THE IMPACT OF MACRO-ECONOMIC CRISES ON NORDIC HEALTH SYSTEM POLICIES.

Denmark, Finland and Sweden 1980-2012

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Introduction

Denmark, Finland and Sweden have until now responded to the global recession of 2008-2009 and the following years of macro-economic uncertainty with rather mild austerity policies and relatively small cuts in their health systems. A political consensus to maintain publicly financed health care at a high level, and the organizational adjustments following the economic crises and recessions in the late 1980s (Denmark) and early 1990s (Finland and Sweden) has kept the impact on health systems relatively low until now.

The policy reactions to the previous and current crises – and to the economic growth periods between them - in the Nordic region can provide empirical illustration of the interaction between economic crisis and sector policy dynamics in countries with extensive welfare states and commitment to public health systems with core values such as universal coverage, solidarity-based funding and public control over the welfare services.

In a theoretical sense we are investigating health policy reactions to external economic shocks. External shocks may lead to disruptions in the societal and political conceptions of
appropriate policies, and changes in the institutionalized values, structures and processes in
the sector (Selsnick 1957, Suchman 1995, Alin, Boin and T’Hart 2011). Such external shocks
may thus contribute to breaking path dependent developments that are often considered to
be normal within health care (Wilsford 1994, Pierson 2000). The outcome of such processes
can be regarded as successful if they lead to a new balance between sector performance and
the expectations and values both externally and within the sector. Alternatively they may feed
into ongoing performance and legitimacy crisis for the institutional structure of the sector. In
this article we will analyze crisis reactions within the health policy sphere of three Nordic
countries in regard to the financial crises in 1980/90s and post 2007. We will assess the level
of policy response against general indicators of the severity of the economic crisis.

Our analysis of policy reactions in Nordic health systems is based on research literature,
official statistics and policy documents from Denmark, Finland and Sweden.

We have selected Finland, Sweden and Denmark as our case countries within the Nordic
region as they have all experienced two relatively severe economic recessions over the past
three decades. Norway is not included as the policy dynamics in this country appear to be
somewhat different due to the sheltering effect of its natural resources. Iceland has
experienced severe crisis, but is less comparable in size and geography. The studied countries
are relatively similar in terms of many important political and health systems variables
(Magnussen et al 2009), but differ somewhat in regards to timing and severity of the
economic crisis (explanatory variable). Analyzing and comparing the three countries provides
insights into the variety of health policy reactions to external macro economic shocks in the
Nordic countries.

Characteristics of the Nordic health systems

The three countries are categorized as Nordic welfare states, which with regard to health
system means funding mainly through taxation, service provision primarily by public
provider organizations, universal access for the whole population to all main services and a
significant role of local and/or regional authorities in the organization and management of the
services. In practice, the systems deviate somewhat from this ideal model as the countries
have developed different supplementary private funding arrangements and given room for
some private providers. Also, the countries differ to some extent with regard to division of
responsibilities of the local, regional and national authorities (Magnussen et al 2009).

During the last 25 years, the health systems of the three countries have experienced a range of
similar types of changes. For instance a substantial increase in number of physicians and
nurses but at the same time a decrease in number of acute hospital beds and average length of
stays in hospitals as well as management reforms and increases in private provision and
private sickness insurance. At the same time, the health care expenditures have varied,
although the general trend has been upwards both in absolute figures and as a percentage of
the GDP.

The economic crises (the explanans) in the studied countries
The three small export-dependent countries have experienced rather similar macro-economic developments, in terms of gross domestic product changes (Annex 1, figure 1) The low growth period of the late 1980’s in Denmark did not go as deep into negative side as the recessions in Sweden and Finland in the beginning of the 1990’s, but the Danish downturn lasted longer. After 1995 the trends were quite similar although Finland again experienced the deepest recession of the three, in 2008-2009. However, the fast recovery is noteworthy particularly in Sweden, which had an annual GDP growth of almost 6 % in 2010, while Denmark and Finland are experiencing a less impressive but still positive growth rate.

A major difference between the economic crises of the late 1980’s/early 1990’s and 2008-2009 may be seen in the unemployment trends (Annex 1, Figure 2). All three countries have survived the last crisis with significantly lower unemployment increase than during the earlier crisis. The figure also reveals a notable difference between the countries over time. Sweden has kept the unemployment rate at a lower level all the time. Denmark came down from a quite high unemployment level, after 1995. Finland started from a relatively low level in the 1980’s, but experienced extremely high levels during the early 1990’s crisis. The unemployment rate in Finland declined slowly after the 1990s, and the country met the 2008-2009 crisis from a higher starting level than the other two countries. Still, the relatively low unemployment rate in all three countries during the recent crisis has led to a favorable position in terms of an almost intact tax base.

A high level of general government gross debt has been a major concern of the European governments, particularly during the present crisis. According to the EU stability pact, the member states are urged to keep this indicator below 60 % of the GDP. All the three countries have succeeded in lowering their government debt significantly after 1995. Until now, the countries have also succeeded in keeping their debt level clearly below the EU ceiling, in contrast to most EU members states (Annex 1, Figure 3).

A core aspect of the macro-economic crisis of the early 1990’s in Finland and Sweden was the crisis of their banking systems and the devaluation pressures against their national currencies. They had used devaluation rather often in the 1970’s and early 1980’s and introduced floating exchange rates as a reaction to the crisis in the early 1990 (Kiander 2001). Later, they linked their currencies to the ECU. Finland joined the euro zone in the early 2000’s, whereas Sweden refrained from joining, keeping its own krone. The Danish Krone underwent several devaluations in the 1970s, but has been pegged to the European currencies (ECU and EURO) since 1982 through the European Monetary System and the Euro collaboration. There were few bank failures in Denmark during the 1980s crisis, but the current crisis has seen a number of failures of smaller banks, and downgrading of larger Danish banks. This has mostly been due to the drop in the domestic housing market, and poorly performing international investments (e.g. in Ireland). In overall terms, the impact of the crisis in the international banking system has only rather mildly spread to the Nordic banks.

