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# The Nordic welfare model and welfare services – Can we maintain acceptable standards?

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A key feature of the Nordic welfare model is provision of welfare services like care, education and health. They are individual entitlements, and collectively financed. It is a prerequisite that contemporary standards of services are provided; thus the public solution is not a second rate solution used only by those who cannot afford better solutions. Can the Nordic welfare model meet this objective in the future? Increasing productivity and wealth challenge this. Services tend to have lower productivity growth and thus to become more expensive (Baumol's cost disease), but also to have a high income elasticity, and thus demands rise alongside improved material living standards (Wagner effects). The same implies to leisure, implying that tax bases may be eroded. In short, expenditures are on an upward drift and revenues on a downward trend, challenging the financial viability of the welfare model. This seems to leave a conundrum for the welfare state in the sense that the success of the model in improving living standards tends to undermine the possibility of attaining key objectives of the welfare state. It is argued that although the welfare state will be financially strained, these challenges can be met without jeopardizing its fundamental objectives.

**Keywords:** Baumol, Wagner, Welfare services, productivity

### Introduction

Why is it so difficult to make ends meet for the welfare state in affluent societies like the Nordic ones? Why are there never ending discussions about the quality and extent of public welfare services, not least public schools, health and care? Why are there continuous worries about the ability to finance the welfare state even when economies are growing?

These concerns reflect the role of welfare services like education, health and child/old age care as essential elements of the welfare society. They are accessible to all depending on need, and they are financed collectively via taxes. It is a premise that the solutions offered by the welfare state should be up to contemporaneous standards and meet the reasonable needs of most people. That is, public welfare services should not be second-rate only for those who cannot afford otherwise. They are offered to and meant to be used by all.

Welfare services are thus an important pillar of the welfare state, of equal importance to the social safety net. The services offered are essential at various stages over the individual life-cycle, and all citizens benefit from them. They play an important role also in terms of social inclusion and (re)distribution. Although the term "welfare" suggests that these services are essential to the living conditions and well-

being of citizens they are important for a well-functioning economy as well. Human capital is important for productivity and growth, and depends critically on education. Labour supply in both quantitative and qualitative terms is strengthened by education, health, and care. Welfare services thus serve the dual role of improving economic performance as well as individual well-being and welfare.

A fundamental dilemma is associated with these welfare services. Over time they tend to become relatively more costly to produce (Baumol's cost disease), because it is more difficult to increase productivity for some essential services, such as care, than it is for, say, traditional manufactured products. At the same time, demands for welfare services are increasing, because services tend to be valued more highly when material well-being increases (Wagner's law), and because new options become possible, not least within health. Providing welfare services of contemporaneous standards which meet the reasonable needs of most people is thus a moving target. At same time, improving material living standards may tend to increase the demand for leisure (shorter working hours, longer vacations etc.) with the implication that tax bases and thus tax revenues decrease.

All of this sums up to a financial challenge if welfare services are to remain of contemporaneous standards and meet the reasonable needs of most people. If, alternatively, expenditures are not allowed to increase, an increasing gap will evolve between the level and standard of welfare services provided and the need and expectations of citizens. Eventually the gap may reach a level where the strong support to the tax financed welfare model starts to dwindle. There is thus reason to address the dilemma of welfare services.

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The drivers behind the welfare service dilemma are not new and have been at work in the past. They have, however, been less visible because there has been fiscal space to accommodate them, among other things, via tax increases and expanding labour supply (not least female labour force participation). Empirical analyses show that expenditures corrected for wage and price increases have increased in the past two to three decades by more than can be explained by the number of people using various services. In short, standards have been improved. It would be naïve to think that this would not be so in the future. On the contrary, the dilemma of welfare services will be more visible both because we become richer and more options become available, but also because the fiscal space is restricted.

These challenges come on top of demographic changes. There is some difference across the Nordic countries in terms of fiscal sustainability.<sup>1</sup> While Sweden and Denmark via pension and other reforms meet the criteria for fiscal sustainability, problems remain in both Norway and Finland. However, and importantly, assessments of fiscal sustainability are made based on a crucial and critical assumption, namely, that current standards in welfare services are maintained unchanged over time. In short, the increasing needs and demands for welfare services as well as the options created by technological and other developments are not taken into account. Even if the ageing problem has been solved, there is no space in public finances to address the dilemma of welfare services.

This seems to leave a conundrum: Either fundamental principles of the welfare state would have to be given up, or taxes would have to rise to significant costs? The following argues that neither needs be the case and that it is possible to maintain the fundamental principles underlying welfare services in the welfare state, that is, universal access to tax financed services of contemporaneous standards.

The paper is organized as follows: Section 2 provides a brief overview of the role of welfare services in the Nordic welfare model, and section 3 explains the basic mechanisms of the wealth dilemma in terms of the so-called Baumol's cost disease and Wagner's Law. Section 4 discusses financing and productivity of welfare services, while section 5 discusses some modes by which to address the problems. Section 6 gives a few concluding remarks.

### Welfare services in the Nordic Welfare Model

The Nordic model is based on the principle of universalism; that is, the rights are universal and defined at the individual level (individual social rights) and the activities of the state are collectively financed by general taxation; see e.g. Esping-Andersen (1990).

The welfare model rests on two important pillars, the social safety net and provision of welfare services. Often the discussion of the Nordic model focuses on the social safety net and its relative generosity and broad coverage compared to other countries. This is surely an important element of the Nordic model.

As a key characteristic of universal arrangements it is of-

ten highlighted that they are not means-tested in the sense that access is independent of the ability to pay. However, social transfers are not universal in the strict sense of the term since they are provided to individuals without a (sufficient) market income, for example due to unemployment. Eligibility for transfers is thus strongly dependent on the economic position of the individual. A form of "means testing" is necessarily involved since it is a precondition that one does not have a (sufficient) market income. However, the universal principle holds largely for welfare services such as education and health care. This is an important element of the Nordic model which is often overlooked.

