



(I can't get no) satisfaction: A comparative study of healthcare recommodification in Europe, 2010-18

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ABSTRACT

European health reforms during the last decades have strengthened patient rights and introduced choice, competition and financial incentives in a sector that has typically been state-directed and centrally controlled. The marketisation of health care has also drawn out profit and introduced private provision. The main argument behind this trend is that market competition will improve service quality and deliver health services more efficiently. Such reforms often fall under the umbrella of New Public Management (NPM), and there is a lack of empirical research on their effects. The purpose of this paper is to investigate the association between healthcare marketisation and health system outcomes across European nations. In order to measure a country's degree of healthcare marketisation we employed indicators of healthcare decommodification. The concept refers to the extent to which an individual's access to healthcare is dependent upon their market position and the extent to which a country's provision of health is independent from the market. These indicators are three measures that assess the financing, provision and coverage of the private sector, and thus reflects the varied role of the market in a health care system: private health care expenditure as amount of GDP, private hospital beds as amount of total hospital bed stock, and public healthcare coverage. As indicator of health system outcome, we employed a measure that has not previously been investigated in the context of healthcare marketisation: satisfaction with health care system. We used multilevel analyses on five waves (2009–2017) of the biannual European Social Survey (ESS), with our final models including more than 120,000 individuals from 21 countries. Our methodological approach allowed us to study both cross-sectional and longitudinal relationships. The strongest substantial associations were between coverage and satisfaction, with high public healthcare coverage being associated with higher satisfaction.

1. Introduction

European health reforms during the last decades have strengthened patient rights and introduced choice, competition and financial incentives in a sector that has typically been state-directed and centrally controlled. The main argument behind this trend is that market competition will improve service quality and deliver health services more efficiently. The marketisation of healthcare can be seen as part of the rise of neoliberalism and is thus also about drawing out profit and introducing private provision (Schrecker and Bambra, 2015). Such reforms often fall under the umbrella of New Public Management (NPM), and typically involve the introduction of competition, business-like management principles, patient rights and patient choice, activity-based financing, separation of purchasers from providers, closer

monitoring of performance, and performance-based contracts. There is, however, still inconclusive evidence on the impact of such reforms (Dranove and Satterthwaite, 1992, 2000; Gaynor and Haas-Wilson, 1999; Sage et al., 2003; Gaynor, 2004; Cooper et al., 2011). One strand of research has focused on competition and ownership of healthcare delivery, but suffers from many limitations, and is dominated by data from American hospitals (Cooper et al., 2011; Gaynor et al., 2013; Bloom et al., 2015) or studies of low- and middle-income countries (Basu et al., 2012). Another extensive literature has addressed the impact of marketisation on healthcare quality and inequalities, suggesting mainly inconclusive or negative effects (Gelormino et al., 2011; Footman et al., 2014; Bambra et al., 2014). A subfield of this literature has focused on the concept of recommodification in the study of the effects of neoliberalism on health and health inequalities (see Schrecker

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and Bambra (2015) for an overview). The central argument of this literature is that the reforms have recommodified healthcare by making individuals' access to healthcare more dependent on an individual's ability to pay, and therefore largely on his or her labour market position (e.g. Farrants et al., 2016, 2017; Farrants and Bambra, 2018). While these studies have found associations between recommodification and the magnitude of health inequalities both over time and between countries (Labonté and Stuckler, 2016), there is still a lack of comparative country studies of marketised and non-marketised health systems.

This is the first study to investigate the association between healthcare marketisation and satisfaction with health services across European nations. Following the growing literature on healthcare marketisation (Farrants et al., 2016, 2017, Farrants and Bambra, 2018), we employed the theoretical framework of recommodification for our study. Whereas the research field on recommodification have mainly focused on health outcomes and health inequalities, the subject of this study is on satisfaction with the health system. By supplementing the studies of health and health inequalities with analyses based on health services evaluation, we are able to provide a broader picture of the role of marketisation. Given that previous studies have indicated that recommodification is linked to ill health among the unemployed (Farrants et al., 2016) and increasing inequalities between the employed and unemployed (Farrants and Bambra, 2018), it is certainly of interest to investigate whether recommodification is also associated with the population's overall evaluation of the health services. Measures on satisfaction are increasingly used in international comparisons of health systems. Healthcare satisfaction is an alternative way to measure healthcare quality and performance, and the results are typically used to identify whether a system is performing sufficiently well and to identify areas where it can improve (Busse et al., 2012). There has consequently been growing interest in measuring satisfaction with the health services and health system performance (Bleich et al., 2009; Busse et al., 2012; Papanicolaos et al., 2013).

The recommodification of healthcare may impact individual satisfaction primarily through reduced access to and poorer quality of healthcare. The fiscal sustainability of health systems is under pressure in many European countries due mainly to ageing populations, technological developments and increasing population demands. This has been used by many governments to justify a variety of austerity measures in their health systems, such as reduced public spending, higher taxes, the introduction or increase of user fees for health services, reduced benefits and increased co-payments for medicines (Freeman and Moran, 2000; Rothgang et al., 2005; Schrecker and Bambra, 2015). Such austerity measures have been particularly exacerbated by the financial crisis, and the recommodification of healthcare can be seen in the context of this development. Whereas a decommodified health system minimises the role of markets and secures access to services through citizenship (Farrants et al., 2017), the last decades have seen several European countries implement major changes in their health systems that often combined establishment of market mechanisms with increases in co-payments and reductions of the benefit package (Freeman and Moran, 2000; Rothgang et al., 2005). It is therefore of great interest to uncover how the recommodification of healthcare has affected public evaluation of European health systems. Citizens are recipients of the health services, and their opinions can be important in shaping health policies. They can provide feedback on the quality and responsiveness of services and may bring legitimacy and accountability to the policy-making process (Judge and Solomon, 1993; Mossialos, 1997; Blendon et al., 2001; Bhatia et al., 2009; Munro and Duckett, 2015).

