FiFo Discussion Papers
Finanzwissenschaftliche Diskussionsbeiträge

FiFo Discussion Paper No. 22-2

The Quality of Public Finances

Michael Thöne

2022

Finanzwissenschaftliches Forschungsinstitut an der Universität zu Köln

FiFo Institute for Public Economics, University of Cologne fifo-koeln.de

FiFo Discussion Papers
Finanzwissenschaftliche Diskussionsbeiträge
No. 22-2 / April 2022

ISSN 0945-490X

The Quality of Public Finances

Michael Thöne*

This is a draft version of a chapter to appear in the *Handbook on Public Sector Efficiency*, published by Edward Elgar Publishing. Eds: A. Afonso, J. Jalles, A. Venâncio.

* Dr. Michael Thöne ist Geschäftsführender Direktor des FiFo Köln. thoene@fifo-koeln.de.

Finanzwissenschaftliches Forschungsinstitut
an der Universität zu Köln

FiFo Institute for Public Economics, University of Cologne
P.O. Box 130136; D-50495 Köln
Wörthstr. 26; D-50668 Köln
Tel. +49 221 13 97 51 0

http://fifo-koeln.de

The Quality of Public Finances[1]

Michael Thöne

Abstract

The concept of the "quality of public finances" (QPF) covers many qualitative and structural issues of fiscal policy. This chapter traces the origins of the concept of QPF to the Lisbon Strategy and the subsequent EPC Working Group on "Quality of Public Finances" (2004-2007). At its core, the QPF focuses on the impact that the composition of public spending has on long-term goals such as economic growth. Growth- and sustainability-enhancing public spending comprises infrastructure investment, human capital investment (education, health, family policy, gender policy) and spending on natural capital and climate protection. Today, QPF indicators can very helpful in national fiscal governance and for the supranational surveillance as in the EU. A future QPF approach for the 2020s should help to prioritize inclusive growth and decoupling economic growth from the use of finite resources. Quality indicators can also help to determine the legitimate levels of new government debt ("green golden rule").

JEL Codes: E62, H11, H50, H52, H54, H61

Keywords: Quality of public finances (QPF), expenditure composition, growth-enhancing public spending, fiscal governance, decoupling, green golden rule

Contents

[1] This is a draft version of a chapter to appear in the *Handbook on Public Sector Efficiency*, published by Edward Elgar Publishing. Eds: A. Afonso, J. Jalles, A. Venâncio.

1 The two (and more) dimensions of the Quality of Public Finances

At the turn of the millennium, nobody was familiar with the concept of "quality of public finances" (QPF), because the term had not yet found its way into the public finance discussion. Less than ten years later, the concept of quality of public finances covered such a broad field that – conversely – the abundance of issues under consideration made it difficult to know what exactly was meant by "QPF".

This broad spectrum of terminology has remained intact for another decade into the 2020s. At the core of the concept, the quality of public finances focuses on the effects that public spending – particularly in its composition – has on long-term macroeconomic targets such as economic growth and productivity progress. This chapter concentrates on this economic root of the QPF concept.

It can be argued that this focus is only one aspect of what the quality of public finances as a whole covers. This is certainly true. For one thing, the *expenditure* side would also have to be contrasted with the *revenue* side of the public budget. Tax systems, in their composition and specific design, can significantly affect innovation and economic growth. Nevertheless, the revenue side has not gained much importance within the QPF concept. Not because of its low importance, but conversely because of its already high relevance: Public economics and actual tax policy in most countries have been keeping a close eye on this interaction for many decades. Here, the QPF concept was not needed to raise awareness of the issues.

In addition to the revenue side, which would be included in a comprehensive understanding of the quality of public finances, the discussion also covers the topic of this handbook - the efficiency of public action and public spending. The QPF concept in a broad sense considers two closely related but distinct questions in public spending: *Where* to spend it. And *how* to spend it. *Composition* and *efficiency*. Is the ideal case of high-quality fiscal policy achieved when a large and growing share of public expenditure is spent on future-oriented purposes and this in an efficient way that promises high value-for-money?

Yes and no. Yes, insofar as these two dimensions of the quality of public finances are of course cumulative in political terms. To withstand the inherent tendency towards ever-increasing consumptive spending seems like a good thing. Spending this money wisely, in the most cost-effective way attainable looks an even better thing.

Yet on the *conceptual* level, composition and efficiency of public spending should be treated as two distinctively different dimensions of QPF. Obviously, the claim to spend public money in the most efficient way attainable must not be restricted to growth enhancing, forward-looking expenditure. The efficiency dimension of QPF covers *all* areas of the public budget. On the other hand, the composition of public spending may, as will be shown in this chapter, influence the outlooks of an economy even without regard to the bottom-up perspective of how cost-effective the money is spent in each case.

These two main dimensions of the quality of public finances – composition and efficiency of spending – have been part of the concept from very early days. This becomes clear from the comprehensive documentation of the group that – although not necessarily the birthplace – was certainly the "nursery" of the QPF concept: The "Working Group on the Quality of Public Finances" (WGQPF; 2004-2007) of the Economic Policy Committee of the EU defined the boundaries of the concept, which are still valid today (see Deroose/Kastrop 2008). Recent work emphasises the multidimensionality of the concept (see Rodriguez-Vives 2019).

Nonetheless, this chapter only looks at one, the more or less original dimension of the QPF concept, that is, the composition of public finances. I do this in the full understanding that this handbook nevertheless covers both dimensions in their entirety.

Moreover, the limitation to "QPF in the stricter sense" is, to a certain extent, a reaction to the multidimensionality outlined above. For this is both a blessing and a curse. It encompasses a very broad spectrum of what is really important for good fiscal policy. The width of this spectrum, however, also results in the difficulty that no one really knows what is meant when we talk about the quality of public finances. Recalling that the term was at the outset primarily used to refer to the *composition* of public spending can help to gain a little more conceptual clarity without denying the other dimensions their (great) importance.