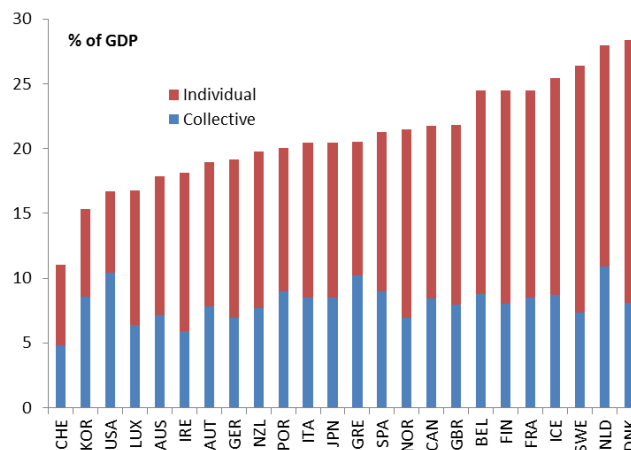


Figure 1. Public consumption – individual and collective components, OECD countries.

Note: Public consumption as a share of GDP split between individual and collective public expenditure. Note that GDP for Norway includes petro-activities. If expenditures are measured relative to mainland GDP, they are at the level of Denmark and Sweden. Data applies to 2012. Source: [www.OECDilibrary.org](http://www.OECDilibrary.org).

It is well known that the Nordic countries have large public sectors. For public consumption (see Figure 1), there is an important distinction between collective and individualized expenditures. The former refers to classic public sector activities like administration, policy, legal system, military and the like. The latter refers to solutions offered directly to individuals and which, in principle, could be offered by the market mechanism, the family or the civil society (public provision of private goods). The main items are so-called welfare services like education, health, and child- and old-age care. What makes the Nordic countries stand out is the extensive public provision of such welfare services, as shown

<sup>1</sup> According to recent assessments the sustainability indicator is -1.6 % for Sweden, 0 % for Denmark, 3.4 % for Norway and 3 % for Finland. The indicator measures the necessary permanent improvement in the public budget as a share of GDP needed to ensure that the present value of expenditures plus initial debt does not exceed the present value of revenues under current welfare and taxation systems taking into account demographic developments; see Andersen (2014b).

in Figure 1. These expenditures constitute about 2/3 of total public consumption. Importantly, they are provided on a universal principle since they are available to all and tax financed.<sup>2</sup> Therefore, service provision contributes to redistribution and equality beyond what is captured by standard income measures. The effect is significant as seen from Figure 2, which shows how much the standard Gini-coefficient computed over disposable income is reduced when services are taken into account.<sup>3</sup>

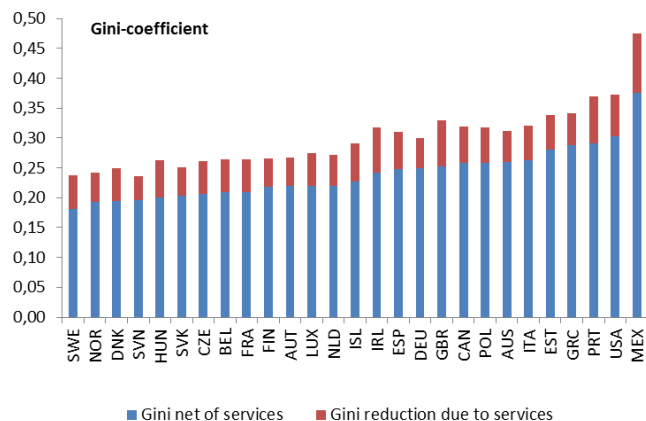


Figure 2. Redistribution via services, OECD countries.

Note: The full column gives the Gini-coefficient measured over equivalent disposable income (standard measure), and the bottom column is the Gini-coefficient when income has been corrected for use of services. The difference gives the reduction in income inequality when taking into account use of public services. Data applies to 2007. Source: OECD (2011).

## The wealth dilemma for public service provision

### The theoretical arguments

The welfare state faces a wealth dilemma. Financial strains on welfare arrangements may tighten precisely because society at large experiences continuous increases in income and standards of living due to higher productivity. First we turn to the theoretical arguments.

*The cost side.* Production of services may suffer from Baumol's cost disease. While productivity increases steadily for standard goods (food and manufactured products), productivity growth is lower or absent in service production. This applies in particular to activities intensive in human interaction such as care. It is the nature of the activity which is at the root of the problem, and not whether it is produced in the private sector or the public sector. Since wage developments are driven by the general level of productivity increases, and since wage developments across different sectors have to be fairly similar<sup>4</sup> to recruit workers, it follows that the relative costs of producing services tend to increase

over time. Given that the welfare state is a provider of essential services like education, health and care, it follows that it may be facing a permanent problem of rising costs.

Baumol (1967) raised the issue of how society will develop if there are ongoing productivity increases in the manufacturing sector (what he termed the progressive sector) and no productivity increases in the production of services (the non-progressive sector). If wage increases are the same across sectors, it follows that the relative cost or price of services increases relative to manufactured goods – this is what is known as the Baumol's cost disease. Baumol predicted an ever declining employment level in manufacturing, increasing employment in the service sector, and eventually a stagnant economy. This argument builds on the assumption that productivity growth in services is lower than productivity growth in manufacturing, while relative wages across sectors are constant.

There is empirical evidence in favour of both the productivity assumption and the implied structural changes. Empirical analyses show that services in general tend to have lower productivity growth than other goods and therefore their relative price tends to increase over time (see e.g. Nordhaus (2008) and IMF (2014)). Structural changes leading to a declining employment share in manufacturing (in the broad sense of including the primary and secondary sectors) and increasing employment shares in private and public services are observed in all OECD countries.

However, this does not necessarily imply that economies will stagnate. Ngai and Pissarides (2007) show that both facts are consistent with ongoing growth when capital goods needed both for manufacturing and service production are taken into account.

Although the Baumol cost disease applies to services in general and not whether they are provided by the private or the public sector, a number of authors have pointed to the particular difficulties it raises for tax financed service provision. Baumol (1993) predicted that an ever increasing share of the gross domestic product would be absorbed by the public sector, and thus eventually leading to a tax rate of 100%. Similar arguments have been made by Lindbeck (2006) and van der Ploeg (2007), among others. These doomsday implications rely, however, on the restrictive assumption that the private sector only produces manufactured goods, and the public sector is the only provider of services. Taking into account that there are also important services – even in countries with extensive welfare states as the Nordics – produced and financed privately, these implications do not automatically follow (Andersen (2014a)).