Building on survey data from European countries, we utilised the most recent data available. We used multilevel regression analysis on five rounds of the European Social Survey (ESS) from 2010 to 2018, including over 120,000 respondents from 21 countries. Satisfaction was measured through a question that asked the respondents to rate the overall state of health services in their home country. In order to measure a country's degree of healthcare marketisation, we built on a health

decommodification index originally constructed by Bambra (2005a) to reflect the financing, provision and coverage of the private sector. To account for the many potentially confounding differences between countries, we estimated various sensitivity analyses that controlled for welfare and health system types.

The paper proceeds as follows. The next section outlines the introduction of markets and private sector involvement in European healthcare. Section 3 then gives an overview of previous research on the impact of healthcare marketisation on health outcomes. Section 4 presents the data material, empirical model and methods, while section 5 reports the results. The findings of our analyses are discussed in section 6, before section 7 contains the concluding remarks and policy implications.

2. Health reform and healthcare marketisation in Europe

The appropriate role of the private sector and competition in healthcare has been the subject of debate for several decades (for more thorough reviews, see e.g. Akinci, 2002; Blank et al., 2017). The advocates of more market typically argue that it is more efficient and responsive to patient needs because of competition, which can overcome government inefficiency. Further rationales for marketisation are to encourage innovation, develop more user-sensitive services appropriate for a particular community or context, and to give the purchasers and consumers a stronger voice through increased choice and competition (Saltman and Figueras, 1997). Market-oriented mechanisms may reduce costs of provision of hospital services, thus making limited health care funds have more impact, even in systems with primarily public hospitals. A number of countries that have previously not had significant market-based mechanisms for health services have thus taken steps to introduce such policies, including France, Germany, the Netherlands, Norway, Sweden and the United Kingdom.

Several factors have driven this growth in healthcare marketisation. In many European countries the increasing financial burden of governments, combined with a desire to improve the resource allocation to health services, has put pressure on the public health sector. An important driver of the health reforms has therefore been the wish to contain costs. Increased consumer demand for choice, technological and organisational innovations, long waiting times and geographic differences in quality and services provided have also played an important role in many countries (e.g., Saltman and Figueras, 1997; Blank et al., 2017).

In several countries the marketisation wave was also part of a neoliberal ideological project to roll back the state in favour of private initiative and capital (see e.g. Schrecker and Bambra (2015) for a useful overview). The rise of neoliberalism is usually associated with the elections of Margaret Thatcher in the UK in 1979 and Ronald Reagan in the US in 1980, and is best understood as a multi-dimensional development which included concrete policy programs and innovations (such as welfare state entrenchment and 'workfare'), more general reorganisation of state institutions (such as privatisation and contracting out), and an ideological dimension. The neoliberal doctrine can be briefly summarised in three main assumptions: the belief that markets are the normal, natural and preferable way to organise human interaction (since they maximise freedom of choice and/or efficiency), that the state's primary function is to ensure the efficient functioning of markets, and that institutions or policies that lean on other mechanisms than markets would need justification (Ward and England, 2007; Schrecker and Bambra, 2015). The neoliberal reforms thus set out to dismantle and restructure the welfare state, thereby breaking down the post-war settlement between labour and capital (Schrecker and Bambra, 2015). The specific policies and mechanisms that have been adopted vary across countries, but a common characteristic is the introduction of privatisation and markets into welfare services, often combined with restrictions in entitlements and increased qualifying conditions, as well as a shift towards targeting and means testing. Another typical feature is the

modification of funding arrangements, shifting away from business taxation, and an increased emphasis on an active rather than a passive welfare system (Bambra, 2010).

Except for the most fervent neoclassical economists, most would agree that a pure market approach will work badly in health care. Consequently, when markets are involved, healthcare is typically provided in the context of regulated markets. While the debate has had a tendency to evolve around 'state versus market', it is important to remember that market-style mechanisms may include a number of other solutions. 'Market' has come to be synonymous with a variety of financial management mechanisms and tools that operate within the public sector and typically fall within the NPM framework. In Europe, policies have oscillated between regulation and markets, and between measures that favoured the growth of the public sector or encouraged expansion of the private sector at the expense of the public sector (Atun, 2007). On the supply side, these include regulated competition, the use of incentive-based contracts, the introduction of private providers to create contestability in a publicly dominated sector, and independent management models. On the demand side, the introduction of choice and a strengthening of patient rights leads patients to behave more like consumers in 'ordinary' markets. A number of countries use a combination of market-style incentives and public-sector ownership; an approach that has been labelled internal market, public competition, as well as quasi-market (Magnussen et al., 2009).

