässner (2005), slides 18f.
See also Rentsch, Flückinger, Held, Heiniger and Straubhaar (2004), pp. 11-34, who describe the causes of the sluggish economic growth in Switzerland.

[53] The estimation procedure stems from the study „Die Bundesländer im Standortwettbewerb". See for example Berthold and Drews (2001), pp. 290-293 for a detailed description of the estimation procedure.

[54] See Berthold, Fricke and Kullas (2005), pp. 44-46, p. 57 for the theoretical hypotheses which form the ground for the estimation.

[55] See Berthold, Fricke and Kullas (2005); Berthold, Fricke, Drews and Vehrkamp (2003); Berthold and Drews (2001).

different German federal states. In order to do so, we use a panel estimation for all German Bundeslaender and the years since German Reunification. As results, we find significant influencing factors for all of these six success parameters. If we add to the regression for economic growth the budget of the local authorities as share of the total budget of the respective Bundesland with its local authorities, the result is as follows in table 1.

Tab. 1: Regression "Economic growth"			adjusted R²: 65,4
Regressor	direction of effect*	weight (in percent)	significanc level
horizontal financial equalisation payments (paid or received)	-	19,6	(***)
debt level of the Bundeslaender	-	15,7	(***)
urbanisation	+	10,5	(**)
capital investments of the Bundeslaender	+	10,0	(**)
budget share of the local authorities	**+**	**9,5**	**(***)**
capital investments of the industry	+	8,0	(*)
self-employed (as share of all employees)	+	7,9	(**)
amount of welfare aid per recipient	-	5,9	(***)
vertical financial equalisation payments (received)	-	5,0	(***)
patent applications	+	2,2	(**)
employment rate of the women	+	1,6	(*)
expenditure for universities	+	1,3	
intensity of competition between the political parties	+	1,2	(***)
air traffic, passengers	+	1,1	(***)
school graduates with university entrance diploma	+	0,4	
* + stands for "furthering economic growth", - for "impairing economic growth"	(***)	99 % significance leve	
	(**)	95 % significance leve	
	(*)	90 % significance leve	

Source: own calculations.

By adding this regressor, quality criterions such as significance levels and adjusted R^2 improve by tendency. We find for the German Bundeslaender, that a high degree of decentralisation enhances economic growth and does so with a great influence on this regressand. This holds true for the share of public income as well as for the share of public expenditure. Hence, our results are equivalent to those of Feld, Kirchgässner and Schaltegger (2004) for the Swiss cantons. Our estimation suggests that at least within the German Bundeslaender, the positive effects of decentralised public structures (for example their market preserving function) lead to higher growth rates, when the local level is strengthened.

Certainly, local authorities in the Swiss cantons have stronger incentives to foster growth, as they are less severely affected by a communal fiscal equalization scheme, which confiscates above-average tax income. Nevertheless, it is also important for German communal politicians to make a thriving economy. If they are successful in doing so, their chances of becoming re-elected rise. Besides, they are often affected directly by the state of their municipalities: Usually, a considerable portion of the city councils consists of local businessmen, who have a vivid interest in the citizens of their community having more money to spend. Family and friends of local politicians depend on local employment opportunities, and a prospering town offers more leisure time opportunities.

Politicians on the level of the federal states are at least concerned about their re-election, as well. Hence, they also have some incentives to foster the economic well-being of their federal state. Therefore, it appears to be plausible that an additional budget volume for the German Bundeslaender would also be beneficial and foster economic growth, just as in the case of the local authorities. The same positive effects can be expected for the transfer of competences, though they are difficult to parameterise, and therefore, it is difficult to estimate their impact on economic growth.

6. Concluding Remarks

In theory, competitive, decentralised federal orders enhance economic growth in several ways. The market-preserving function of this federal type is one important reason: If investors and citizens have the chance to move on to another jurisdiction which offers more favourable conditions, politicians are forced not to impair the market mechanism. Otherwise, they would lose people and capital. As governments lose scope to intervene in goods and factor markets, also the labour market will be less disturbed in a system of market-preserving federalism. Hence, real wages are flexible and reflect labour supply and labour demand rather than political conceptions. Flexible wages lead to labour market clearance. Thus, the level of employment is higher and there is less unemployment in a system of market-preserving federalism.

As we have shown, market-preserving federalism was crucial for the industrial revolution in England, the rise of the American economy and is decisive for China's current economic boom. Empirical studies support the relevance of federalism for economic growth. Hence, China is on the right road by leaving important economic competences to its provinces and local authorities.

Germany, however, should look at the Chinese, American and English examples. In order to benefit from its federal structure, the country should move away from cooperative federalism towards a more decentralised, competitive federal model. The reform of the constitutional rules which govern public finances, which is currently on the political agenda in Germany, provides the opportunity for more competition and less interdependence between the German Bundeslaender. Politics should make use of this opportunity.

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