2 From Quantity to Quality of Public Finances: Expanding the Scope of Fiscal Governance

Not everything that is good is an investment. And not all things made of concrete have a long-term benefit. These insights - related to public spending - are older in general economics than in public economics and fiscal policy. Here, and to some extent in the public perception, for a long time government investment was virtually synonymous with forward-looking, provident policy. Conversely, government consumption expenditures, which are defined as the (extensive) residual of all non-investment expenditures, have the reputation of being short-sighted, opportunistic and wasteful. However, the dualism of investment and consumption expenditures in budgetary law and, similarly, in national accounting is unsatisfactory from both sides when it comes to the actual, empirically observed effects of public spending. For sure, not every budget item recorded as public investment in the statistics can be considered *productive* investment in the economic sense. Conversely, some types of consumptive spending provide important economic benefits in the form of provisions for the future.

At the turn of the millennium, this perspective gave rise to a discussion among public finance experts in the EU on a different and new understanding of public investment and the concept of capital that is relevant for government activities. The background to this discussion was the quantitative consolidation of public finances, which was considered imperative in many member states at the time to comply with the Stability and Growth Pact in the long term. In this context, qualitative aspects of public spending policy were not to be ignored. Otherwise, there was the perceived risk that quantitative consolidation steps - in a misconception of equal treatment or because of their relatively weak political "resistance" - would hit those areas of spending particularly hard which have a positive impact on growth and sustainability. With this in mind, the European Council decided with the "Lisbon Strategy" in 2000, among other things, to take greater account of qualitative elements in the member states' deficit reduction measures. This impetus created the basis for a political and scientific discussion of the concept of "quality of public finances" (QPF), which was launched at the time.

An important component of the QPF concept is the long-term impact of the composition of public spending. Behind this stands an expanded notion of public capital, based on empirical research.

3 Elements a More Economic Understanding of Public Capital

Which government activities and the associated expenditures are captured in an expanded concept of capital is first a normative, then an empirical question. The capital concept is normative insofar as the future effects of government activities considered here are selective. The QPF-concept focuses on those government expenditures that can be expected to increase economic productivity and thus raise the potential for economic growth. In addition, all public measures with a positive impact on natural capital in the broader sense - including environmental protection, climate protection and climate adaptation - are to be included.

Already these two objectives of future orientation do not necessarily go hand in hand. The debate on "post-growth" actually assumes the opposite. Whether or not growth and environmental sustainability can harmonize via “decoupling”, and if so, to what extent, cannot be judged in the abstract. That, too, is an empirical question that will be answered in the decades to come. In any case, decoupling resource consumption and economic growth is one of the greatest and most pressing challenges of the near future.

Indeed, very good reasons speak for the choice of these two central future tasks; in particular, economic performance and ecological sustainability on the path to climate neutrality are strategic prerequisites for being able to achieve further future goals. Still, restricting the focus to these two dimensions remains a *normative* choice. Usual sustainability agendas, for example, include all 17 target dimensions of the UN Sustainable Development Goals (SDG). If one builds indicators that also take into account the numerous dimensions of social sustainability, the outcome will look quite different and much more comprehensive.

In other respects, too, "future investments" are not the only state activities that are important for a country's economic welfare. Before that come the fundamental public goods. In a market economy, these include above all: the rule of law and the guarantee of human rights, internal and external security, the guarantee of clear property

rights, the political stability of democracy, trade policy, price stability and competition policy. Nothing works without these public services; providing them is the top priority of any government. However, once they are well provided for, further spending on these purposes quickly becomes unproductive. Technically speaking, after an early optimum, their marginal economic productivity quickly declines with further expansion of spending (EU-COM 2003).

This overview of growth- and sustainability-enhancing spending reviews the empirical research literature. It builds on existing meta-analyses (see, among others, Thöne 2005, Thöne/Krehl 2016, Cepparulo/Mourre 2020, Zouhar et al. 2021). The identification of forward-looking expenditures is accomplished by means of a non-formalized meta-analysis of the research literature. The result such a meta-analysis is an overview of the government spending that can be expected to have positive growth effects and/or sustainability effects in an industrial economy.

The studies reviewed show that many consumer expenditures can also provide important benefits for the future. Above all, the high economic significance of human capital investments, especially in the education sector, is confirmed. Here, however, as with other growth- and sustainability-enhancing expenditures, the restriction applies that the positive effects are primarily found for government activities in this field, not for spending. It is immediately obvious that more spending in a promising field does not automatically mean higher performance. Accordingly, input data - i.e., budget figures - must be interpreted with caution when it comes to outcomes, e.g., the quality of school education.

3.1 Infrastructure investments

Not every investment expenditure in the sense of budgetary law - in Germany, this would be every expenditure on physical assets of more than 5,000 euros - can also be considered an economically productive investment measure. Nevertheless, the rate of accumulation of physical capital is one of the key determinants of macroeconomic growth. Empirical work regularly confirms the growth relevance of public investment; negative findings are rather rare. The initial marginal productivity of investment is very high because of its input character. This means that not all, but very many, public investments are actually very productive.

Public spending on infrastructure can provide a crucial input for private economic production. In general, economic theory distinguishes several channels through which infrastructure can have a positive impact on economic growth (see EU-COM 2014). First, energy, transport, and other network infrastructures are intermediate inputs for firms and thus have a significant impact on their costs and ultimately on competitiveness from an international and national perspective (Pradhan and Bagchi 2013). Moreover, government investment increases aggregate demand for construction and maintenance activities (Wang 2002; Esfahani and Ramirez 2003; Phang 2003; Short and Kopp 2005; Pradhan and Bagchi 2013). Finally, government investment can provide important signals that direct private investment into key sectors of the economy (Fedderke and Garlick 2008).