*Changes in the political environment (a potential competing explanation or intermediating factor)*

The economic crises are taken as an explanatory factor for health system changes. Changes in the political environment may happen either independently from economic crises or as
intermediating between the crisis and health system changes. Without going deeper in the political development in the three countries, a few things may be mentioned.

A clear trend through three decades has been a decrease in the support for traditional left parties (Figure 4). A second trend has been an increase and variation in the support for new parties in the center and right, such as green parties and populist parties like the True Finns in Finland, Swedish Democrats in Sweden and Danish People's Party in Denmark. The support for the traditional established right-wing parties has varied without a clear long term trend (Annex 1, Figure 4).

In Finland and Sweden, the downward trend of the left was broken by a temporary rise immediately after the macro-economic crisis of early 1990’s. In Denmark, however, a temporary peak of the support for leading right-wing parties can be observed in the same period.

Although Esping Andersen (1990) and many others have labeled the Nordic countries as “social-democratic Welfare States”, only Sweden has had significant periods of a purely social-democratic government, between 1980-2012. Both in Denmark and Finland as well as in Sweden during liberal-conservative majority, the governments have been formed by coalitions of parties (Annex 1, Table 1).

Finland and Sweden had right-wing prime ministers at the beginning of both macroeconomic crises. They shifted to social-democratic lead coalitions during or immediately after the crisis in the early 1990’s. In Denmark there was a significant shift in government from Social Democratic led coalitions to Conservative/Liberal coalition governments in 1982. The inability of the Social Democratic government to handle the economic crisis was the main reason for the change, and the legacy of this has challenged the Social Democrats for many years. The Conservative/liberal government coalitions ruled Denmark from 1982-1993, and are generally credited for bringing the economy “back from the edge of the abyss” as one of the previous Social Democratic ministers of finance, Mr. Knud Heinesen, characterized the situation, when he resigned in 1979.

After the 2008-2009 crisis the countries have chosen different government coalitions. Finland shifted from center-left to a broad “rainbow” coalition, Denmark from bourgeois to social-democratic lead coalition and Sweden continued with a liberal-conservative coalition. An important legacy from the previous macro-economic crises has been that all governments, regardless of ideological orientation since the 1980s (DK) and 1990s (FI and S) have been committed to “responsible” economic policies, with an emphasis on balanced budgets and debt reduction. This meant that the three countries entered the 2007 crisis with public finances that were in better shape than in many other EU member states. Commitment to the EU “Stability and Growth Pact” has further reinforced this policy orientation.

It is impossible to identify any general relationship between the crises or reactions to the crises and the government coalitions. We assume that, at least partly, this reflects the diminished differences in macro-economic policy orientations of the different government coalitions.

**Theoretical perspective and research question**
The impact of a macro-economic crisis on a national health system may be theorized from the perspective of different scientific disciplines and theories. From a Keynesian macro-economic perspective one might understand health care as part of the broader welfare system, where sector policies are used as instruments for countercyclical reaction, keeping up demand and consumption levels during a recession (ref). Thus, we ask how health expenditure development is related to macro-economic fluctuations and are there institutional mechanisms or conscious policies that make health systems behave counter cyclically? In institutional terms we would then see mechanisms that ensure a continuation of health expenditure growth during a macro-economic downturn. Conscious policies could mean, e.g., health system infrastructure investments or expanding services and/or entitlements. (ref)

Political science theories talk about stability and disruption of path dependent development processes (Wilsford 1994). Policy systems such as health care are often assumed to be relatively resistant to change (Pierson 2000). However, major external shocks can lead policy actors to challenge the institutional structures and processes within a sector (Alin, Boin and T’Hart 2011; Selznick 1957, Suchman 1995). This can lead to a loss of legitimacy for existing sector institutional arrangements and challenges for the policy makers and stakeholders behind the status quo. Such challenges can lead to different types of outcomes. Alin et al (2011) distinguish between “reformist” and “conservative” response approaches, where the former represent major disruptions of existing institutional structures while the latter signifies gradual and limited adjustments to re-store order and re-balance or re-design in order to ensure a new “fit” with the changing contingencies. A “conservative” approach would thus in essence seek to re-establish a pre-crisis status quo, or at least ensure, that adjustments are minor or temporary, and without challenges to the existing path. A “reformist” approach would focus on establishing a new institutional structure, which is better in tune with external demands.

Some institutional changes may resemble what is referred to as “creative destruction” in Schumpeterian theorizing about the relationship between macro-economic cycles and innovation. The point is that crises can serve as opportunities to eliminate less efficient and innovative practices (Freeman 2008). In Schumpeter’s perspective this would occur “automatically” through market forces, whereas the equivalent in a non-market setting would be that regulatory actors intervene in regards to those actors (hospitals, local authorities etc) or processes (programs) that are not able to adjust to new contingencies through innovation and adjustment of practices face consequences in terms of intervention. The intervention could be in the form of closure or decrease in funding and service provision as adjustments to budget cuts and starting or increasing funding for more innovative services and organizations when cuts are over and there is again option for funding new services. From this kind of “Schumpeterian” perspective we ask whether it is possible to identify enhanced elimination of outdated practices and structures during the budget cuts and their replacement by more up to date practices and structures during the budget growth periods.

A particular analytical challenge is how to determine causality between the macro-economic crises and health system changes. It is difficult to distinguish direct crisis reactions from general policy changes that are influenced and shaped by a “crisis awareness”. It may also be advantageous for policy entrepreneurs to use crisis rhetoric, when promoting policies that are favored for ideological or other reasons. This is best captured by the commonly used phrase, that “you should never waste a good crisis”. In our analysis we investigate macro level descriptive statistics, that can illuminate policy changes and we discuss their relation to the
crises in the late 1980s (Denmark) and early 1990s (Finland and Sweden). Furthermore we discuss policy measures that have been implemented with reference to the recent crisis.