Many of the European health reforms the last decades have combined an increase in co-payments and a reduction of the benefit package (Freeman and Moran, 2000; Rothgang et al., 2005). Such market-inspired reforms have been introduced even in NHS-type countries (Magnussen et al., 2009). These health policy reforms can therefore be seen as part of a process of recommodifying healthcare: it has made access to healthcare more dependent on individual's ability to pay, and therefore largely on his or her labour market position. As we will see in the next section, there is little research on the impact of healthcare marketisation in general, and on healthcare recommodification in particular. Critics of the reforms have therefore consistently questioned whether the aims of improving quality, stimulating innovation and promoting equity have been achieved, arguing instead that the reforms increase inequalities in access and reduce quality (Farrants et al., 2017).

3. The research on healthcare marketisation

Despite the many research efforts to uncover the impacts of privatisation and marketisation of health systems, the evidence is still weak and inconclusive. In a review of the effects on quality, Footman et al. (2014) concluded that "the evidence base suggests that the privatisation and marketisation of health care systems does not improve quality, and that most financial and organisational system-level reforms have either inconclusive or negative effects" (p. 498). In a companion review of the evidence on equity, the conclusion was that the reforms have had either inconclusive or negative impacts also on health equity both in terms of access relative to need and in terms of health outcomes (Bambra et al., 2014). Similarly, a literature review of the effects on health inequalities of European health care reforms found that out-of-pocket payments increased inequalities in access to care and contributed to impoverishment, while decentralisation might lead to geographic inequalities in health care access (Gelormino et al., 2011).

A growing research field is studying how welfare states affect population health, building on comparative data typically from OECD or European countries. A review of the literature showed that they tend to cluster around three dominant indicators: welfare regimes, welfare state effort, policies and spending, and welfare governance (Muntaner, 2011). While these studies have analysed the relevance of factors such as welfare state structure (Bambra, 2005c; Chung and Muntaner, 2007; Eikemo et al., 2008), political ideology (Navarro and Shi, 2001; Navarro et al., 2006), quality of government (Menon-Johansson, 2005; Klomp and de Haan, 2008) and welfare state spending (Chung and Muntaner,

2006; Olsen and Dahl, 2007; Lundberg et al., 2008) for a number of indicators on health (mortality, life expectancy, birth weight rates, self-rated health), none of them have explicitly addressed the effects of marketisation and privatisation of health systems.

Of most relevance for our case is the small but growing literature that have looked specifically at the effect of recommodification on health status and inequalities. Bambra (2005c) investigated whether there are significant differences in health status between health system types and whether health status is related to decommodification, building on data from 18 OECD countries from 1980 to 1998. She found that infant mortality was negatively correlated with decommodification in both 1980 and 1998.

Farrants et al. (2016) analysed the impact of recommodification on health inequalities between the employed and unemployed in Sweden and England. Recommodification was measured by the average production net replacement rate provided by the unemployment insurance for a single adult, while the outcome variable was self-rated health adjusted for age and sex. The study found that health inequalities increased between the employed and unemployed in both countries between 1991 and 2011, but that this change was more closely associated with the recommodification of unemployment benefits in Sweden.

In a later study using survey data, Farrants et al. (2017) investigated whether the increase in user charges had an impact on educational inequalities in access to health care in Sweden between 1980 and 2005. The results were stratified by self-rated health, and showed that the recommodification of healthcare in Sweden due to the requirement for out-of-pocket payment was not associated with increased educational inequalities. The explanation offered for this is the Swedish welfare state's ability to protect the vulnerable against rising healthcare costs, through for instance charge caps.

In a third study, Farrants and Bambra (2018) examined the recommodification of the social determinants of health in Sweden. Using time-series survey data from 1980 to 2011, the study investigated three research questions: the effects of reductions in the replacement rate value of unemployment benefit on inequalities in self-rated health between the employed and unemployed, the effects of reductions in the replacement rate value of pensions on educational inequalities in self-rated health among pensioners, and the effects of the increase in user charges on inequalities in doctor visits by educational level. The results indicated that health inequalities increased between employed and unemployed, but not among the retired or in access to healthcare.

Marketisation in healthcare is a broad term that does not capture adequately the many variations and meanings of the term. Even when defined carefully, evaluation of the impact of marketisation is difficult (Goddard, 2015). In order to capture the role of marketisation within mainly public health systems in European countries, we need an indicator that reflects the introduction of more private sector and market-style incentives. And, equally important, such an indicator of the varied role of the market must allow for comparisons across health systems. For this reason, we have turned to the concept of decommodification, which is a useful instrument allowing for such an analysis. Inspired by the previous research on recommodification, we used this concept to investigate whether there is a relationship between healthcare marketisation and how European populations value their health systems.

4. Data and methods

The study is based primarily on the five latest waves (5th to 9th wave, 2010 to 2018) of the European Social Survey (European Social Survey, 2021). ESS is an academically driven cross-national survey that has been conducted across Europe since its establishment in 2001, and there is widespread consensus about the high quality of ESS data, even in direct comparison to other surveys of similar purpose and scope (Kolarz et al., 2017). Our original data set included a total of respondents from 21 countries and 67 country-year groups of the European Union (EU)

and the European Economic Area (EEA) in the years after the financial crises of 2008 and the following austerity measures. Data collection was based on face-to-face interviews with individuals aged 15 and above living in private households. Response rates ranged from 28 per cent in Germany in 2018 to 77 per cent in Portugal in 2012, and are overall similar to previous rounds of the ESS. In this paper the individual-level ESS dataset is accompanied by country-level data from the OECD Health Statistics (2018a; 2018b; 2018c). The country-level indicators are linked to the individual-level survey data from the subsequent year (i.e., OECD data from 2009 is linked to ESS data from 2010 and so forth), assuming that changes in healthcare financing and provision does not have immediate effect on citizens' satisfaction. All data manipulation and analyses were performed in Stata MP 16.