In view of the situation in many mature industrialized countries, Kalyvtis and Kalaitzidakis (2002) early on pointed in a critical direction: In their empirical study, they explicitly distinguish between the growth effects of new infrastructure investments and the effects of maintenance and repair of existing infrastructures. In their study for Canada, they show that for a well-endowed economy, the maintenance and modernization of existing infrastructure is the crucial determinant of growth.

For EU economies, the relationship between infrastructure and human capital investment is also of strategic importance. An exemplary study here was conducted by Quirino, Macas Nunes and de Matos (2014). In their study of Portugal, they conclude that public infrastructure investment contributes to economic development, especially in low-growth regions, whereas in high-growth regions, human capital investment is the main driver of productivity. In an early survey, the European Commission also points to a "certain consensus" that public investment in developed industrial societies is of secondary importance compared with spending on human capital, because above a certain level of development the marginal productivity of public physical capital increasingly falls, whereas the importance of knowledge-based skills increases (see EU-COM 2003: 106 and 110).

Despite - or because of - these clear findings, it is important to emphasize what might “go without saying”: Even a *generalized* positive assessment for a specific area of spending does not, of course,

equate to a positive assessment of every *individual* measure in this area. As Bertenrath, Thöne and Walther (2006) show for the example of transport investment, such empirical "top down" assessments cannot be readily disaggregated. This means that cost-benefit analyses are required for individual projects even where growth effects are warranted at the general level.

3.2 Technical Knowledge

The growth of technical knowledge - technological progress - is a central determinant of productive economies. In industrialized countries in particular, research and development activities (R&D) are regarded as a key to high and sustained economic growth. At the same time, technological progress is a complex economic and social process in which few clear causalities can be identified. In this context, the public sector may seek to promote the accumulation of technical knowledge and technological progress by investing in research institutions and universities.

This fundamental role is also reflected in the revaluation of investment in national accounts. In Germany's national accounts, for example, all expenditure on research and development and related personnel resources have been included in fixed capital formation since 2014 (with retroactive effect from 1991). This is the implementation of the European System of Accounts (ESA) 2010 and the underlying System of National Accounts (SNA) 2008 of the United Nations. Most other OECD countries are taking a similar approach. Since then, R&D is no longer recorded as current expenditure for production purposes, but as an investment asset that is used for production purposes over several time periods. This conceptual change applies to private companies in the same way as it does to government units and non-profit organizations.

When looking at the empirical literature, the growth impact of public and private R&D investments should be assessed separately, as it is primarily private R&D investment that is perceived to have a particularly strong impact on growth. Some researchers recommend promoting the innovative strength of companies in particular with the help of tax credits, grants, patent protection and the like.

The link between public and private R&D spending has long been regarded as a particularly delicate one, with some authors arguing that the two activities complement each other, while others have shown that public R&D crowds out private activities. Only in the case of complementarity, however, can government or government-funded R&D be seen as having a positive effect on growth, because it penetrates areas where private R&D is not pursued due to positive externalities, or because public R&D provides a locomotive function and stimulates further private R&D. A review of the empirical literature reveals a majority of studies pointing to complementarity (cf. e.g. Diamond 1999, Guellec/van Pottelsberghe de la Potterie 2000). But at the same time, the question is never ultimately answered.

3.3 Human Capital

Human capital with its many nuances has long been at the centre of the discussion on productivity- and future-oriented public spending. On the side of academic economics, the emergence of the "New Growth Theory" according to Uzawa (1965), Lucas (1988) and Romer (1990) has led to a breakthrough, explaining technical progress as endogenous to the "human factor".

Investments in this human factor can increase productivity through many channels and can therefore have a positive effect on growth. Today, many areas of family and equality policy are also included. Finally, recent empirical research has turned to participatory, inclusive growth via human capital investment and its interpersonal distribution.

The fact that **education** is an area of high growth relevance within the sphere of influence of the state is an obvious fact in the OECD countries and most other economies, but by no means a matter of course. Education as an individual investment in human capital yields returns of between five and 15 percent per annum when rewarded according to the marginal product of labour (Mincer 1974). Mincer's calculations are confirmed in numerous recent reviews (see, e.g., Barro/Sala-i-Martin 1995, Temple 2000, Colombier 2011, Barro 2013). In particular, the average duration - and thus the intensity - of schooling in secondary and tertiary education has a positive effect on economic growth.

Using Germany as an example, Wößmann and Piopiunik (2009) estimated the long-term costs of inadequate education in 2009 at 2.8 trillion euros over a period of 80 years. They define inadequate

education as the lack of the minimum level of basic skills required for promising participation in working life. Inadequately educated students cannot exploit their full potential in the labor market. The economic growth lost here forms the basis for calculating the follow-up costs.

At the same time, a consensus has emerged in the empirical literature that the quality and dissemination of early childhood education in particular is very important both for the productivity of an economy and for its inclusive quality (see Heckman/Cunha 2007; Fritschi/Oesch 2008, Delalibera /Ferreira 2019).

Healthcare spending has been back in the spotlight of fiscal policy discussions since the beginning of the 2020 Corona pandemic. From a human capital perspective, they hold a long-established place in this discussion (Bloom et al. 2019). From a human capital perspective, health is an essential growth factor because healthy workers are physically and mentally more robust, they are more productive and earn higher wages. At the same time, they are less likely to be absent from work due to illness or family disease (Bloom, Canning and Sevilla 2001). At the microeconomic level, these connections have been extensively documented (see Strauss and Thomas 1998 for an overview). Empirical evidence also shows significant positive effects of health care spending on overall economic growth. The importance of health for economic prosperity becomes particularly clear when one considers the impact of the past introduction of public health care systems in Europe, which had a significant effect on infant mortality and death rates. The associated improvement in health status in turn had a positive impact on per capita income (Strittmatter and Stunde 2013).

More important, however, is the question whether the causality in industrialized countries might be inverted. In this case, the increase in income associated with economic growth would enable people to spend more money on their health. Economic growth would become the explanatory variable of health. A hint of a possible bidirectional causality between health spending and growth is provided by Öztürk and Altun Ada (2013). However, this alone is not a sufficient reason not to include health expenditures among the growth-related expenditures.