We created, on the basis of empirical studies on the impact of economic crisis on the health systems of the three countries, inductively a tentative categorization of typical policy reactions to crisis as presented in the following table. For each of the five typical reaction types we have elaborated how they might be shaped in accordance to conservative or reformist change strategies.

**Table 1. Categorization of changes in health care systems**

<table>
<thead>
<tr>
<th>Type of change</th>
<th>Conservative responses (path conforming)</th>
<th>Reformist approach (potentially path breaking)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction of total health expenditures</td>
<td>Minor adjustments in allocation of funding for specific programs</td>
<td>Elimination or major adjustments funding for programs&lt;br&gt;Privatization of infrastructure and operation</td>
</tr>
<tr>
<td>Cost shifting</td>
<td>Minor increases in client copayments e.g. for pharmaceuticals and long term care&lt;br&gt;Marginally stronger role for informal caregivers</td>
<td>Major increases in level and scope of private out of pocket payment or private insurances.&lt;br&gt;Significantly stronger reliance on informal care from relatives etc.</td>
</tr>
<tr>
<td>Cutting entitlements</td>
<td>Letting practical barriers to service use grow (waiting lists, higher user fees etc) without openly cutting entitlements</td>
<td>Elimination of programs or significant reductions in access to public services for all or selected groups</td>
</tr>
<tr>
<td>Increasing productivity</td>
<td>Temporary/limited wage constraints&lt;br&gt;Temporary/limited reduction of staff (e.g. reduction in temporary employment)&lt;br&gt;Gradually increasing demands for productivity at the institutional and individual level. Backed by control mechanisms, sanctions and incentives</td>
<td>Major reductions in wages and/or changes in working conditions&lt;br&gt;Replacing highly skilled with less skilled labor (e.g. nurses for doctors, or health assistants for nurses)</td>
</tr>
<tr>
<td>Structural changes and adjustments in power relationships</td>
<td>Reducing central state regulation of municipal health care organizations&lt;br&gt;De-privatization of health care production&lt;br&gt;Increased scrutiny and restrictions in autonomy or forced changes to management.</td>
<td>Closure, forced amalgamation, restructuring of administrative and delivery systems</td>
</tr>
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</table>

Based on the categorization above we ask what kind of changes in health systems and policies may be related to the macro-economic crises 20-25 years ago and 2008-2012 in the three countries.

**Previous research about policy changes as a response to financial crises**

There is extensive research on the expansion of health care expenditure and its relationship to macro-economic growth. However, studies on how recessions impact mature health systems are still rare. Generally, both the public health expenditure and the total health
expenditure have tended to grow faster than the GDP, in the OECD area. The proportion of total health expenditure of the GDP has tended to be the higher the higher the GDP. And even if the growth of the health expenditure seems to have slowed down in the 1990’s and the 2000’s, the proportion of GDP has still tended to rise as the slowing down of GDP growth has been greater than the slowing down of health expenditure growth. (OECD 1993; Mossialos & al 2002; Busse & al 2012).

There is also a substantial literature that emphasizes the resiliency of health systems against “normal” macroeconomic pressures and structural reform policies. The path dependency of the systems seems to be strong (Oliver & Mossialos 2005; Pierson 2001). Resiliency is mainly discussed with regard to health care reform pressures, but the reform pressures are often linked to the observed or assumed macro-economic limits for health expenditure expansion.

The macro-economic crisis in the whole OECD area, and almost globally, and the austerity policies chosen for adjusting to the macro-economic change have created new conditions for testing the resiliency of the health systems. There are many studies on the immediate adjustments with regard to the health systems (e.g. Mladovsky & al 2012; Cylus & al 2012; Keegan & al 2012; France & al 2012). There seems to be rather large variation between countries and between different crisis periods. It is evident that major macro-economic crises tend to break the continuity of health expenditure growth, and that the health systems have to adapt to this. At the same time, it appears difficult to gain accept for radical path breaking changes and to implement such measures even as adjustments to major economic crises. However, most of these studies have been looking for rather immediate impact of crises. The picture may be different in a long time perspective. With a longitudinal design, as in our case, such conclusions could more easily be drawn.

**Data and methods**

In the analysis we use official statistics, previous research and core governmental documents. We use official statistics on macro-economic and health system changes between 1980-2011. The data is derived from OECD Health Data and other statistics published by the OECD. While there are a number of problems for cross country comparisons by OECD Health Data (Cylus & al. 2012), the comparability of data for a given country over years can be assumed to be much better. Thus, comparing the national trends over 25 years is done on a more secure basis. With only three countries, we refrain from any advanced statistical analyses and limit our analysis to descriptive statistics. We also reviewed published analyses of the policy and system changes related to the crises in the three countries and re-read the results and conclusions of the analyses using the categorization presented above. Particularly for analyzing the ongoing adjustments to the recent crisis, we have searched through core government documents such as budget and law proposals and programmatic documents for an analysis of the changes and proposed changes in health systems related to the recent macro-economic crisis in 2008- . Also this analysis is framed by the same categorization as above.

**Results**

*Reductions of public health expenditure*
In all countries the total health expenditure, as a percentage of the GDP, has increased during the beginning of the macro-economic crises (Figure 1). A significant part of this increase is due to the decrease of the denominator, the GDP. Figures 1-6 compare the annual absolute changes in GDP and total health expenditure. We observe that also total health expenditure growth slows down during the times of macro-economic recession or severe depression. However, there seems to be a 1-3 years time lag between the times of lowest level of GDP change and the lowest level of total health expenditure change. The return to and increase in health expenditure also seems to be more rapid and strong than in the return to GDP growth. There are also years of negative total health expenditure development during periods of no significant macro-economic crisis.