The problem with welfare services arises because financing via taxes is disassociated from the willingness to pay.

<sup>2</sup> There may be some user charges. This applies in particular to child-care.

<sup>3</sup> For a detailed analysis for Sweden see Andersson et al. (2012), and for Norway see Aaberge et al. (2010).

<sup>4</sup> Wage equality is not required, but the argument assumes constant relative wages. That is, wages in the public sector move proportionally to wages in the private sector.

Hence, even if willingness to pay increases, it is not unproblematic to increase tax due to tax distortions. In Andersen and Kreiner (2013) it is shown that if public welfare services can be taxed under the so-called benefit-principle where tax payments are tied to individual preferences for welfare services, then Baumol's cost disease does not pose a threat to the welfare state in the sense that a given distributional profile and the principles for public provision of services can be maintained. It is an implication that increases in productivity in manufactured goods lead to a Pareto improvement even when productivity in services cannot be increased and manufacturing productivity increases. While the application of the benefit principle in actual tax systems may be questioned, this result underscores that the Baumol problem is one of prioritization.

*The demand side.* The so-called Wagner's law essentially states that the demand for some services has an income elasticity above one; that is, the demand increases more than proportionally to an increase in income (for given prices). This is associated with Wagner because he already in 1883 predicted that there would be a tendency that services (the public sector) would increase in relative importance as economies become richer (see e.g. Dollery and Singh (1998)). Health is usually considered the most important broad class of services with a high income elasticity, see e.g. Hall and Jones (2007). Reducing morbidity and mortality is valued highly by most people, and when more basic needs are satisfied, improvements in health in particular. This is also fuelled by new possibilities. Life science – luckily – makes continuous advances in terms of new and better treatment of various diseases. When something is feasible, there is also an expectation that the public health care system should supply it. If not, it would fail to deliver services of contemporaneous standards which meet the needs of most citizens. The public health care system need not be at the possibility frontier, but it needs to follow it closely. Moreover, alongside more education and well-informed citizens, demand for public services may increase both because the public solution is challenged by users and because there is a demand for more choice to allow for adjustment and flexibility to the individual situation and preferences (one size does not necessarily fit all).

*Leisure and tax financing.* The main source of financing of the welfare state is (direct or indirect) taxation of labour income. If higher income and wealth induce people to demand more leisure (shorter work week, more vacation, earlier retirement etc.), total working hours decrease, which in turn reduces the tax base. The ability of the current tax system to finance welfare arrangements through this route may dwindle alongside increases in productivity.

The trend increase in leisure observed in most OECD countries may be interpreted as leisure having a high income elasticity. However, this view is challenged by Buera and Kaboski (2012) arguing that general productivity increases may induce a shift from home production to high skilled work in the market. Hence, leisure understood as time not at work

may decline. The argument is that the pay-off to specialization in services becomes much higher when general productivity is high, and this induces a substitution from home production in which most have low productivity to specialized services in which productivity can be high; in other words, the division of labour becomes even more specialized.

The sum of the three ingredients of the wealth dilemma, cost, demand and leisure, is increasing expenditures and dwindling tax revenue. In short it would challenge the financial viability of the welfare model.

### Empirical evidence

A brief look at the data confirms that the above discussed pressures on the welfare state are present. The first striking observation is that public consumption has remained fairly constant as a share of GDP since the 1980's at 26-27 % of GDP.

Hence, public consumption has grown alongside growth in GDP. Figure 3 displays growth in health spending over the period 1995-2009 and decomposes it to the part driven by changing age composition of the population, increasing income, and a residual. The residual may be interpreted as the consequence of Baumol's cost disease and standard improvements in service provision above a proportional adjustment to income. It is seen that the residual component is non-trivial. As an example, in Sweden expenditures, in particular on health, have increased by more than what can be explained in terms of demographics (see Andersen et al. 2014).

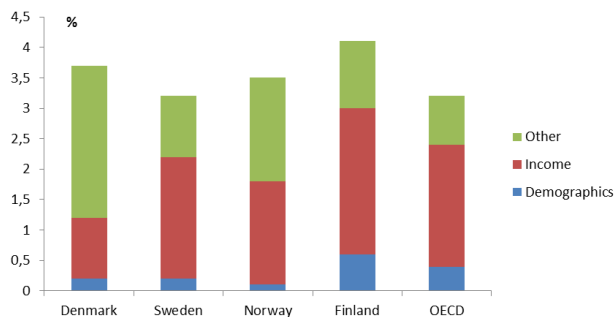


Figure 3. Public health spending, 1995-2009.

Note: Growth in real health spending per capita in 2005 PPP US \$. The demographic component is the expenditure change explained by the change in the age composition of the population. The income effect is the change explained by increasing income, assuming an unitary income elasticity, and other is the residual. Source: Own calculations based on data from OECD (2013).

In a forward perspective the effects can be large.<sup>5</sup> Figure 4

<sup>5</sup> It is also noteworthy that assessments of fiscal sustainability commonly point to Baumol's cost disease as an important driver of expenditures; see Andersen and Pedersen (2006). These aspects are included in recent assessments, see e.g. IMF (2012) and European Commission (2013), as well as a long list of specific country studies including Bates and Santerre (2013) on the US, Office of Budget Responsibility (2013) on the UK, New Zealand Treasury (2012) on New Zealand, and Regeringen (2013) on Sweden.

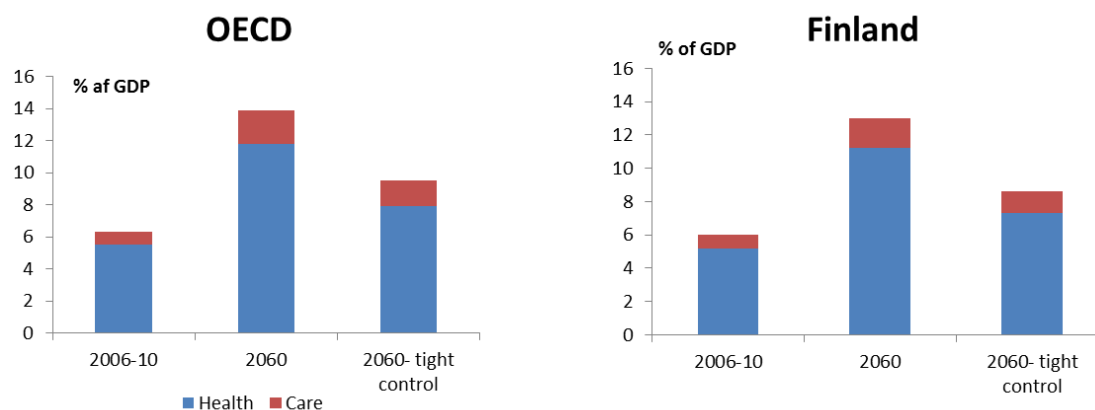


Figure 4. Projection of health and long-term care expenditures.