Family policy is very ambivalent as a growth policy because its instruments are so heterogeneous. Possible growth effects of family policy measures can be conveyed through two channels: On the one hand, measures to improve the work-family balance result in a higher labour supply, especially from mothers with childcare-age children. Second, in an ageing society such as Germany's, measures to increase fertility expand the labour supply, which is otherwise becoming increasingly scarce, and thus also the available stock of human capital in the long term (see, for example, Alders and Broer 2004; Weil 2006). A group of researchers led by Prognos AG conducted a major evaluation of family policy benefits in Germany in the years preceding 2014.The results showed that in the difficult decision-making process of realizing the wish to have children, public family policy measures only play the role of one influence among many. The impact of family policy measures on the labor supply of mothers is different; here, public financing of childcare in particular is shown to be a very effective measure for labour supply and higher productivity.

Gender policy - if simplified to gender relations alone - is directed at all persons of all gender identities. For developing countries, significant growth effects can be demonstrated in the case of increased spending on health and education for women, who are often strongly disadvantaged compared to men in these countries (cf. Dollar and Gatti 1999; Agénor and Canuto 2012). Agénor and Canuto (2014) show growth effects of a reduction in gender inequalities for Brazil as well.

With regard to industrialized countries, Lorgelly (2000) finds contradictory evidence on productivity in her meta-analysis. In their meta-study of the empirical literature, Kabeer and Natali (2013) also point to the asymmetric nature of the relationship between gender equity and economic growth: While there is growing evidence that gender equality positively influences economic growth, the findings for the opposite direction - the influence of growth on gender relations - are very mixed.

A paper by the International Monetary Fund (2013) discusses policies on gender equality primarily in the fields mentioned here in the section on family policy, because in Western industrialized countries the rate of female labour market participation is primarily a question of the compatibility of work and family.

Overall, empirical studies on the impact of gender indicators and policies on growth are primarily available where gender equality goals coincide with other areas of growth policy, as usually the

same mechanisms of impact are considered (see e.g. IMF 2013). These include, for example, maternity protection and government support for childcare (see above). Furthermore, programs aimed at equitable integration in the labour market ultimately have a positive impact on economic growth through this channel. The same applies to government activities that support gender equality in education and gender-equitable access to health.

3.4 Natural capital and climate protection

The "pure" objective of the quality concept, economic growth, must be questioned. In a world of finite resources and climate change, simple economic growth is no longer a goal that can be pursued without reservations. Yet, right from the outset, the QPF concept hast reflected developments towards greener growth or, better, towards a full decoupling of growth on the one side and the use of non-renewable resources and the emission of greenhouse gases on other side (Thöne, 2005).

Yet, in a time of massively increasing climate protection efforts and intensive work of numerous economic sub-disciplines, at first glance it may seem surprising that there is little broad-based empirical research on the ecological sustainability effects of government spending policies. Of course, environmental spending programs are evaluated in detail for their effects. But broad studies on the direction of impact on growth are largely lacking while the opposite direction - i.e., the effects of climate change on economic growth - receives good attention (see e.g. OECD 2021).

This paradox - irritating and somewhat annoying at first glance - is cleared up on closer reflection. Environmental policy is not spending policy. On the contrary, government spending plays only a minor role in environmental economics compared to instruments that are designed in accordance with the polluter-pays principle. These are regulatory or revenue-based instruments. This, however, does not mean that environmental policy expenditures are detrimental to environmentally sustainable development.

Since this distinction is primarily normative, it would be inadequate to base a discriminating assessment on it, given the lack of empirical evidence.

Nonetheless, expenditures that fall under environmental protection and nature conservation count here globally as effective for the benefit of natural capital. Why is that the case? Because times have changed and an up-to-date QPF-concept must make amendments for that. The first contribution to the sixth report of the Intergovernmental Panel on Climate Change (IPCC 2021) is very clear about the need to intensify the efforts of climate protection in every country of the world dramatically and immediately if the COP 21 Paris goals of keeping global warming significantly under of 2.0°C still shall be achieved.

In view of this imperative, the questions raised about instrumental optimization of climate protection lose their thrust. In the near future, the question of revenue-side or expenditure-side or regulatory instruments will no longer be an issue. The principle will probably have to turn much more in the direction of "whatever helps, helps". In such a perspective, government expenditures in favour of climate and environmental protection can usually be regarded as having an impact on sustainability.

4 Making Use of Quality Indicators in Fiscal Governance

Secondly, quality indicators for the composition of government spending can also be used in the supranational surveillance of the several states, as the European Union monitors its member states with the help of the Stability and Growth Pact. As mentioned, it was in this context, specifically through the Lisbon Strategy of 2000, that the term "quality of public finances" was originally coined.

For both purposes, quality indicators are helpful both longitudinally for the budget-timelines and cross-sectionally to enable comparisons between different countries.

Both purposes have shaped the development of the QPF-concept. As an example, the author of this paper conducted in 2002/3 a first study on the quality of public finances of the German federal budget and the aggregate public finances of Germany on behalf of the Federal Ministry of Finance. The aim of the research was to develop an indicator of future-oriented expenditure that would serve this purpose better than the benchmark traditionally used, i.e. public investment expenditure. The result was the "WNA budget" (Thöne 2005), with which the growth- and sustainability-effective expenditures (*WNA: Wachstums- und Nachhaltigkeitswirksame Ausgaben*) were shown separately from the other government expendi-

tures. Apart from being used in the domestic discussion of future fiscal governance, the *WNA Budget* served as an early input to the *Working Group on the Quality of Public Finances* WGQPF of the Economic Policy Committee of the EU which, subsequently, has developed the whole spectrum of the quality discussion (see above).