*Figure 1. Annual total health expenditure (% of GDP) in Denmark, Finland and Sweden 1980-2010 (OECD Health Data 2012)*

![Graph showing annual total health expenditure (% of GDP) in Denmark, Finland and Sweden 1980-2010](image)

*Figure 2. Annual GDP growth (%) and total health expenditure growth (%) in Denmark 1980-2010 (OECD Health Data 2012)*

![Graph showing annual GDP growth (%) and total health expenditure growth (%) in Denmark](image)
There is also a significant difference in the relationship between health expenditure and GDP change in all the countries, between the earlier and the recent economic crisis until summer 2012. The drop in health expenditure has been much milder during the present crisis, particularly in Finland and Sweden. There are at least three alternative explanations for this: 1) the macro-economic crisis has been different, 2) adjustment options and policies to crisis have been different, or 3) there are problems with our data. In Sweden most likely, the stable unemployment rate, the strong government finances and the comprehensive rationalizations following the crises in the 1990s could explain the milder drop in health expenditure during the present crisis. The slower recovery in Denmark and the commitment to reducing public debt can explain the sharp decline in growth rates of health expenditures after 2009.
It may still be too premature to compare the two crises in the three countries, because the recent crisis still continues and may be turning into a second recession only two years after the first – to the so-called double dip or W-phenomenon, also in the Nordic countries. In any case we can observe that the 2008-2009 recession was more or less as deep as the recessions and depression in the early 1990’s. However, in all the countries the downturn in GDP growth was shorter in 2008-2009 than in the early 1990’s, and Sweden stands out with its remarkably quick recovery and a mean GDP growth of almost 6 % in 2010. The impact on health expenditure growth rates has also been less severe than in the previous crisis, particularly for Sweden and Finland, while Denmark experienced a negative growth rate in 2010 for the first time since the previous crises.

**Immediate and at least partly temporary cuts to the health expenditure**

The major measures for rapid adjustment of the health expenditure, in the 1990’s were constraints in wage policies and capital investments and prioritization of those health system reforms that could be implemented by targeted cutting of certain expenditure. In all three countries, the increase in the wages of the health sector slowed down at the end of the crisis. Also, the increase in the total number of health care jobs, mainly other than doctors and nurses, slowed down or even decreased for a couple of years following the onset of the crisis (Lehto & Blomster 2000; Socialstyrelsen 2012). Denmark has gone from a situation with a lack of professional staff in 2007-2008 to a situation where regions are firing doctors and nurses. Staff reductions and organizational amalgamations have also taken place in the central ministry and agencies in Denmark in response to significant budget cuts. All countries introduced health technology assessment and other prioritization instruments as an attempt to manage expenditures better. The impact of all these measures can be debated. An optimistic view argues that they have led to a more controlled growth rate, than might otherwise have been the case, while a more pessimistic view might emphasize that growth rates returned quickly to the previous levels. All three countries have experienced slower growth rates after the 2008 crisis, but only Denmark has experienced negative growth (in 2010). The reaction in the two other countries has therefore, until now, been less radical than during previous crises.

**Cost shifting**

Rather rapid adjustments could also be aimed at by accelerating the cost-cutting parts of certain structural reforms. The most significant examples are accelerating the trend of cost shifting from public sector to private funding of the system and deinstitutionalization of long term care.

The proportion of public sector funding of total health expenditure has slowly decreased over the study period. The decrease accelerated, in the years after the macro-economic crisis of early 1990’s. Both in Denmark and Finland the proportion returned somewhat, in the early 2000’s. Thus, the cost-shifting was partly a temporary adjustment to macro-economic crisis. Sweden, which started from a higher proportion of public funding, has continued the decrease over the entire study period, with a second more rapid drop in the beginning of the 2000’s – without a preceding major recession. The drop in Sweden is partly explained by increased dental and pharmaceutical co-payments at the beginning of the 2000s. Thus, a macro-economic recession is not the only reason for acceleration of this trend.
Figure 5. The proportion of public sector funding (%) of total health expenditure in Denmark, Finland and Sweden 1981-2009 (OECD Health Data 2012)

Structural changes
Deinstitutionalization of in-patient care is another structural change trend that has been advocated, also, as a way to decrease expenditure. There has been a steady downward trend in the number of hospital beds over the study period. Unfortunately, the international comparative statistical data covers only half of the study period (Figure 10), and there are more general issues of definitions and comparability of this kind of statistic. The downward trend in acute hospital beds accelerated slightly during the crisis of the 1990’s, while that of psychiatric beds accelerated more, particularly in Finland (Lehto & al. 1999). In Sweden, a considerable reduction of beds has taken place during the 2000s; there has been a 24 % reduction of acute hospital beds in the period from 2000 to 2010 (OECD, 2012).

Sweden implemented a radical management reform (Ädelreformen) of elderly care in early 1990’s by transforming the responsibility of long term care from the regions and health administration to the municipalities and social welfare administration (Socialstyrelsen 1996). The same type of reform took place within psychiatry in 1995. Danish municipalities had already assumed responsibility for elderly by a reform in the early 1970s. A stop for building traditional nursing homes from 1987 further accelerated the transition towards home based care. Finland implemented, at the same time a concerted transfer (Palvelurakennemuutos) of long term care from the regional somatic and psychiatric hospitals to municipal outpatient services, long term institutions and service housing (Lehto & al. 1998). A similar change was also advocated with regard to services for the disabled and substance abusers. While the original plan was also to increase less intensive outpatient and home services as a compensation of the cuts in hospital services, the cuts were implemented rapidly as adjustments to the economic crisis but the compensatory services were expanded much
slower and less than originally planned. The coverage of home care services for the elderly remained at a significantly lower level than before the recession of the early 1990’s, in Finland and Sweden. The coverage of these services is more extensive in Denmark than in the two other countries (Rostgard & Fridberg 1998, Rostgård and Szebehely 2012).