Note: Both scenarios assume a unitary income elasticity and healthy ageing. For the base projection – cost pressure case – full Baumol-effect is assumed for long-term care, and for the cost containment its effect is halved. Source: OECD (2013).

shows a projection of health and long-term care expenditures made by the OECD. As is seen, the expenditure increases are large and in the base scenario amount to a doubling of expenditures relative to GDP. Even in the so-called cost containment scenario the increases are large and raise significant financing issues.

Are there no productivity increases in public service production? When new knowledge and insights as well as new pedagogical approaches are applied, there are productivity increases in teaching, because more human capital is created for the same teacher input measured in, say, hours. The same applies in the health system when new and better ways of treatment are introduced. OECD (2006) makes a rather detailed analysis of health care. The analysis documents significant productivity increases. However, the advances paving the way for such improvements have also made new and better treatments available. In net terms, the latter has dominated and thus created an expenditure drift. Of course, this reflects that the new opportunities created have been used to improve standards in the health system.

Approaching the question of productivity in the public sector in a more systematic way brings up a fundamental problem. For private activities there is a market test of what is being produced – Is someone willing to buy and at which price? For publicly provided services the basic idea is that there should be no such market test. They are free (or almost free) to citizens who use them and financed by general taxation. The traditional national account procedure circumvents this problem by imputing the value of services produced by their input costs. While a pragmatic solution, it leaves the problem that productivity by definition is constant.<sup>6</sup>

These three ingredients underlying the wealth dilemma look like a recipe for a doomsday prediction for the welfare state. Increasing expenditures and decreasing tax revenue leave an ever growing financing problem. To give an idea about orders of magnitude, Figure 5 shows the implications for public finances of more leisure and increased stan-

dards in public service provision for Sweden. In both cases, the computations presume increases which resemble but do not exceed what has been seen historically over the last 30 years. The numbers displayed in the figure give the permanent financing requirements to accommodate the assumed increases in leisure and welfare standards. To accommodate an increasing leisure trend, the surplus target should be close to 2.5 % of GDP, to accommodate increased standards for services, it should be 4 % of GDP, and to accommodate both, it should be about 5.5 % of GDP. In short, the potential financial pressure arising from the wealth dilemma is large. Figure 5 also displays the financial implications of productivity growth in the public sector. Even a small annual growth (0.1 % per year) has a significant effect on public finances. However, to fully match the expenditure pressure from more leisure and improved standards as depicted in Figure 1, annual productivity increases in the order of 0.5 % are required. This is not out of reach, but it would not arise automatically.

It may be questioned why the wealth dilemma has not been more visible in the past if it is driven by such fundamental factors. The short answer is that this has not happened for three reasons. There has been a demographic tailwind with an increasing share of the population in the work-age population. For the Nordic countries approximately 40 % of women were not in the labour force in the 1970s (compared to approximately 10 % of men). In 2012 less than 20 % of women are outside the labour force, and for men the share remains close to 10 %.

<sup>6</sup> The European Commission has decided on a new approach whereby output-indicators should be used to assess public production, and thus also lead to possibilities of assessing productivity. In an application of this method it is found for Denmark that average productivity growth has been 0.8 % over the years 2005–2012; see Statistics Denmark (2014).

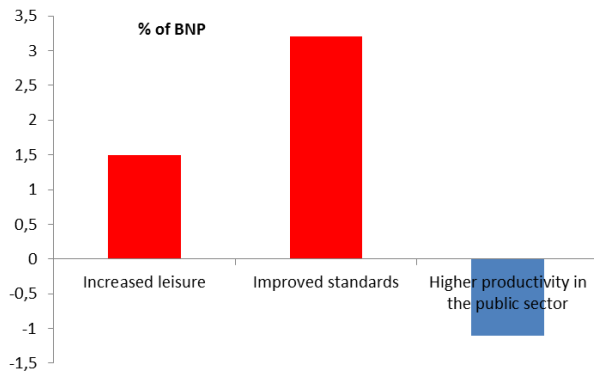


Figure 5. The wealth dilemma and public finances.

*Note:* The number shown gives the permanent effect on the public budget measured in % of GDP. The metric reported is the change in the sustainability indicator ( $S_2$ ), which in turn is the permanent requirement to the budget balance to ensure that the intertemporal budget constraint for the public sector is satisfied. Scenarios: i) More leisure: Average annual working hours decline by 0.1 % per year from 2018 until 2099 (approximately the actual change over the period 1980–2009), ii) Higher standards correspond to annual real growth of 0.2 % per year from 2018 until 2099 (actual increase above demographic causes has been about 0.7 % over the period 1980–2007), and iii) productivity increases in the public sector 0.1 % per year from 2018 to 2099. Source: *Vårpropositionen* (2013).

Moreover, whereas the tax burden in 1960 was about 25 % of GDP, it is now around 50 %; that is, it has been roughly doubled. In short, the ability to finance the welfare was expanded. Although details concerning the tax burden and (female) labour force participation can be discussed, in the future they cannot be expanded on par with what has happened historically. Therefore the wealth dilemma will become more visible in the future.

### Productivity and public sector financing

What are the possibilities of coping with the wealth dilemma? As a prelude to a discussion of this it may be useful to address some myths.

The wealth dilemma does not mean predicting financial chaos. It should be recalled that its source is increases in productivity and higher income and material well-being in society. It is not a process which makes society worse off, but a process which makes society better off. Everything that is feasible today will also be feasible tomorrow. It is not a question about the welfare state becoming “too expensive” and unaffordable. It can be afforded if there is a willingness to pay for it. The problem is that relative costs of producing certain welfare services may increase, that more or different services are demanded at the same time as leisure is increasing. This calls for prioritization, not disaster, hence the term wealth dilemma. More wealth does not make it trivial how to reach the objectives of the welfare state.