With regard to the composition of public expenditure, this group has achieved two key results. For one, it has provided the common ground for the EU-Commission to present a proposal for a QPF indicator that was to be applicable to all member states (EU-COM 2008). Once more, the practical feasibility of this approach was demonstrated by using the German example (Thöne/Dobroschke 2010). However, this EU-initiative proved to be far too ambitious and politically too invasive to gain an important role in the EU's fiscal governance. To be effective, a QPF approach for all member states would have had to be anchored in the preventive arm of the Stability and Growth Pact. But this would have created more European influence on the budget priorities of the member states than they would have wanted to concede. As a consequence, only rather soft quality criteria could be implemented within the corrective arm of the Excessive Deficit Procedure.

Politically, the quality of public finances has so far not been able to develop the authority at the European level that it would deserve, given its high significance for Europe's future. This makes the second achievement of the WGQPF on the composition of public finances all the more important and enduring. Already the first studies had shown that the functional analysis of government expenditure was the most practical way to implement the quality concept. However, no data were available in sufficient detail. Specifically, for the EU states only insufficiently rough expenditure data according to the international COFOG classification were available. As a result of the initiative of the WFQPF, from 2005 onwards a task force was set up at Eurostat which, with and for the EU Member States, compiled data on public expenditure at the reasonably detailed level of the COFOG 2-digit -lassifier, retroactively from de facto 1995 onwards (Eurostat 2011). Without the WGQPF-impetus, these data, which are indispensable for the QPF-discussion in Europe, would most likely not be collected even today.

Nevertheless, it has to be acknowledged in retrospect that the world economic crisis from autumn 2008 and the resulting European sovereign debt crisis of the years 2010 to 2012 washed away the discussion on modernisation of the quality of public finances in all its aspects.

All of a sudden, it was a matter of averting the collapse of the financial system, counteracting the ensuing recession in the real economy, saving some EU states from bankruptcy and bringing the common currency, the euro, through this fire baptism reasonably unscathed. During the crisis, little attention was paid to the discussion on the quality of the longer-term future orientation and rationality of fiscal policy. The focus of fiscal policy was once again on simple quantitative issues. Qualitative aspects, questions about the investive or sustainable character of government spending, played no role for the time being.

Until the next major crisis, which erupted in 2020 with the Corona pandemic, the concept of quality of public finances has not experienced significant political progress at the level of the European Union or in individual countries in or outside the EU. However, academic attention has not faltered, so the next steps for advancing the concept are quite clear.

In the course of ten years, it has become apparent that the primary goals of a quality philosophy cannot remain unchanged over time. This became clear in the above discussion with regard to the relationship between economic growth and the goal of climate protection and resource conservation. A modern, future-oriented QPF concept must give top priority to the finite nature of natural resources and the correspondingly decoupling-focused concept of economic growth. Crisis resilience and the question of how inclusive growth is (Cournede/FournierHoeller 2018) will also play a much greater role in the 2020s than in the previous decade.

Also, the "framing" of the QPF discussion has changed with the Corona crisis. The long phase of extremely low interest rates has reduced concerns about fiscal sustainability in many countries - despite the enormous new debt in the wake of Corona. However, it would be a mistake to conflate the idea of quality with its merely temporal genesis with a policy of strict fiscal austerity, which seems to have been overcome at the beginning of the 2020s. In an era that seeks to make future-oriented policies possible again through future-oriented financing - i.e. through public debt - the importance of the QPF concept does not diminish, but rather increases.

Just like national fiscal rules, the European Stability and Growth Pact is also under scrutiny. Here, the focus is no longer only on the quality of public spending, but increasingly also on the quality of new public debt. Modern fiscal rules can no longer be simple numerical deficit limits. Rather, they specify the permissible level of new debt according to the purpose of the expenditure financed by it. This does not mean that all spending covered by the QPF concept should be financed by deficits. Teachers' salaries must always be financed by current taxes. Nevertheless, analogous to the traditional "golden rule" of public debt, some government expenditures with particularly high benefits for the future can also be financed by the future through debt. Especially in the case of climate protection, such a "swap of future burdens" - low additional burden from debt, substantial saved burden on the part of the climate - can become an element of a concept that is more strongly based on the quality of public finances, e.g. a “green golden rule”.

However, this QPF-perspective on the funding of public tasks should also be reinforced for other elements of public finances that are particularly effective in terms of “future investment”. In the best case, such a perspective is embedded in a redesign of fiscal governance that relies more on soundly interpreted economic standards than on rigid numerical rules (e.g. Wieser, 2021, and Blanchard/Leandro/Zettelmeyer, 2021). Such a comprehensive, more economic governance would also benefit immensely from a strong reliance on the broad knowledge on public sector efficiency as discussed in the various chapters of this handbook.

Sources

Afonso, A., W. Ebert, L. Schuknecht and M. Thöne (2005), Quality of Public Finances and Growth, ECB Working Paper No. 438, Frankfurt/M.

Afonso, A. and J. G. Alegre (2011), Economic growth and budgetary components: a panel assessment for the EU. Empirical Economics, 41, 703-723.

Agénor, P. and O. Canuto (2014), Access to Infrastructure and Women's Time Allocation: Evidence and a Framework for Policy Analysis, FERDI-Working Papers P45.

Agénor, P. and O. Canuto (2014), Gender equality and economic growth in Brazil: A long-run analysis. Journal of Macroeconomics 43.

Alders, P. and P. D. Broer (2004), Ageing, fertility and growth. Journal of Public Economics 89: 1075–1095.

Barro, R. (2013), Education and Economic Growth. Annals of Economics and Finance (14) 2: 329–366, 2013.

Barro, R. and X. Sala-i-Martin (1995), Economic Growth. New York 1995.

Bertenrath, R., M. Thöne and C. Walther (2006), Wachstumswirksamkeit von Verkehrsinvestitionen in Deutschland, FiFo-Berichte Nr. 7, Köln.

Blanchard, O., Á. Leandro und J. Zettelmeyer (2021), Redesigning EU Fiscal Rules: From Rules to Standards, PIIE Working Paper 21-1; Washington D.C.