4.1. Dependent variable: health services evaluation

Our dependent variable was based on a question asking respondents what they think overall about the state of health services in their home country nowadays, using a scale from 0 ('extremely bad') to 10 ('extremely good'). Answer categories 'refusal', 'don't know', and 'no answer' were coded as items missing; the variable was otherwise kept as is.

4.2. Healthcare recommodification

The explanatory factor in focus is a country's degree of health care marketisation. To capture this, we turned to Bambra's (2005a) concept of health decommodification. Bambra constructed a health care services decommodification index through the assessment of the financing, provision and coverage of the private sector. These measures are said to reflect the varied role of the market in a health care system: the larger the size of the private health sector, in terms of expenditure and consumption, the larger the role of the market and therefore the lower the degree of health decommodification. Based on Bambra's health decommodification index, we used the following three indicators: 1) *private health care expenditure (PrivHE)* as an amount of the gross domestic product (GDP), indicating the amount of private health care financing; 2) *private hospital beds as an amount of total hospital bed stock*, indicating the extent of private provision at a practical level within the health care system; and 3) *public health care coverage*, expressed as the amount of the population covered by the public health care system.

Given that the original index was a relative measure, based on deviations from average scores across countries, it is problematic to use it in an analysis including longitudinal components. Calculating the index and using it for each year does not make sense, as it is always a relative measure. A country's underpinning health care factors (e.g. % private provision) might not change one year, but if other countries do better or worse, their relative score will change. Furthermore, while the index provides a general measure of marketisation, it might include cases where a country scores high on one or two of the indicators and low on the third, thus cancelling each other out. We therefore used the three separate indicators that constitutes the index as independent variables, entered separately and together (bivariate and multivariate models).

4.3. Controls

Obviously, a quantitative comparative study of recommodification across European countries must consider the variations in specific policies and system characteristics. We therefore included health system type as control in our model to pick up some of the variation due to health system differences across Europe. We controlled for two different typologies in separate models: 1) an expansion by Eikemo et al. (2008) of the classic welfare state typology by Esping-Andersen (1990), which originally separated between liberal, conservative and social democratic regimes, where additional regimes covering Southern and Eastern European welfare states were added; 2) the most recent and comprehensive

health system typology so far, proposed by Reibling et al. (2019), a fivefold typology which differentiates between "supply- and choice-oriented public systems" (Type 1), "performance- and primary care-oriented public systems" (Type 2), "regulation-oriented public systems" (Type 3), "low-supply and low performance mixed systems" (Type 4) and "supply and performance-oriented private systems" (Type 5, Switzerland and the US, neither participating in ESS). The typologies utilised in our analyses are displayed in Table 2.

The different typologies were constructed on the basis of cluster analyses of country-level indicators. Our final study sample of 21 countries was the result of available data at country and individual level, and there are discrepancies when we compare our study sample of countries with the typologies above (for more details, see appendix). As an additional sensitivity analysis, reported in the appendix Table A.4, we also tested the healthcare decommodification typology suggested by Bambra (2005b).

4.4. Multilevel analysis

Multilevel analysis was performed on the ESS data through three steps, assuming that individual respondents were nested (1) in country-year groups and (2) in countries. First, we ran an empty or "baseline" model without any explanatory variables and calculated intra-class correlation for health system satisfaction: approximately 16.1% and 18.9% of the variation were located at the country and country-year level, respectively ("Baseline" model in Table 3). This baseline model was further used as a reference point when assessing the regression models. Second, the three variables composing the decommodification index were added, first separately and then together. These variables were decomposed into (1) a cross-sectional component – a mean variable for each country across all survey years, and (2) a longitudinal component – a centered variable calculated by subtracting the country mean from the time-varying country-level variable. This technique enables us to identify separate cross-sectional and longitudinal associations between variables at the individual and country-year level, meaning that both between- and within-country effects can be calculated (Fairbrother, 2014). If a time-varying independent variable is not mean-centered, a single coefficient intercepts both within- and between-effects, making results difficult to interpret (Schmidt-Catran and Fairbrother, 2015). The longitudinal variable captures the within-country variation and is thus similar to a «fixed effects» approach, effectively controlling for unobserved between-country heterogeneity. A control variable for time, operationalized as survey-year dummies, was also included to account for trends affecting both dependent and independent variables.

5. Results

Results from multilevel regression analyses are displayed in Table 3. The longitudinal component of the private hospital bed share was positively associated with health system satisfaction, meaning that a health system increasing its share of private hospital beds with one

Table 1
Descriptive statistics (n = 129,076).