In political discussions it is often asserted that if growth<sup>7</sup> can be boosted, it becomes easier to make ends meet in the

financing of the public sector. An argument often pushed to avoid taking a stand on more problematic and controversial issues. But it is a myth that growth automatically alleviates the need for prioritization. Growth is important for the general level of material living standards in society. The fundamental driver is productivity; that is, more value added by working hour which in turn increases real wages and thus, incomes. It is obviously the case that more growth and thus higher income will increase tax revenue for given tax rates. But before concluding that this leaves fiscal space, we have to consider expenditures. Simplifying, the public sector has two main categories of expenditures, namely, so-called public consumption, which includes expenditures on welfare services and traditional public sector activities (administration, military, police, judicial system, etc.), and expenditures on various transfers constituting the social safety net. Let us consider them in turn. If inequality is not to increase with growth, it is required that the various transfers follow wage developments. If so, these expenditures will increase in proportion to improvement in productivity. Considering the consumption side, if public activities and thus employment levels are to be maintained and if public wages are to follow private wages (anything else would be difficult in the medium to long run if the public sector should be able to recruit employees), then these expenditures also increase in proportion to growth. Hence, we are left with growth increasing both tax revenues and expenditures proportionally, leaving no bonanza for policy makers. Or to put it differently, if two key elements of the welfare state are to remain intact — unchanged income distribution and supply of welfare services — then no degrees of freedom in public finances are created by more growth. Of course it is a political question whether fiscal space for welfare services should be created by, for example, letting transfers decline relative to wages, but this just underscores that growth per se does not diminish the need for political prioritization. Many details and refinements could be added to this line of reasoning, but the main thrust of the argument remains: It does not become easier to finance the welfare state as we become richer. Any demands for improvements will require that financing possibilities are created.

Whether the dilemma of welfare services presents a financial challenge begs a fundamental question. If citizens demand and want more welfare services, it seems to be a straightforward solution to increase taxes so as to match the financing contribution to the demands. Leaving political views on the size of taxes and tax burdens aside, it remains that general tax increases would have some negative economic side effects. Tax payments are not directly tied to the use and demand for welfare services. On the one hand, this is a virtue; it ensures that access to and use of welfare services do not depend on the ability to pay, which is a fundamental principle in the welfare state. On the other hand, taxes create a wedge causing the private return to work, education, and so forth to be lower than the social return; in other words, the

<sup>7</sup> The discussion here pertains to trend growth and not the question of how to normalize growth in the wake of the financial crisis.

incentive structure is distorted. It is a fundamental insight of economic theory that the distortions increase more than proportionally to the tax rate. Moreover, these distortions may increase due to globalization and other similar developments. Significant increases in taxes would thus have a cost in terms of lower material well-being. Hence, allowing taxes to increase to accommodate the dilemma of welfare services is a problematic route. This is not tantamount to the current tax system being ideal, and there is room for improvements.

*Substitution and innovation.* The Baumol cost disease is not a natural law in the sense that it or its consequences cannot be addressed. To discuss the implications and possibilities for adjustment induced by Baumol's cost disease and technological progress, it is useful to consider one of the examples Baumol used to explain the cost disease, namely music. Take live music in the form of one of Beethoven's quartets. At the time it was composed in the early 19th century, it took four musicians, say, 40 minutes to play it. Today it still takes 40 minutes to play it. Disregarding all other aspects (transport, organization of concerts, rehearsals, etc.), productivity is unchanged in terms of labour input — the output to input ratio is constant. However, the cost of producing music has increased because the wages of musicians have increased due to general productivity growth and thus general wage increases in society. Compared to food or clothing, the cost or price of producing that particular piece of music has increased significantly, but it is still affordable. If a person should work say 3 hours to afford a ticket to the concert in the early 19th century, it would also require 3 hours of work today. But the relative price has increased — the concert attendee can acquire much more food or manufactured goods for the price of the concert ticket today. The relative price has increased, and this may induce some to shift demand away from live concerts, not because they cannot afford it, but because they prioritize other things more.

Although productivity in the live performance of a Beethoven quartet cannot be increased without compromising the product, substitutes have developed. Via inventions going from the gramophone, fragile 78s records, LPs, tape recording to the streaming of music, access to music has become available at very low prices. More people can afford to listen to much more music today than in the late 18th century! These ways of listening to and enjoying music are not perfect substitutes to a live concert, but they are close substitutes. And they may have other advantages – you can listen to the Beethoven piece when and where you want and swiftly change to listen to one of your other favourite composers or bands. The fact that demand for such alternatives is high clearly reflects that customers find these alternatives to live concerts attractive.

This example has several implications of importance for the public provision of services; in particular two are worth discussing further, namely innovations and substitution.

The driver for innovation and product development in private markets is clearly to gain market shares and earn a profit. The inventor who can provide access to music at a lower price, higher quality and/or more flexible terms creates a

market. In the public sector there is by definition not the same automatic mechanism inducing innovation. There is therefore a fundamental question of how to induce innovation in public service production. In some cases, innovations relevant for private activities can also be used in the public sector (IT, robot vacuum cleaner etc.), while in other cases there is need for genuine innovations directed at the public activity. The latter may suffer from the problem that it tends to be driven by a top-down procedure. If the budget process is bottom-up and takes outset in the current way of arranging production, one can be sure that the Baumol cost disease will be present since nothing is done to mitigate it.

However, there is a further step, namely adaptation of new ways of producing public services (including the organization of work). The new technique has to be adopted, which again requires political initiative and therefore often is a top-down process. For private services it is more straightforward, prices disseminate the signal, and customers decide whether to substitute from live concerts to iTunes, a bottom-up procedure. For the public sector this is more complicated for several reasons. One is the already mentioned top-down procedure, which may be less adaptive than the bottom-up procedure. Second, since citizens do not see price/cost signals (they are not customers!), they will not automatically induce a shift, or even find one acceptable. On the contrary there may be a status-quo bias; why having robot vacuum cleaners at the nursing home rather than having it done in the old fashioned way by staff? Why change something which citizens have been accustomed to and which at face value seems to be well-functioning? A change can be difficult to implement if it does not have general public acceptance. Finally, reorganization of work within the public sector may be more difficult due to organizational forms and regulations, and collective agreements may also hamper this, for example strict rules on which types of labour can perform given tasks.