Figure 6. Number of acute hospital beds per 1000 population in Denmark, Finland and Sweden, in 1997-2010 (OECD Health Data)

The smaller number of hospital beds are used for a greater number of intensive treatment periods, day surgery and outpatient services. An illustration of this trend can be found in the Danish case, where the number of ambulatory visits to Danish hospitals increased by 32% from 2005-2010, while the average bed days per admission were reduced by 4 days in the same period. This has contributed to an overall rise in hospital productivity of 14.8% from 2003 to 2010, calculated as number of DRG points produced relative to funding (Ministry of Health and Prevention 2012). The same trend can be noticed in Sweden and Finland. For a number of procedures, the countries have experienced a shift from in-patient to day-case surgery during the 2000s (OECD 2012).

The combination of deinstitutionalization of elderly care and psychiatric care on the one hand and concurrent reductions in the number of hospital beds and increased numbers of treatment episodes in acute hospitals on the other hand, can be presented as increasing productivity of the system. However, because there is not very convincing data and analysis of the cost-effectiveness of the new intensive and de-institutionalized treatment and care arrangements, the development has to be looked at with some caution.

One aspect of the change both in hospitals and its alternatives is the upward trend in the number of physicians (Figure 7.) and highly educated nurses. The recession in early 1990’s does not seem to have impacted significantly on this trend, either immediately or with a time lag for changes in education and immigration or emigration of doctors and nurses.

Structural adjustment by health care privatization?

In addition to acceleration in privatization of health care funding, it is often assumed that the privatization of health care production tends to be an option preferred as an adjustment policy. Also with this respect, it is rather difficult to distinguish between a long term trend and the impact of economic crises. Both Sweden and Finland have experienced a slow privatization of the production of publicly funded services such as primary health care and long term elderly care, from the late 1980’s and onwards (Anell 2012; Szebehely 2011; Stolt &Winblad 2009, Stolt et al. 2011; Hakkinen & Lehto 2005). However, in some of the Swedish regions the number of private providers is increasing rapidly, especially within primary health care. A new law from Jan 2010 (Lagen om valfrihetssystem) has led to a 20 % increase in the number of private health care centers in the country as a whole. Some county councils have also decided to introduce a voucher system within specialist care which will also increase the number of private providers in the Swedish context (Blomqvist & Winblad 2012). Within elderly care the number of private provider is also increasing. Today, almost one fifth of the providers are private. It should be noted, that these are predominantly for-profit companies owned by international equity companies (Stolt et al. 2011). Also in Finland, elderly care has been the area of most rapid privatization. Private providers also play a stronger role in the provision of home care services for elderly in Denmark due to the “free choice” reform in 2003. There has also been a growth in private hospital providers fuelled by a waiting time guarantee, which has provided publicly funded access to private hospitals and clinics since 2002 for patients facing expected waiting times of more than one month. The liberal/conservative government (2002-2011) also implemented tax exemptions for employer contributions to VHI schemes. This has further fuelled the market for private health services, although the use of such insurance schemes has been much smaller than the uptake.
Unlike Sweden, Denmark has a long tradition for primary care delivery through privately practicing general practitioners and specialists. This has been maintained through the period and practicing specialists have benefitted from the general rules about waiting time guarantees and tax exemption for VHI.

Lehto & Blomster (2000) observed that during the previous economic crisis, in Finland, the proportion of private production in health care decreased. This “de-privatization” was explained both by decrease in people’s willingness to pay for private health services and by the fact that it was easier for the municipal and regional public organizations to cut contracts with private providers than to reduce the number of public employees. However, an increase in private provision can be observed later, during the growth period of private and public economy, in late 1990’s and early 2000’s (Stakes 2009). A large part of this later growth has been made by new and rapidly growing enterprises rather than the old local small ones (TEM 2011). Thus, a recession seems to eliminate some of the old service producers. This creates room for new producers to enter the field when the system starts again to grow. The new entrants in the Finnish market have been large, often multinational, care corporations, (Lehto 2009). Privatization of health funding was part of the policy reaction to crisis in Denmark in the 1980s (see fig. 5), implemented as adjustments to existing co-payment schemes (within dental care and for pharmaceuticals). Unlike Sweden and Finland there is no co-payment for visits to primary care or hospitals in Denmark, and there has been a political consensus to maintain this policy in spite of suggestions from policy analysts to adjust the overall pattern of user-payments. Also the private delivery market has been dominated by the long standing tradition for privately practicing GPs and specialists that are mostly funded by the public system, with a minor growth in private clinics and smaller hospitals in the past two decades. Some of these are multinational, but not to the same extent as in Sweden.