Bloom, D. E., D. Canning and J. Sevilla (2001), The Effect of Health on Economic Growth: Theory and Evidence. NBER Working Paper No. 8587, Cambridge MA.

Bloom, D., D. Canning, R. Kotschy, K. Prettner and J. Schünemann (2019), Health and Economic Growth: Reconciling the Micro and Macro Evidence, NBER Working Paper No 26003, Cambridge MA.

Cepparulo, A. and G. Mourre (2020), How and How Much? The Growth-Friendliness of Public Spending through the Lens, European Economy Discussion Paper 132, Brussels.

Colombier, C (2011), Does the composition of public expenditure affect economic growth?, Evidence from the Swiss case. Applied Economics Letters 18.

Cournede, B., J.-M. Fournier, P. Hoeller (2018), Public finance structure and inclusive growth, OECD Economic Policy Paper No. 25, Paris.

Delalibera, B.R. and P.C. Ferreira (2019), Early childhood education and economic growth, Journal of Economic Dynamics and Control 98, 82-104.

Deroose, S. and C. Kastrop (Hrsg.) (2008), The Quality Of Public Finances, Occasional Papers 37, 2008, European Commission, Directorate-General for Economic and Financial Affairs. Brussels.

Diamond, A. R (1999), Does Federal Funding 'Crowd In' Private Funding of Science? Contemporary Economic Policy. 17.

Dollar, D. and Gatti, R. (1999), Gender Inequality, Income and Growth: Are Good Times Good for Women? Policy Research Department on Gender and Development. Working Paper No. 1.

Esfahani, H. and M. T. Ramíres (2003), Institutions, Infrastructure and Economic Growth. Journal of Development Economics 70: 443–477.

European Commission (EU-COM) (2003), Public Finances in EMU 2003. Brussels.

European Commission (EU-COM) (2008): Public Finances in EMU 2008. Brussels.

European Commission (EU-COM) (2014), Infrastructure in the EU: Developments and Impact on Growth, Occasional Papers 203. Brussels.

Eurostat (2011), Manual on sources and methods for the compilation of COFOG statistics - Classification of the Functions of Government (COFOG) – 2nd edition, Luxembourg.

Fedderke, J. and R. Garlick (2008), Infrastructure development and economic growth in South Africa: a review of the accumulated evidence. Policy Paper No 12. School of Economics, University of Cape Town and Economic Research Southern Africa.

Fritschi, T. and T. Oesch (2008), Volkswirtschaftlicher Nutzen von frühkindlicher Bildung in Deutschland. Eine ökonomische Bewertung langfristiger Bildungseffekte des Besuchs von Kindertageseinrichtungen. Studie im Auftrag der Bertelsmann Stiftung, Bern.

Guellec, D. and B. van Pottelsberghe de la Potterie (2000), The Impact of Public R&D Expenditure on Business R&D. OECD STI Working Paper 4.

Heckman, J. and F. Cunha (2007), The Technology of Skill Formation. American Economic Review 97(2), 31–47.

Heinemann, F., A. Bohne, P. Breithaupt, T. Doherr, G. Licht, T. Niebel, M. Thöne (2021), Studie zur Einführung einer Zukunftsquote. Im Auftrag des Bundesministeriums für Bildung und Forschung, ZEW Mannheim (*forthcoming*).

IMF (2013), Women, Work and the Economy: Macroeconomic Gains from Gender Equity. IMF Staff Discussion Note SDN 10/13, Washington D.C.

IPCC Intergovernmental Panel on Climate Change (2021), Sixth Assessment Report, Climate Change 2021: The Physical Science Basis, Geneva.

Kabeer, N. and L. Natali (2013), Gender Equality and Economic Growth: Is there a Win-Win? IDS Working Paper 417. Institute of Development Studies, Brighton.

Kalyvitis, S. and P. Kalaitzidakis (2002), Financing 'New' Public Investment and/or Maintenance in Public Capital for Long-run Growth? The Canadian Experience. Athens University of Economics and Business.

Lorgelly, P. K. (2000), Are there gender-separate human capital effects on growth? A review of the recent empirical literature. University of Nottingham.

Lucas, R. E. (1988), On the mechanics of economic development. Journal of Monetary Economics, Vol. 22, 3-42.

Mincer, J. (1974), Schooling, experience and earnings. Human Behavior & Social Institutions No. 2. NBER Books, New York.

OECD (2021), Climate Change and Long-term Fiscal Sustainability, Scoping Paper. Working Party of Senior Budget Officials, GOV/PGC/SBO(2021)4, Paris.

Öztürk, F. and A. Altun Ada (2013), Is Health Expenditure Important for Economic Growth in Selected EU Countries. The Empirical Economics Letters, January.

Phang, S (2003), Strategic development of airport and rail infrastructure: the case of Singapore. Transport Policy 10: 27–33.

Pradhan, R. P. and T. P. Bagchi (2013), Effect of Transportation Infrastructure on Economic Growth in India: The VECM Approach. Research in Transportation Economics 38: 139–148.

Prognos (2014), Gesamtevaluation der ehe- und familienbezogenen Maßnahmen und Leistungen in Deutschland. Auftraggeber: Bundesministerium der Finanzen und Bundesministerium für Familie, Senioren, Frauen und Jugend, Berlin.

Quirino, E., P. Macas Nunes and A. F. De Matos (2014), Public Investment and Economic Growth in Portuguese Sub-regions: Empirical Evidence Using Panel Data. Transformations in Business and Economics (13) 1.

Rodríguez-Vives, M. (2019), The quality of public finances: where do we stand? Economics and Business Letters 8 (2), 97-105.

Romer, P. M. (1990), Endogenous technological change. Journal of Political Economy 98.

Short, J. and A. Kopp (2005), Transport Infrastructure: investment and planning policy and research aspects. Transport Policy 12: 360–367.