So-called welfare technologies are an important and interesting case in relation to productivity increases in the public sector. Welfare technology is a catch-phrase for the use of IT and automated processes in basic service activities like e.g. old age care. Such technologies cover equipment lessening the work load for staff in old age care institutions to solutions for monitoring and communication, and to aids which can compensate for physical handicaps or weakened physical capacity. Such technologies may actually reduce the need for manpower in the provision of welfare service and thus reduce the direct human interaction in these activities. Therefore this is often seen as “cold technologies” replacing “warm hands”, and consequentially they are often not perceived as close substitutes. However, the comparison is not that simple. These technologies also make it easier for old people to stay longer in their own homes, or to manage daily routines by themselves, and therefore strengthen independence, self-control and self-respect among the elderly. Finally, even disregarding such possibilities, the question is not that simple since public funds are not unlimited. Hence, if cost savings are possible, the consequences have to be assessed taking into account the benefits from alternative uses of resources.

The way the public sector is organized is crucial. If the

budget procedure is a simple adding up of the costs, it will automatically cement a procedure of business as usual, and Baumol's cost disease will be confirmed for sure. To mitigate it, specific actions are required. Productivity in services can be improved; new techniques and ways of organizing work make it possible to lower the costs of already available services and to develop close substitutes which are cheaper and offer better solutions. The question is how to ensure that this happens.

### Efficiency and productivity in the public sector

Considering provision of welfare services, it is important to distinguish between productivity and efficiency. By productivity we mean whether a given task is done in the best and most cost effective way, and by efficiency whether the right task is being performed (see e.g. Hjalmarsson (1991)). One may say that the former is a management issue, and the latter a political decision problem of deciding which provisions should be offered to the population. In this three roles are involved, namely:

- The organizing role
- The financing role
- The producing role

In the classical example of a welfare service, e.g. primary school or basic health care, the public sector acts in all three roles. That is, it is decided politically that the service should be available to the population, it is financed via general taxation, and it is produced within the public sector. The question is whether the public sector should always be active in all three roles. The fundamental objectives of the welfare state are related to the organizing and financing roles. It is not always obvious why the public sector should be in the producing role. The following discusses the producing role in some detail, and considers arguments for public or private provision to be preferred. The perspective is pragmatic in the sense of considering which way of organizing production leaves most "welfare for the money". The perspective here is how to improve productivity and efficiency in the production of welfare services so as to close the gap between needs and demands on the one hand and what the public sector can offer on the other. As long as the public sector retains the organizing and financing role it is hard to argue that a change in the division of labour between public and private providers implies a qualitative change in the welfare model.

Considering how the production role can be implemented in practice one may at the price of some simplification distinguish between four main models, summarized in Figure 6. I) The public sector is the provider and meets the citizen directly in the provision of the service (primary public schools), II) private providers are sub-contractors to the public sector delivering inputs, equipment, and so forth, which are used by the public provider to produce the service in case (IT solutions, catering at hospitals), III) a private provider is responsible for production but according to requirements

stipulated by the public sector and with tax financing (outsourcing) (collective traffic, garbage collection), and IV) the money follows the citizen (vouchers) who have the freedom to choose among private providers and possibly also public providers. Clearly the ingredients in these models can be combined in many different ways as they are in practice. This also applies to financing when there is some user payment or subsidy associated with use of a service.

The question is which of the four models to use in specific cases. Can productivity and efficiency in the production of welfare services be improved within public institutions, or are there gains by introducing elements of the market mechanism either on the producer side moving from model I towards model II or III, or the citizen or user side as in model IV?

*Who should be the provider?* The core issue is whether the provider should be public or private (Model I, II or III). This discussion easily gets ideological since it raises questions about markets and state. To some, markets should be allowed to work as much as possible, also in relation to welfare services, while marketization in this area is a red cloth to others. The following takes a more pragmatic view in an attempt to find better ways of achieving overall objectives of the welfare state. As noted, attaining the basic objectives of the welfare state does not depend on whether provision is public or private. It is equally misleading to have a target for the fraction of public activities to be outsourced as it is to have a target for employment within the public sector. Focus should be on ensuring that the provision is done in the best way for users and tax payers. This is in the first place a question about productivity in provision.

As a prelude it needs to be emphasized that an important rationale for public intervention and responsibility in the area of welfare services is market failures (incomplete market structures, imperfect competition, externalities, bounded rationality, etc.). Hence, the problem is not automatically solved by a simple privatization recipe. However, this does not imply that the market mechanism can play no role.

To discuss these issues it is important to make clear what is understood by the market, and what can be achieved by strengthening the market mechanism. It is well known that a competitive market process has strengths in terms of ensuring an efficient resource allocation and also under certain conditions, innovation. But it requires that markets are perfectly competitive, which requires a number of critical assumptions to be fulfilled. One is free entry and exit of firms. This is for many welfare services a first obstacle since it may be very difficult to meet this requirement both due to large fixed costs (irreversible investments) in setting up and operating production units like schools or hospitals, and due to geographical dispersion of the population. Scale requirements may imply that there is room for only a single or few suppliers (natural monopoly) and give incumbent providers an advantage. Opening a tender process in an area where there is only room for one (or a few) supplier(s) would inevitably create a monopoly situation, and neither cost efficiency nor innovative incentives are therefore ensured.



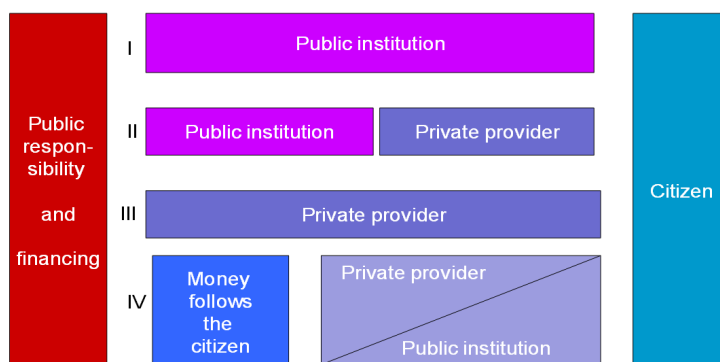


Figure 6. Different producer models for welfare services – public and private providers.