**Structural changes – de- and recentralization of the health care system**

The division of power and management authority between the different levels of government (national, regional, local) in the health systems of the three countries has been subject to debate and different reforms over the whole study period. The common trend has been operational decentralization to municipalities (Finland) and regions and municipalities (Denmark and Sweden) since the 1970s (Magnussen & al 2009). This trend of operational (managerial) decentralization continued through the 1980s e.g. with the the Ädelreform in Sweden that moved decision making on elderly care from the regional to the municipal level, during the deepest recession (Socialstyrelsen 1996). At the same time, Finland loosened much of the national regulation of health care and, thus, increased the power of municipal decision makers in the health system (Häkkinen & Lehto 2005). However, at the same time there has been a tendency to tighten the national level control with economic steering of health care, and more recently also through national standards, guidelines and quality control schemes. This centralization trend has been very pronounced in Sweden recently where the state has increased the use of national guidelines and monitoring within health care but also used regulation much more frequently than before (Fredriksson 2012). Denmark is another illustrative example of this trend towards stronger central control over economic issues. One of the most important instruments to control expenditures have since the crisis in the 1980s been the annual budget negotiations between the government and the regions/municipalities. These negotiations establish targets for expenditures and importantly also for tax levels at the decentralized level. This worked reasonably well as a flexible instrument for coordination of economic policy throughout the 1990s and early 2000s as decentralized authorities were
always facing the implicit threat of legislation og withholding the block grants in the following year. However, the central control was further tightened in 2007, as the government removed the regions’ right to issue taxes altogether, and with the implementation of a budget law in 2012, that introduces four year budgets and imposes automatic sanctions on municipalities and regions that run over budget. Another important development in Denmark (and in the other two countries) has been the gradual introduction since the 1980s of measuring and budget control systems based on DRG measures. This has allowed a much tighter monitoring of regional/municipal performance and has enabled various incentive schemes for decentralized authorities and providers. The activity performance measurement schemes have been supplemented by service and quality measurements in the last 10-15 years. Along with centrally set standards and (clinical) guidelines, this has further reduced the scope for decentralized variation in performance.

Finland and Sweden have implemented many of similar recentralization measures, particularly in the 2000’s, and the tide seems to be turning towards larger local and regional authorities in Finland (Saltman & al. 2012). Sweden has also tried to create larger regions but not with the same success as Denmark and Finland. The tightening of central control through economic steering mechanisms and performance monitoring can be seen as a legacy of the 1980s and 1990s crises, and arguable as significant, but quiet revolutions of the steering conditions in the Nordic systems.

**Cutting of health care entitlements**

The debates about proposed health care budget cuts in Finland have centered on cuts in supply and availability of the services. Mostly, the decisions on budgets at the national and local level are made with a wish that the provision is made more efficient so that the services of the inhabitants are not decreased in volume or quality (e.g. Lehto & Blomster 2000; ). In Denmark the hospitals have been subjected to demands of a 2% productivity increase per year. Technically this is done by setting a baseline for the production level, and increasing this baseline by 2% each year. Part of the budget is withheld until the baseline activity level is met. Payment for activity above the baseline is reduced to 50% of DRG rates, and to zero beyond a second threshold level. In Sweden the budget steering has not been as strict as in the other countries. The county councils are in charge of financing of services and all use different methods for reimbursement.

In the Nordic decentralized systems, based largely on public provision of services, and delegating the individual level access decisions to the grass root level professionals, the actual service availability consequences of budget cuts are often rather difficult to directly measure. The research conclusions about the consequences are often done on the basis of changes in supply and use of the services. The consequences on service quality can in principle be ascertained through the ongoing collection and publication of service and quality measures (e.g. Sundhed.dk in Denmark and the Danish accreditation scheme). In Sweden, quite substantial quality information about the health care providers, so called Open Comparison, is also published yearly since 2006. (SKL & SoS 2011). However, in practice it is hard to establish a direct link between budget levels and quality indicators, particularly since there are few instances of negative expenditure growth rates. Furthermore, there may be a

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2 The same applies, of course, also to the actual consequences of increased budgets.
tendency to present quality data in the most favorable light e.g by shifting attention and resources from the activity areas subjected to measurement, and away from areas that are less evaluated in terms of quality.

In terms of service use, the most obvious impact of budget cuts in the early 1990’s, was the reduction of the number of elderly covered by home care services, in Finland and Sweden (Rostgaard & Lehto 2001, Isaksson 2012). According to many experts, but not proven by harder data, also preventive health services were significantly affected by the cuts, in Finland (Lehto & Blomster 2000). In Denmark the waiting lists for some procedures during the 1980s and the lack of investment in new facilities e.g. for cancer treatment have been seen as consequences of the tight fiscal climate in that period. The overall picture is that overt cuts in particular programs or benefits are seldom, while general and gradual tightening of expenditure control is a pervasive instrument in all three countries.

In terms of increases in patient-copayments, interpreted as patient benefit cuts, the general trend is indicated in the decrease of the share of public sector funding of the total health expenditure (Figure 5). The co-payments for pharmaceutical drugs, dental care and long-term care of the elderly, as well as the sickness insurance reimbursements for the use of private health services, have been the major objects of crisis-induced increases, in Finland, in the 1990’s (Rostgaard & Lehto 2001). In Sweden the co-payments increased for dental as well as pharmaceuticals in the beginning of the 2000s and could therefore not be directly connected to any economic crises (ref). Co-payments for drugs, dental care and some other services increased somewhat during the crisis in the 1980s in Denmark, but have remained at a relatively stable level since then. Unlike Sweden and Finland, there is no co-payment for hospital treatment or visits to GPs in Denmark. It has been suggested e.g. by a recent government commission to introduce such a co-payment, while at the same time reducing the co-payment for other services (e.g. dental care, where utilization has a significant social bias), but so far it has not been possible to get political support for such a suggestion in spite of the economic crisis.

While the examples above describe changes in practice, the legal rights of the inhabitants to health service benefits have mainly remained the same over the study period. The right to influence one’s service has even been clarified by the introduction of legislation on patient’s rights, in Finland (1992) and Denmark (1992). Rights in Denmark were collected into the health law in 1998, and include the right to informed consent and right to access personal medical records etc. A waiting guarantee was introduced in 2002 giving access to private treatment facilities for patients with expected waiting times of more than one month in the public system. The general trend in Denmark has thus been to extend, rather than reduce rights. Unlike the other Nordic countries, there is no explicit patients’ rights law in Sweden. However, the present conservative-liberal government has made substantial efforts to increase the rights of the patients, for instance by introducing a mandatory waiting time guarantee and a patient choice reform within primary care (Winblad & Ringard 2009, Blomqvist & Winblad 2012). In Finland, the legal right to public reimbursement of dental care was expanded and waiting guarantee for hospital admission was introduced, during the economic growth period in the beginning of the 2000’s (Vuorekoski & al. 2008).