Variable	Mean	Std. dev.	Min	Max
Satisfaction with health system	5.77	2.40	0	10
Private beds (% share of total beds)	24.4	23.1	0.00	100
Private beds (within)	0.55	1.25	-2.59	4.78
Private beds (between)	23.8	22.9	0	100
PrivHE (% share of GDP)	2.06	0.52	1.18	3.08
PrivHE (within)	0.05	0.18	-0.40	0.41
PrivHE (between)	2.01	0.49	1.05	2.84
Pub. Coverage (% of population covered)	97.7	3.80	88.8	100
Pub. coverage (within)	0.42	2.54	-1.90	14.9
Pub. coverage (between)	97.3	4.22	84.9	100

Table 2
Welfare and healthcare regimes.

Welfare regimes (Eikemo et al., 2008)	Anglo-Saxon	Bismarckian	Scandinavian	Southern	Eastern
	United Kingdom	France Germany Switzerland Austria Belgium Netherlands	Norway Sweden Denmark Finland Iceland	Italy Spain Portugal Israel	Czech Republic Latvia Lithuania Slovenia Estonia Hungary Poland
Healthcare regimes (Reibling et al., 2019)	Type 1 Austria Germany France Czech Republic Iceland Slovenia Belgium	Type 2 Finland Norway Portugal	Type 3 Denmark Netherlands United Kingdom	Type 4 Spain Italy	Type 5 Estonia Hungary Poland
Healthcare decommodification regimes (Bambra, 2005)	Type 1 Finland Norway	Type 2 Germany Netherlands	Type 3 United Kingdom	Type 4 Austria Belgium Denmark France Italy	

Table 3
Multilevel regression analyses.

	Baseline	Bivariate	Multi-variate	WF regimes	HC regimes
Private beds (within)		0.128**	0.121**	0.0986*	0.120*
		(0.0483)	(0.0464)	(0.0456)	(0.0489)
Private beds (between)		0.0124	0.0207*	-0.0141	0.0120
		(0.0084)	(0.0102)	(0.0148)	(0.0114)
PrivHE (within)		-0.674	-0.525	-0.537	-0.491
		(0.480)	(0.448)	(0.442)	(0.491)
PrivHE (between)		-0.467	-0.906*	-1.025**	-0.816*
		(0.463)	(0.415)	(0.390)	(0.414)
Pub. coverage (within)		0.189*	0.122	0.125 ⁺	0.0975
		(0.0834)	(0.0795)	(0.0682)	(0.0814)
Pub. coverage (between)		0.120 ⁺	0.176**	0.102 ⁺	0.110
		(0.0693)	(0.0641)	(0.0529)	(0.0817)
Constant	5.614	-	-10.50	-2.568	-3.775
Year FE	No	Yes	Yes	Yes	Yes
Regime controls	No	No	No	Yes	Yes
Country level variance	0.967	-	0.674	0.314	0.476
Country-year level variance	0.162	-	0.107	0.108	0.119
Individual level variance	4.854	-	4.854	4.854	4.800
<i>N</i> _{individuals}	129,076	129,076	129,076	129,076	112,055
<i>N</i> _{country-years}	67	67	67	67	59
<i>N</i> _{country}	21	21	21	21	18

Standard errors in parentheses.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In the Bivariate model, all variables have been entered separately, and one single constant or variance could not be reported.

percentage point from their “own” mean are also likely to experience an increase in the average health system satisfaction by 0.1 points. In the last model, the cross-sectional estimate was also significant and positive, meaning that countries with a high mean share of private hospital beds on average have 0.02 points more satisfied citizens when controlling for private health expenditures and coverage rate. Descriptive statistics (Table 1) show that the difference between the highest and lowest observed value of the longitudinal hospital bed variable is 7.4, resulting in a 0.74 predicted difference in satisfaction points. As for the mean

shares, Table 1 displays that there are countries where all hospital beds are private and likewise where all beds are public. The predicted difference in satisfaction between these are at 2 satisfaction points.

Private health expenditure showed no significant associations when entered individually, but when entered together with the other decommodification variables, the cross-sectional component showed a negative and significant association: a one percentage point increase in the share of private expenditure is associated with a 0.9 decrease in satisfaction. The difference between the highest and lowest mean private expenditure share was at 1.8, resulting in a 1.6 predicted difference in satisfaction.

Public health care coverage was significantly associated with satisfaction; one percentage point increase on the longitudinal component with 0.2 increase in satisfaction; one percentage point difference on the cross-sectional component with 0.1 satisfaction increase. When controlling for the other country-level variables the longitudinal variable loses statistical significance, while the cross-sectional variable increases its association by approximately 0.5 points. The difference between the highest increase and decrease from the mean within one country was approximately 17 percentage points; with estimates from the bivariate model, this corresponds to a 3.2 difference in satisfaction points. Looking at the between-country estimates, there is a 15-percentage point difference between the country with the lowest and highest mean coverage rate, corresponding to a 2.7 difference in satisfaction points.

When comparing residual variance between the baseline estimate and the different models, we see that model 2, with hospital bed variables, reduces unexplained variance by 6 per cent at the country level and by 27 per cent at the country-year level. This comparison further suggests that the model including all decommodification components is the best-performing model, reducing unexplained variance by 30% at the country level and 34% at the country-year level. As could be expected, the inclusion of regime controls reduced the unexplained variance at the country-level, but not at the country-year-level.