Strauss, J. and D. Thomas (1998), Health, Nutrition and Economic Development. Journal of Economic Literature 36.

Strittmatter, A. and U. Sunde (2013), Health and Economic Development: Evidence from the Introduction of Public Health Care. IZA DP No. 5901.

Temple, J. (2000), Growth effects of education and social capital in the OECD countries. OECD Economics Department Working Paper 263.

Thöne, M. (2005), Wachstums- und nachhaltigkeitswirksame öffentliche Ausgaben (WNA), FiFo-Berichte Nr. 2, Köln.

Thöne, M. and F. Krehl (2016), Investing in Our Future. Empirical Evidence of the Impact of Public Spending on Inclusive Growth, Bertelsmann-Stiftung, Gütersloh.

Thöne, M. and S. Dobroschke (2010), Qualität der öffentlichen Finanzen - Anwendung des Ansatzes der EU-Kommission auf Deutschland, FiFo-Berichte Nr. 12, Köln.

Uzawa, H. (1965), Optimal technical change in an aggregative model of economic growth. International Economic Review. 6.

Wang, E. C (2002), Public infrastructure and economic growth: a new approach applied to East Asian Economies. Journal of Policy Modelling 24: 411–435.

Weil, N. D. (2006), Population Aging. NBER Working Paper No. 12147.

Wieser, T. (2021): The post-coronavirus fiscal policy questions Europe must answer, BRUEGEL Brussels.

Wößmann, L. and M. Piopiunik (2009), Was unzureichende Bildung kostet – Eine Berechnung der Folgekosten durch entgangenes Wirtschaftswachstum. Bertelsmann Stiftung, Gütersloh 2009.

Zouhar, Y., J. Jellema, N. Lustig and M. Trabelsi (2021), Public Expenditure and Inclusive Growth - A Survey, IMF Working Paper WP/2183, Washington D.C.

FiFo Discussion Papers / Finanzwissenschaftliche Diskussionsbeiträge

Eine Schriftenreihe des Finanzwissenschaftlichen Forschungsinstituts an der Universität zu Köln; ISSN 0945-490X.

Kostenloser Download: www.fifo-koeln.de. Discussions Papers can be downloaded free of charge from: www.fifo-koeln.de.

00-1 Thöne, M.: Ein Selbstbehalt im Länderfinanzausgleich?

00-2 Braun, S., Kitterer, W.: Umwelt-, Beschäftigungs- und Wohlfahrtswirkungen einer ökologischen Steuerreform: eine dynamische Simulationsanalyse unter besonderer Berücksichtigung der Anpassungsprozesse im Übergang.

02-1 Kitterer, W.: Die Ausgestaltung der Mittelzuweisungen im Solidarpakt II.

05-1 Peichl, A.: Die Evaluation von Steuerreformen durch Simulationsmodelle.

05-2 Heilmann, S.: Abgaben- und Mengenlösungen im Klimaschutz: die Interaktion von europäischem Emissionshandel und deutscher Ökosteuer.

05-3 Fuest, C., Peichl, A., Schaefer, T.: Dokumentation FiFoSiM: Integriertes Steuer-Transfer-Mikrosimulations- und CGE-Modell.

06-1 Fuest, C., Peichl, A., Schaefer, T.: Führt Steuervereinfachung zu einer „gerechteren" Einkommensverteilung? Eine empirische Analyse für Deutschland.

06-2 Bergs, C., Peichl, A.: Numerische Gleichgewichtsmodelle – Grundlagen und Anwendungsgebiete.

06-3 Thöne, M.: Eine neue Grundsteuer – Nur Anhängsel der Gemeindesteuerreform?

06-4 Mackscheidt, K.: Über die Leistungskurve und die Besoldungsentwicklung im Laufe des Lebens.

06-5 Fuest, C., Peichl, A., Schaefer, T.: Does tax simplification yield more equity and efficiency? An empirical analysis for Germany.

06-6 Fuest, C., Peichl, A., Schaefer, T.: Die Flat Tax: Wer gewinnt? Wer verliert? Eine empirische Analyse für Deutschland.

06-7 Kitterer, W., Finken, J.: Zur Nachhaltigkeit der Länderhaushalte – eine empirische Analyse.

06-8 Bergs, C., Fuest, C., Peichl, A., Schaefer, T.: Reformoptionen der Familienbesteuerung: Aufkommens-, Verteilungs- und Arbeitsangebotseffekte.

06-9 Ochmann, R., Peichl, A.: Measuring distributional effects of fiscal reforms.

06-10 Peichl, A., Schaefer, T.: Documentation FiFoSiM: Integrated tax benefit microsimulation and CGE model.

06-11 Peichl, A., Schaefer, T., Scheicher, C.: Measuring Richness and Poverty. A micro data application to Germany and the EU-15.

07-1 Fuest, C., Mitschke, J., Peichl, A., Schaefer, T.: Wider die Arbeitslosigkeit der beruflich Geringqualifizierten: Entwurf eines Kombilohn-Verfahrens für den Niedriglohnsektor.

07-2 Groneck, M. Plachta, R.: Eine natürliche Schuldenbremse im Finanzausgleich.

07-3 Kitterer, W.: Bundesstaatsreform und Zukunft der Finanzverfassung.

07-4 Brenneisen, F., Peichl, A.: Dokumentation des Wohlfahrtsmoduls von FiFoSiM.

07-5 Brenneisen, F., Peichl, A.: Empirische Wohlfahrtsmessung von Steuerreformen.

07-6 Fuest, C., Peichl, A., Schaefer, T.: Is a Flat Tax politically feasible in a grown-up Welfare State?

07-7 Groneck, M., Plachta, R.: Simulation der Schuldenbremse und der Schuldenschranke für die deutschen Bundesländer.

07-8 Becker, J., Fuest, C.: Tax Enforcement and Tax Havens under Formula Apportionment.