*Summary of the crisis reactions in the period since 2007*
As indicated earlier, the three countries seem to survive from the recent crisis with a shorter and less severe recession. This is mainly due to only moderate increases in unemployment rates which mean stable tax incomes, and a public debt level among the lowest in the EU. Also, the governments in all three countries have been very crisis aware and seem to have learned, at least to some extent, from their previous crises. They have rationalized their health and welfare systems and so their health systems may be in a more favorable position when the crisis hit in 2008. Also – at least by the summer 2012 – the reactions in health system policies to the crisis seem to be more moderate than 20–25 years ago. The government of Finland even declared that it will not repeat the austerity policy of the early 1990’s that had cost too high unemployment and other social problems (Vanhanen/Katainen 2009-2010). However, all the three countries stopped their health expenditure growth in 2009 and a number of common traits can be found in the reactions after 2008:

- attempts to restrict wage increases in Denmark and Finland
- increase in some co-payments, such as for pharmaceutical drugs in Finland and Sweden,
- investments in new hospitals were decided in Denmark before the crisis, but the crisis has meant that expected additional allocations to the projects have been prohibited
- promises about a decrease in management costs and ineffectiveness through centralization in the management structures in Finland. The new Danish hospitals plans from 2008 also build on centralization with the dual purpose of creating benefits of scale and improving quality through specialization.
- policy to continue the elderly care deinstitutionalization in Finland. Efforts to optimize rehabilitation and prevention of hospitalization in Denmark.
- Cuts in professional staff and administrative staff at the national level (Ministry and agencies) in Denmark.

**Discussion and conclusions**

Health systems changes are proposed also in absence of major economic crises. Most often mentioned drivers and/or motivations for health systems change are changing health care needs due to population ageing and increased expectations, changing health care technologies and growing difference between what kind of medical interventions are possible and what is economically feasible (Buse & al. 2005; Blank & Burau 2004). Health system changes are also assumed to be related to ideological, political and cultural changes, for instance to a shift towards “neo-liberalism”, “individualism” or decrease in the support for socialist and social democratic parties (Buse & al 2005). These drivers mostly develop slower and last longer than the macro-economic cycles.

There are changes in health systems that seem to be dependent on such longer term drivers. For instance, we claim that the decrease in beds in somatic acute hospitals and the increase in the total number of highly educated health personnel, particularly of physicians, are more related to the changing health technologies than macro-economic cycles. The cycles do not seem to significantly impact on these developments (figures 6. And 7). We also claim that the increase in the consumption of medical drugs and the changes in the long term care systems are more related to the aging of the population and to the changing health technologies. It
may also be argued that the privatization of the provision of health care is more driven by changing ideological and political climate.

In contrast to some other welfare state institutions, the Nordic health systems do not seem to act counter cyclically, in a "Keynesian" way. There is a 1-3 years time lag between a drop in GDP and a drop or stop in health expenditure growth. This can be understood as institutional inertia. During periods of macro-economic growth, it is even more difficult to observe any counter cyclical behavior in health systems. Rather, economic growth induces a more rapid health expenditure growth – indicated in the growth of the proportion of health expenditure of the GDP.

We also asked, whether we could observe any "Schumpeterian" relationship between the renewal of the health systems and the macro-economic cycles. This would mean "creative destruction" of old and ineffective elements of the system as a reaction to recession which would create room for new and more effective elements to grow during the following period of macro-economic growth. "Schumpeterian" may, in the highly regulated and subsidized Nordic health care markets, be understood mainly as an analogy, because the dynamics of this market may be quite different from the market assumed in the Schumpeterian theory. However, we found indications of a renewing impact of macro-economic cycle, in the long term care system developments, at least in Finland. The adjustments to recession killed old and ineffective provider organizations and care patterns, which created room for new providers and patterns to grow rapidly, during the following growth period. This aspect of the impact of the macro-economic cycle needs more detailed research, to be proven.

A general conclusion is that the health system policy reactions to the crises of the late 1980's and early 1990's, in the Nordic countries, were more severe than to the crisis of 2008, until now. This may be interpreted, at least partly, as a result of success in macro-economic policy, public sector and health system reforms after the crises of the late 1980's and early 1990's. Both the economy in general and health system as part of the public sector policies were better prepared for macro-economic hardships, in 2008.

The main reactions to the economic crises of the late 1980's or early 1990's, in the three countries, may be located to the side of conservative or temporary institutional changes in the table 1 at the beginning of this paper (table 3.) Yet, it can also be argued that the earlier crises initiated developments towards greater centralized control by the gradual development of measuring and accounting systems such as DRGs, and by institutionalized negotiations and agreements over budgets, backed by the implicit threat of intervention or legislation. Denmark has gone the furthest in this direction by eliminating the right for regions to issue taxes, and by introducing a budget law with automatic sanctions if regions/municipalities run over budget. These types of changes are important legacies of the crisis management in the 1980s and 1990s, and have been reinforced by the current crisis. Arguably they amount to a rather significant gradual reform of the previously very decentralized Nordic health systems.

With regard to most of the changes related to the macro-economic crises, the crisis does not seem to be the initiator of the permanent change. Rather, the crisis has accelerated the changes already prepared before the crisis, and gives motivation or opportunity window for implementing changes. We claim that the major structural changes in the Nordic health systems have been considerably accelerated by the previous crises, around the shift from the
1980's to the 1990's. Sometimes, the crisis may have delayed a change process, as indicated in the temporary “de-privatization” of some elements of health care, in Finland, in early 1990's.

In contrast to the permanent changes, the Nordic countries seem to have applied temporary changes as immediate adjustments to crises. Wage constraints for a couple of years, delays in investments to new buildings and technology, perhaps letting the waiting lists to grow or restricting choice, are among such temporary adjustments.