In relation to consumer choice it should also be noted that there is a difference between private markets and welfare services offered by the welfare state. In private markets the supplier can turn away difficult or problematic customers. This is not possible for welfare services, which should be available to all and where all are to be treated equally.

Private markets operate on a profit motive, and this in itself is often used as an argument against private providers for key welfare services. The argument seems to be that these services are so important that they are beyond the profit motive. Disregarding ideological motivations for this view, it is based on an unclear premise. If markets are perfectly competitive, there is no excess profit, and all factors of production are rewarded according to their marginal social value. This applies to labour, real capital, and the management skills of operating this activity. Efficient public provision would entail exactly the same costs. We are thus back at the crucial question of whether the market mechanism can be made to operate on competitive terms.

It is naïve to think that having a private provider is tantamount to having ensured perfect competition and thus cost effectiveness in the provision. At the same time it is important to stress that public provision is not automatically solving problems associated with market imperfections. Public provision runs through a bureaucratic system with the risk that the organization is not focusing on cost effectiveness and innovation but may cater for other objectives including rent seeking activities to the benefit of the management or employees. This system also suffers from the problem that politicians over-regulate and interfere in management issues, leaving insufficient flexibility at the management level (the classical central planner problem).

The discussion of management of public providers has in recent years been influenced by the so-called New Public Management line of thinking (see e.g. Pollitt and Bouckaert (2000)). This line of reasoning is very controversial and the

approach has been under severe criticism. While there certainly are many examples of mis-guided attempts at management guided by the principles of new public management, it is worth pointing out that the basic quest is how to ensure “value for money” in the public sector. This is a pertinent question which cannot be neglected or removed under the guise of various management slogans, see also Sørensen (2014).

*How to assess cost effectiveness and quality.* Irrespective of whether provision is public or private, an issue of delegation is involved. The organizing and financing decision is a political decision, and the role of provision is delegated either to a public institution or a private company. Delegation involves an implicit or explicit contract stipulating the task to be performed (quantity and quality) and resource needs (price). This raises difficult problems.

A major problem with welfare services is that there is no market test of the quality of the services provided. This is not to say that there is no information, but there is not a systematic mechanism as in a private market where the willingness to pay is a clear test that customers value the goods or services acquired. As discussed above, this is in national accounts solved by assessing output values by the value of inputs. A pragmatic solution to a difficult problem, which just underscores a fundamental information problem associated with public provision. It reflects that there is no systematic procedure by which to evaluate resource use against outcomes in quantitative and qualitative terms.<sup>8</sup>

This lack of information is crucial. It makes it impossible both to observe increases and decreases in productivity and hard to assess efficiency. Both are problematic and imply that the political decision process is impaired – How is it

<sup>8</sup> In two recent studies for Sweden it is concluded that knowledge about productivity developments in the public sector is incomplete and scant; see Hartman (2011) and Edquist and Hultkrantz (2013).

possible to make qualified decisions when key information is missing?

Of course, some information is available. We know the number of pupils and students, their grades at exams; we know the number of patients, number of operations, recovery and survival rates, and so forth. The point is that there is a need for a more systematic way of assessing output and relate it both to resource use and the extent to which the basic objectives underlying the particular activity are met as well as possible. We need to be able to assess improvements in productivity (more quantity or quality for unchanged resources) and innovations to strengthen efficiency and make product development.

Service provision requires decentralization irrespective of whether production is private or public. Politicians demand certain services to be produced and delivered to the citizens either by setting up a public institution or by contracting a private provider. The basic delegation issue is the same; perform a given task in a cost efficient way. If the activity can easily be characterized in terms of quantity and quality such that this can be monitored, delegation is simple. In situations where this monitoring is more difficult or costly, it is not generally clear whether private or public provision is better; for this, see the literature on so-called incomplete contracting, see for example Hart, Sleiifer and Vishny (1997) and the references therein.

An additional difficulty arises because the public sector not only provides services to the population, but also is an important employer. Public provision is often interpreted as implying that these activities are taken out of the market sphere. This is only partially correct since the public sector becomes an employer demanding labour to perform the needed tasks. A tension may thus be present between the public sector in its role vis-a-vis citizens and vis-a-vis public employees (which in turn constitute a non-trivial share of citizens and thus voters) which may be an obstacle to initiatives which can improve efficiency in the public sector.

The upshot is that when discussing private or public provision we are often comparing two imperfect systems – a bureaucratic system vs. an imperfect market system. Which is better is context-dependent and must be considered carefully. The key question is whether some of the virtues of the market mechanism (focus on cost effectiveness and innovation) can be brought into the provision of welfare services in the public sector via a more clear management structure (eventually supplemented by user choice and influence) or by out-sourcing.

*User choice.* The essence of welfare services is that use is disassociated from payment, but this also creates a difficulty. With direct payment by the user, there is a one-to-one relation between the demander and the supplier. For tax financed welfare services we have a triangular relation between the user, the political system, and the provider. That is, the political system decides on the basis of the preferences of voters/citizens/users the type and level of welfare services to be provided and tax financed, and the political system requests a public entity or private firm to provide the service to

the citizen. The payment relation is thus between the political system and the provider, and the delivery is between the provider and the user.

This structure creates fundamental information and incentive problems: i) How does the political system elicit preferences from voters/citizens/users to determine welfare services to be offered? ii) How is the level and quantity determined when users do not know prices? iii) How does the political system get feedback on quality and satisfaction? iv) How does the political system as the demander create incentives for the provider to be cost effective and to respond to user preferences? v) How does the provider get incentives to innovate?

All of these questions are addressed more easily in a traditional market setting due to the direct exchange between the demander and the supplier, of course, under the proviso that the conditions for perfect competition are present. The question is thus whether some of the virtues can be translated into welfare service provision without compromising the essential requirement that universal access is maintained to ensure equal access on equal terms for all citizens. This is the idea of model IV where user choice is introduced by letting the money follow the user; that is, the financing is still public, but the user gets a voucher and can freely choose a supplier. In this way the basic mechanism of users assessing quality relative to costs is activated.