We now turn to the models which control for welfare and healthcare regimes. Since we are foremostly interested in the decommodification indicators, and whether these change after the introduction of controls, the regime estimates are only reported in the full regression models in the appendix (Table A.4). There, we see that the countries in the Bismarckian regime have significantly less satisfied citizens compared to the Anglo-Saxon regime. In the healthcare typology, type 4 – low-supply and low performance mixed systems – differ negatively and significantly from type 1 – supply-and choice-oriented public systems.

The within-estimate for the private hospital bed indicator does not change substantially after introducing controls. The between-estimate for the hospital bed indicator loses statistical significance, which indicates that the typologies intercepts some of the between-country variation in private hospital bed share. The within-estimate of private healthcare expenditure is negative and non-significant in all models. The between-estimate shows a small increase in effect size and significance when controlling for the welfare regimes, and a similar drop when the healthcare typology was included. As for the public healthcare coverage variables, the longitudinal component shows a small increase in size and significance when controlling for the welfare regimes (0.122, $p = 0.124$ to 0.125, $p = 0.068$), and remains similar when controlling for the healthcare regimes. A change in the within-estimates after adding controls may indicate that the longitudinal variation in public coverage is intercepted by the control variable, i.e., that the countries within a regime display similar trends. These results suggest that some of the decommodification indicators are intercepted by the regime typologies, particularly by the healthcare regime of Reibling et al. (2019). Some estimates, such as the positive association with private hospital beds and the negative association with private health expenditure appears robust against these controls.

Lastly, the sensitivity analysis reported in Table A.4 shows that all types score significantly lower on health care satisfaction compared to the decommodification regime type consisting of Germany and the Netherlands. The introduction of a decommodification typology also has some impact on the decommodification indicators, particularly the public healthcare coverage variable: before controlling for typology (Baseline 3 in Table A.4), the estimates are similar to the Multivariate model in the main analysis (Baseline 1). Both the longitudinal and cross-sectional estimates are positive, but only the latter is statistically significant. After adding the controls, both associations turn negative and significant. However, these estimates should be interpreted with caution. The sample is severely reduced in this model; it consists of 10 countries, meaning a small number of degrees of freedom at the country level. There are few countries in each regime type, and associations can be biased by single countries. Finally, the original clustering of countries was based on the same decommodification indicators. The implication of public healthcare coverage “turning negative” could be that coverage would have a negative association with satisfaction if all countries were to belong to the same decommodification regime – a somewhat tautologic argument where the practical meaning is unintuitive.

6. Discussion

During the past decades, European countries have adopted various strategies in order to redefine the role of the state, profoundly changing the public sector by subjecting it to market forces and various modes of private sector involvement. These strategies have ranged from full privatisation and outsourcing services from the public sector to the creation of hybrid organisations and the transformation or “modernisation” of work practices in organisations under state control (Saltman and Figueras, 1997). However, while marketisation has come to be a major policy strategy in many healthcare systems, there is still insufficient evidence about its impact on health system performance.

The analyses of health care marketisation have so far almost exclusively focused on either hospitals, patient groups or populations within a single country. There is consequently a lack of comparative studies investigating whether marketisation can account for different outcomes across health systems. More knowledge is needed on how detailed components of marketisation – related to financing, access and provision – are associated with health system satisfaction and other outcomes. Several authors have pointed out the need to investigate the role of detailed welfare regime characteristics, and in particular the need to incorporate specific health services variables in order to better explain the pathways between political and welfare state variables and various health outcomes (Chung and Muntaner, 2007; Eikemo et al., 2008;

Wendt et al., 2009).

A majority of the studies of privatisation and competition in healthcare are based on data from before the turn of the millennium. In the meantime, the financial crisis of 2008 can be expected to have impacted individual health in several European countries, both indirectly through reduced access to and poorer quality of health services, and more directly through increased financial strains, job loss, etc. In addition, several European countries implemented major changes in their health systems that have led to increased co-payments and user charges, more privatisation and outsourcing, often combined with a reduction of the benefit package (Freeman and Moran, 2000; Rothgang et al., 2005). While the public support for healthcare systems has traditionally been high in European countries (e.g., Kohl and Wendt, 2004; Marmor et al., 2010; Jaeger, 2006), these health policy reforms may presumably have led to changes in how health services are evaluated.

Our study adds to the research field by filling some of these gaps. To date, the relationship between marketisation and health services satisfaction has not been investigated across European countries. This study presents quantitative measurements of the association between decommodification and health system evaluations, building on indicators that are previously untested in the context of marketisation. Those favouring more market and privatisation in healthcare typically maintain that it will help governments to fulfil a number of objectives, such as reducing administrative and financial burdens with respect to providing public services, increasing efficiency and effectiveness of services to achieve value-for-money, encouraging innovation, and developing more user-sensitive services appropriate for a particular community or context (Kikeri et al., 1992). One possible benefit of marketisation is that it may shift demand from the public health care sector to the private sector. If it increases available capacity, it may reduce waiting times and release financial pressure from the public system. Our results indicate such a possibility, since the measure of private provision – the share of hospital beds – was positively associated with satisfaction, although with little substantial impact. This makes sense, since even public health systems such as the Nordic countries have allowed for a more active role for private actors, thus relieving the public system of pressure, thereby increasing efficiency and improving access (Magnussen et al., 2009). On the other hand, private financing of services was associated with lower satisfaction, but also here the effect sizes were small. The strongest substantial associations were between coverage and satisfaction, with high public healthcare coverage being associated with higher satisfaction. This estimate was robust also when controlling for welfare regimes. These findings could suggest that whether the provided healthcare services are from a private or a public provider have little influence on user’s experiences, while the notion of being covered matter more. Yet, user satisfaction of public services is an ambiguous term. Rather than being a precise measure of quality, user satisfaction may indicate whether one’s expectations – with regards to both the process and the result from the interaction with the services – are confirmed or disconfirmed (Andersen and Hjortskov, 2016; Walle, 2018). It is therefore important to consider possible artefacts due to cultural differences in European countries. Health expectations may vary according to culture, and direct cultural comparisons of health services evaluations should therefore in general be made with caution. The strength of this study is that all questions are collected from the same survey, asking the same questions within the same period of time (Eikemo et al., 2008).