Table 3. Changes in health care systems in Denmark, Finland and Sweden as reactions to crisis in the 1980s, 1990s and post 2007

<table>
<thead>
<tr>
<th>Extent of change</th>
<th>Minor institutional changes (path conforming)</th>
<th>Major institutional changes (potentially path breaking/paradigmatic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of change</td>
<td></td>
<td></td>
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<tr>
<td>Reduction of public expenditures</td>
<td>Few examples in the 1980s (DEN, SWE) and early 1990s (FIN, SWE).</td>
<td></td>
</tr>
<tr>
<td>Cost shifting</td>
<td>Some increases of co-payments in the 1980s (DEN) and 1990s (FIN). A slow trend towards larger share of copayments of the total health expenditure</td>
<td>Few overt cuts in entitlement. Tight fiscal control led to de facto restrictions in access, and waiting times in some areas through the 1980s/1990s. Reduced coverage of the long term care and home care for the elderly (FIN, SWE) since the early 1990’s. <em>Extending rights</em>, particularly during the growth period in the late 1990s and early 2000s (choice and waiting time guarantees, DEN, FIN, SWE)</td>
</tr>
<tr>
<td>Cutting entitlements</td>
<td>Few overt cuts in entitlement. Tight fiscal control led to de facto restrictions in access, and waiting times in some areas through the 1980s/1990s. Reduced coverage of the long term care and home care for the elderly (FIN, SWE) since the early 1990’s. <em>Extending rights</em>, particularly during the growth period in the late 1990s and early 2000s (choice and waiting time guarantees, DEN, FIN, SWE)</td>
<td>“Cultural” change among administrators and health care professionals to accept demands for productivity/efficiency increases</td>
</tr>
<tr>
<td>Increasing productivity/efficiency</td>
<td>Ongoing pressure since the 1980s/1990s for increasing productivity/efficiency <em>Institutionalized expectations of annual productivity increases</em> (for instance of 2% in Denmark)</td>
<td>“Cultural” change among administrators and health care professionals to accept demands for productivity/efficiency increases</td>
</tr>
<tr>
<td>Structural changes and adjustments in power relationships</td>
<td>Privatization trend of some parts of health care provision (FIN, SWE). Movement towards more managerial governance patterns of hospitals and other health care producer organizations</td>
<td>Gradual development of extensive and detailed budgeting and accounting systems to control decentralized authorities Movement towards larger regional authorities and fusions of small municipalities (DEN, FIN) Tighter institutionalized negotiations between national and local authorities on budgets (FIN, SWE) and economic sanctions for budget overruns (DEN)</td>
</tr>
</tbody>
</table>

References (Incomplete):


Saltman, Richard & Vrangbaek, Karsten & Lehto, Juhani & Winblad, Ulrika. Article in Eurohealth, forthcoming


Annex 1.

*Figure 1. Annual GDP change (%) in Denmark, Finland and Sweden 1980-2010 (OECD Statistical Database)*

*Figure 2. Annual unemployment rate (%) in Denmark, Finland and Sweden 1981-2010 (OECD Statistical database)*
Figure 3. General government gross debt (% of GDP) in Denmark, Finland and Sweden 1980-2011 (Nordstat 2012; Eurostat 2012)

Figure 4. The share (%) of established left parties (DEN: Social democrats and Socialist party FIN: Social democrats and Left Union; SWE: Social democrats and Left party) and the leading bourgeois parties DEN: Liberals (Venstre) and Conservative party, FIN: Coalition party (Kokoomus), SWE: Moderate Party of all votes (Finland) or seats (Sweden, Denmark?) to the national parliament. (Statistics Denmark 2012, Statistics Finland 2012, Statistics Sweden 2012) I could not find data for DEN before 1991)
<table>
<thead>
<tr>
<th>Country</th>
<th>Political composition of the government</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEN</td>
<td>1980-1982 SDL (Jørgensen IV and V)</td>
</tr>
<tr>
<td></td>
<td>1982-1993 PBP (Schlüter I-IV)</td>
</tr>
<tr>
<td></td>
<td>1993-2001 SDL (Nyrup Rasmussen I-IV)</td>
</tr>
<tr>
<td></td>
<td>2001-2011 PBP (Fogh Rasmussen I-III, Lokke Rasmussen I)</td>
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<tr>
<td></td>
<td>2011- SDL (Thorning-Schmidt I)</td>
</tr>
<tr>
<td>FIN</td>
<td>1980-1987 SDL (Koivisto II, Sorsa II)</td>
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<tr>
<td></td>
<td>1987-1991 CSR (Holkeri I)</td>
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<tr>
<td></td>
<td>1991-1995 PBP (Aho I)</td>
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<tr>
<td></td>
<td>1995-2003 SDL (Lipponen I-II)</td>
</tr>
<tr>
<td></td>
<td>2003-2007 CLL (Jäätteenmäki I, Vanhanen I)</td>
</tr>
<tr>
<td></td>
<td>2007-2011 PBP (Vanhanen II, Kiviniemi I)</td>
</tr>
<tr>
<td></td>
<td>2011- CSR (Katainen I)</td>
</tr>
<tr>
<td>SWE</td>
<td>1980-1982 PBP (Fälldin II-III)</td>
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<tr>
<td></td>
<td>1982-1986 SDL (Palme II)</td>
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<tr>
<td></td>
<td>1986-1991 SDL (Carlsson I-II)</td>
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<tr>
<td></td>
<td>1991-1994 PBP (Bildt I)</td>
</tr>
<tr>
<td></td>
<td>1994-2006 SDL (Carlsson III, Persson I)</td>
</tr>
<tr>
<td></td>
<td>2006- PBP (Reinfeldt I)</td>
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