This model has its limitations. High transaction costs, customer loyalty or the nature of the activity may make this difficult. Shift of supplier may be costly to the user in terms of explicit and implicit costs (making your child shift school has consequences in terms of losing friends, etc.) and the value of continuity (e.g., for old persons in care facilities). This creates a so-called customer market where customers do not readily shift supplier even if an alternative supplier may seem to offer slightly more attractive terms (price and/or quality). The mechanism of user voting by their feet is impaired in this case, which in turn gives the supplier some market power which can be exploited to increase price and/or lower quality. If decisions are fully or partly irreversible (schooling, hospital treatment), similar aspects arise. Individuals may have strong risk-aversion in such cases, tending to choose the safe and known rather than the new and uncertain option. From a welfare perspective it may also be both difficult and problematic to allow for consumer choice since bad decisions lead to ex post unequal treatment, which it may be more difficult to accept when the welfare state has the organizing role.

Another important assumption underlying perfect competition is complete information on the good or service being traded. In some important cases these information problems can be large. For example, in health there are substantial information problems on both the patient (knowing the symptoms but not the diagnosis and the relevant treatment) and the provider side (only treating the “easy” cases (cream skimming) or providing unnecessary treatments). This information problem is generic and has to be addressed.

This makes many welfare services so-called experience goods; that is, the quality characteristics are difficult to observe in advance and they are not used frequently by the citi-

zen (you only go to school once, occasional contact with the health care system etc.). In some cases it is even difficult to ascertain quality after use; how effective was the health treatment, for instance? In such cases users have to rely on third-party information (experience by friends, family, rumours, internet reviews, etc.) with the pros and cons involved in such types of information. In these cases consumer choice is not an effective means by which to ensure a competitive process.<sup>9</sup>

*User payments.* Finally, the principle of full public financing may be given up via user payments but at a price below costs (i.e. still subsidies). User payments are known in the Nordic countries also for key welfare services like health. User payments can have various rationales. When the welfare state offers services free of charge there is an issue of how to constrain demand. In private markets, prices serve that purpose. In principle, the service should be produced or offered at a level where the social benefits of the service match the social costs of producing the service. In general, this level of activity will be lower than the demand prevailing when users have costless access to the service since the price to the user is lower than the production costs. This implies a waste and thus misallocation of resources. Likewise, when new demands and needs are formulated for welfare services the pressure on the public sector may be particularly strong when these services are available at no cost to the individual (as discussed in Chapter 3). Although welfare services are costless to the individual they are not costless to society, and they have to be financed by taxes or savings on other activities.

In the absence of prices to constrain demand, the task is left to policy makers. The means to avoid "excess" demand is rationing in the form of queuing/waiting lists or gatekeepers to sort needing recipients from non-needing recipients. The idea is to allocate access to those in most need. However, these means of allocation are not without problems. Queuing imposes a cost in terms of time use and postponement of access on the user, and may introduce an arbitrary element in who is allocated the access (sufficiently patient to stay in the line). Gatekeepers may also make errors in turning away needing users and accepting non-needing users. In private markets, these roles are served by price signals. Those who find a commodity or service worth the price will buy it, and in this way resources are allocated to those who value the particular commodity or service the most. The disadvantage of the market mechanism is that need is not necessarily aligned to ability to pay. This is the distribution argument which is important for public provision of welfare services.<sup>10</sup>

Looking at this more generally we thus have two limiting cases. One is the standard case of private goods and services where the user pays 100 % of the price, and the other is publicly provided services which are free to the user where the share is 0 %. One may ask why we should be in either one or the other corner. Are there arguments for choosing a middle-position between the two extremes? User charge on the use of the welfare services has three immediate effects. First, it may reduce use or demand for the particular service,

which in turn leads to cost savings. Second, it provides some revenue. Finally, financing via user payments does not have the same distortion as general taxation since the payment in case of user payments is related to the demand and use, while it with general taxation depends on income and thus distorts incentives.

The more a user charge reduces demand, the larger the cost saving and the smaller the revenue accruing from the charge. How sensitive the use is to the user payment is thus of crucial importance. There is an international empirical literature on the effects of user payment within health and long-term care (cf. Kiil and Houlberg (2012)). For health services (like medicine, consultation with general practitioner, ambulant treatments, etc.), these studies do in general find that user payment reduces demand. The orders of magnitude are such that a one percent increase in the user payment reduces demand between 0 and 0.4 % depending on the specific service and country. There are fewer studies of the effects of user payments in old-age care, but there is also evidence that demand is reduced by user payments on such services. There is thus evidence that user payments can be used to affect the level of demand for services, which, in turn, has implications for both costs and revenue.

### Concluding remarks

The wealth dilemma pertaining to the welfare service dilemma differs from other challenges for the welfare state, such as ageing. When longevity is increasing and there are more old people in a society, it is not technically difficult to suggest solutions like more pension savings and later retirement – although such proposals may be politically controversial.

For the wealth dilemma the issues are more difficult but not unsolvable. Increasing wealth creates opportunities and the question is one of prioritization. While productivity increases may be lower for some welfare services, they are not necessarily absent. Productivity and efficiency in provision of welfare services can be improved. This requires innovation and substitution and development of more flexible solutions. The quest for "value for money" will be more visible with strained public finances; this applies irrespective of whether provision is public or private.

The upward trend in needs and demands can to some extent be mitigated by user payments. They are not likely to be

<sup>9</sup> In some cases public provision or intervention is motivated by some form of bounded rationality (e.g., myopia motivating mandatory pension savings), in which case consumer choice cannot readily be relied upon. In the presence of externalities this can also be an argument for restraints on consumer choices.

<sup>10</sup> While redistribution in the welfare state is usually associated with taxes and transfers, it is important to note that provision of welfare services also has an important role in terms of redistribution, see e.g. Andersson et al. (2012). The reason is that people with low income will often benefit the most from universal access to welfare services. As an example, a person with a health problem curtailing the ability to work will have a low market income but benefit from free access to health services.

a significant funding mechanism without jeopardizing distributional aims, but they may be used as a signal in measuring the strength of demand and thereby increase efficiency in provision of welfare services.

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