Our work also contributes to the large literature of cross-comparative studies of welfare state/health care regimes and population health. There is a lack of studies that investigate the specific regime features that account for the effects on population health indicators (Chung and Muntaner, 2007). The austerity measures that followed in the wake of the financial crisis of 2008 has raised concerns about the performance of health systems, and thereby about the health of the populations. The austerity policies pursued have varied across countries, ranging from

cost cuts (particularly in the hospital and pharmaceutical sectors), via reductions in the benefits package to increases in user charges (for an overview, see e.g., [Karanikolos et al., 2013](#)). Recommodification can be understood within perspective, since it has transformed the welfare state by dismantling the aspects of it that shelter individuals from market pressures ([Pierson, 2002](#)). Initially, recommodification was seen as specific to liberal welfare states as a process of neoliberal retrenchment ([Pierson, 2001](#)), but has later evolved as mainstream de-politicised instruments across welfare regime types ([Immervoll and Pearson, 2009](#); [Dukelow, 2020](#)). The research on decommodification and recommodification has mainly built on the work of [Esping-Andersen \(1990\)](#) and [Pierson \(2001\)](#), and except for the work of [Bambra and Farrants](#) with colleagues ([Bambra, 2005a, 2005b, 2005c](#); [Farrants et al., 2016, 2017, Farrants and Bambra, 2018](#)), little research has focused on the recommodification of healthcare.

Our study thus adds to the literature in two important ways: first, by building further on [Bambra's \(2005a\)](#) work to explore the role of healthcare recommodification in Europe, and secondly, by investigating other health outcomes than the common health status indicators used in previous studies. Studies of how specific health system components affect health system performance have several advantages. By paying more attention to the output side of welfare states, focusing on what welfare states *actually do*, rather than on generic system wide assessments, we may better stimulate policy learning. Concentrating on the healthcare part of the welfare state, we may thus discover more direct relations between country-level system features and health outcomes, rather than through mediating regime typologies. In order to capture the existing institutional variety at more detailed level we need to break down typologies, by using indicators that cover specific aspects of these systems ([Wendt et al., 2009](#)). The concept of healthcare recommodification can be seen as a first step in such a deconstruction of health typologies into their single components, allowing for comparative studies of the relationship of healthcare marketisation with health outcomes.

It may seem paradoxical how healthcare marketisation – a policy that so strongly builds its legitimacy on results – has been so little subjected to systematic empirical studies itself. One obvious explanation is the major challenges inherent in actually measuring concepts such as privatisation and competition empirically. In this study we have attempted to sidestep these conceptual and methodological challenges by turning to the term recommodification. A possible limitation is that the decommodification indicators exclude several market-inspired health policy strategies that have been implemented in many countries. Clearly, the concept of recommodification cannot possibly capture all the intricate details of marketisation tendencies across countries. Nevertheless, we would argue that the concept of healthcare recommodification represents a fruitful first step in the process of discovering the effects that marketisation has had on health systems across Europe. The factors in the index were selected because they assess the financing, provision and coverage of the private sector and are thus useful indicators to reflect the varied role of the market in a healthcare system. The index was developed by [Bambra \(2005a\)](#) to further advance comparative studies of health systems, and she used it in several studies of European countries published in highly recognised journals ([Bambra, 2005b, 2005c](#)). Later studies have employed the index in analyses that include East Asian countries ([Yu, 2012](#)) and the EU member states ([Kawiorska, 2016](#)). With so few existing studies of the impact of healthcare marketisation in Europe there is great demand for such investigations.

Similarly, our study cannot possibly address all the differences in financing systems and structures across the regions of Europe. A traditional distinction is between three clusters of countries. The social insurance countries of continental Europe are funded by a combination of employer and individual contributions (e.g., Austria, Belgium, France, Germany, and Luxembourg). These countries can be characterised by a high level of total health expenditure and a high share of public funding, while provision of services tends to be private with some public

ownership. A second cluster of countries includes the NHS countries of North-western Europe (UK and the Nordic countries) and Italy, with tax-funded health systems, mainly publicly owned and operated providers, and a high share of public health funding. The regional variation in Europe is completed with the late developed NHS systems found in the Mediterranean (Spain and Portugal) and Finland, with tax-funded health systems, low levels of total health expenditure per capita, and high levels of private out-of-pocket payments ([Wendt, 2009](#)). As a response to the increasing complexity of healthcare systems over the past decades, more advanced healthcare typologies have emerged as useful tools for cross-country comparisons of the similarities and differences of funding, provision and organisation of healthcare ([Reibling et al., 2019](#)). In one of the most recent and comprehensive contributions, [Reibling and colleagues](#) developed a typology that accounts for five key indicators: supply (expenditure per capita, GPs per capita), public-private mix (% public expenditure, % out of pocket expenditure, remuneration of specialists), access regulation (access regulation index, cost sharing for GP visits, choice restrictions), primary care orientation (% expenditure on outpatient care, ratio of GP/specialists) and performance (% smokers, alcohol consumption and quality sum index). To account for possible confounding effects due to different health systems, we therefore performed sensitivity analyses by including this typology in the model. Whereas these basic classifications cannot capture the institutional variety at more detailed level, they allowed us to control for possible variation between countries not accounted for by the recommodification indicators.