07-9 Fuest, C., Peichl, A.: Grundeinkommen vs. Kombilohn: Beschäftigungs- und Finanzierungswirkungen und Unterschiede im Empfängerkreis.

08-1 Thöne, M.: Laffer in Luxemburg: Tankverkehr und Steueraufkommen im Großherzogtum.

08-2 Fuest, C., Thöne, M.: Staatsverschuldung in Deutschland: Wende oder Anstieg ohne Ende?

08-3 Becker, J., Peichl, A., Rincke, J.: Politicians' outside earnings and electoral competition.

08-4 Paulus, A., Peichl, A.: Effects of flat tax reforms in Western Europe on equity and efficiency.

08-5 Peichl, A., Schaefer, T.: Wie progressiv ist Deutschland? Das Steuer- und Transfersystem im europäischen Vergleich.

08-6 Peichl, A., The benefits of linking CGE and Microsimulation Models – Evidence from a Flat Tax analysis.

08-7 Groneck, M.: A Golden Rule of Public Finance or a Fixed Deficit Regime? Growth and Welfare Effects of Budget Rules.

08-8 Plachta, R. C.: Fiscal Equalisation and the Soft Budget Constraint.

09-1 Mackscheidt, K.: Warum die Steuerzahler eine Steuervereinfachung verhindern.

09-2 Herold, K.: Intergovernmental Grants and Financial Autonomy under Asymmetric Information.

09-3 Finken, J.: Yardstick Competition in German Municipalities.

10-1 Mackscheidt, K., Banov, B.: Ausschluss und Zwang im Kollektiven.

12-1 Dobroschke, S.: Energieeffizienzpotenziale und staatlicher Lenkungsbedarf.

12-2 Mackscheidt, K.: Ein Szenario für 2017.

12-3 Brügelmann, R., Schaefer, T.: Der Einkommenssteuertarif verteilt stärker um als je zuvor. Eine Simulationsanalyse.

12-4 Thöne, M.: 18 Billion At One Blow. Evaluating Germany´s Twenty Biggest Tax Expenditures.

12-5 Colombier, C.: Drivers of Health Care Expenditure: Does Baumol´s Cost Disease Loom Large?

13-1 Mackscheidt, K.: Die gesetzliche Unfallversicherung im Systemvergleich.

14-1 Diekmann, L., Jung, A., Rauch, A.: Klimaschutz trotz knapper Kassen? Eine empirische Untersuchung zu Finanzierungsmodellen für Klimaschutzaktivitäten in Städten und Gemeinden.

15-1 Thöne, M.: Blockade beim deutschen Finanzausgleich – Ein Vorschlag zur Güte.

15-2 Braendle, T., Colombier, C.: What Drives Public Health Care Expenditure Growth? Evidence from Swiss Cantons, 1970-2012.

16-1 Mackscheidt, K.: Flüchtlingspolitik – Finanzierung durch Migrationssonderfonds und Erbschaftsteuer?

16-2 Mackscheidt, K.: Die schleichende Entstehung der Schuldenkrise in Südeuropa – und ihre Therapie.

16-3 Colombier, C.: Population Aging in Healthcare – A Minor Issue? Evidence from Switzerland.

16-4 Mackscheidt, K.: Der Weg in die Nullzinspolitik der EZB – Muss die Geldpolitik so bleiben, oder gibt es einen Ausweg?

17-1 Mackscheidt, K.: Zur Finanzierung einer Verlängerung der Bezüge bei der Arbeitslosenversicherung.

17-2 Mackscheidt, K.: Der Wandel in der Staatsschuldentheorie und die öffentlichen Schulden in Europa.

17-3 Bernard, R.: Political Fragmentation and Fiscal Policy: Evidence from German Municipalities

18-1 Funke, J., Koldert, B.: Kosten und Nutzen hausärztlicher Versorgungsmodelle

19-1 Jung, A., Koldert, B., Reuschel, S.: Interkommunale Schulkooperationen: Hemmnisse und Ansätze zu ihrer Bewältigung.

19-2 Jung, A., Koldert, B.: Mobilstationen im Stadt. Umland. Netzwerk – ein Versuch einer Begriffseinordnung.

19-3 Mackscheidt, K.: Der Bundeshaushalt und seine Nebenhaushalte bis 2030 – Drangsal und Hilfe.

19-4 Jochimsen, B.: Christmas Lights in Berlin – New Empirical Evidence for the Private Provision of a Public Good.

19-5 Barone, G., Kreuter, H.: Low-wage import competition and populist backlash: The case of Italy.

19-6 Jochimsen, B., Maina, A.: Consumption Taxes, Income Distribution and Poverty.

20-1 Mackscheidt, K., Maier-Rigaud, R.: Die Grenzen der beitragsorientierten Sozialversicherungen: Grundsatzüberlegungen zum Verhältnis von Beitrags- und Steuerfinanzierung.

20-2 Thöne, M.: Von der Schwierigkeit, tragfähig in die Zukunft zu investieren. Und wie es doch zu schaffen ist. Plus Nachbemerkung: Zukunftsinvestitionen in Zeiten der Corona-Pandemie.

20-3 Thöne, M.: On the difficulty of investing sustainably in the future. And how it can be done. Plus postscript: Future investments in the in times of the Corona-pandemic.

20-4 Breuer, C. and Colombier, C.: Debt and Growth: Historical Evidence.

20-5 Mackscheidt, K.: Die Empirie gegen eine neoliberale Wirtschaftspolitik. Buchbesprechung zu Banerjee und Duflo „Gute Ökonomie für harte Zeiten".

20-6 Mackscheidt, K.: Der vergangene Reichtum Venedigs und die zukünftige Wohlfahrt Europas.

21-1 Thöne, M.: Der Beitrag eines resilienten Finanzausgleichs zur Krisenbewältigung.

22-1 Mackscheidt, K.: Politik und Kultur von Karl dem Kühnen in Burgund.

22-2 Thöne, M.: The Quality of Public Finances.