A final limitation is that our analyses are unable to say anything about causality. Given that the study used cross section data we are only able to assess covariation. However, the analytic approach where we estimate within-country effects allows for bolder causal inferences compared to traditional random or between-effects models.

7. Conclusion

The view on markets and competition is one of the fundamental dividing lines in politics. With the lack of evidence to inform it, the debate on markets and private sector involvement in European health systems has consequently been a permanent controversial and value-laden one ([Saltman and Figueras, 1997](#)). This study adds to the emerging evidence on the negative effects of recommodification ([Farrants et al., 2016, 2017, Farrants & Bambra, 2018](#)). No previous efforts have looked at the relationship between recommodification and health services satisfaction across European nations. Our results indicate that a large role for the private sector in the financing and coverage of healthcare may not be conducive to the evaluation of health services. Private provision, on the other hand, may contribute positively in a healthcare system. Competition and private sector solutions play an undeniable role in most healthcare systems today, and the debate is no longer over private versus public or competition versus regulation, but rather over the degree of competition and private sector involvement. The main message to take away from our study is simply that policy makers should pay extra attention to policies that promote more private spending and low coverage by the public health care system. More studies are needed of how market forces and various modes of private sector involvement affect health system performance in order to provide policymakers, administrators, managers and professions with information on how to best lead, finance, organise and deliver health services. Future studies should in particular respond to the need for more comparative analyses across health systems, building on indicators of population health, service quality, access and inequity, which are becoming increasingly available.

CRedit authorship contribution statement

Pål E. Martinussen: Writing – original draft, preparation. **Håvard T. Rydland:** Methodology, data preparations, analyses, Writing – review &

editing.

Appendix

The different typologies are constructed on the basis of cluster analyses of country-level indicators. Our final study sample of 21 countries was the result of available data at country and individual level, and there are discrepancies when we compare our study sample of countries with the typologies above: [Bambra \(2005\)](#) analysed the same 18 OECD countries as [Esping-Andersen \(1990\)](#); [Eikemo et al. \(2008\)](#) based their study on [Esping-Andersen \(1990\)](#) and Fererra's (1996) welfare state typologies and added a category for Eastern Europe to fit with the available ESS data; [Reibling et al. \(2019\)](#) utilised data from 29 OECD countries. Some countries were included in the different regimes, but not in our data, other countries were included in our data but not part of any regimes. It is beyond the scope of this paper to reproduce these typologies to "match" them with the countries we include in our main analyses. In the control models and sensitivity tests, we therefore limited our study sample to the countries included in the different typologies, meaning that the sample varies across the models. For the welfare regime typology of [Eikemo et al. \(2008\)](#), no sample reduction was necessary, Baseline 1 in [Table A.4](#) is therefore equal to the multivariate model in [Table 3](#). Baseline models 2 and 3 in [Table A.4](#) include the same variables as the multivariate model in [Table 3](#), but with a different sample. When we compare the estimates of the decommodification indicators in Baseline models 1 and 2 (which has a sample fitted to the healthcare typology of [Reibling et al. \(2019\)](#)) in [Table A.4](#), we find fairly similar results between the two.

As an additional sensitivity analysis, reported in the appendix [Table A.4](#), we also tested the healthcare decommodification typology suggested by [Bambra \(2005b\)](#). After performing factor analysis on the three indicators that makes up the decommodification index, she distinguished four groups. Using the same approach, we classified the countries in our study in four groups and re-estimated the model with the typology as a categorical variable in addition to the separate indicators. We note that the Baseline 3 model (which has a sample fitted to the decommodification typology) has some discrepancies compared to the Multivariate model in the main analysis ([Table 3](#)).

Table A.1
Private hospital beds.

	2009	2011	2013	2015	2017
Austria	.	.	30.5	30.8	30.2
Belgium	.	.	.	.	74.2
Czech Republic	12.0	.	16.0	15.5	15.1
Denmark	5.1	6.0	5.4	.	.
Estonia	9.8	10.7	8.5	7.4	7.5
Finland	4.0	4.9	4.2	5.5	4.5
France	36.3	37.6	37.8	37.9	.
Germany	59.3	59.4	59.3	59.2	59.3
Hungary	3.1	3.1	.	.	.
Iceland	.	0	.	0	.
Israel	28.8	29.8	29.9	29.8	.
Italy	.	31.6	.	32.4	33.3
Latvia	.	.	.	.	10.1
Lithuania	.	0.5	1.1	1.3	.
Netherlands	100	.	100	.	.
Norway	22.9	21.0	22.4	23.4	.
Poland	21.3	26.8	.	.	.
Portugal	26.8	27.5	29.5	31.1	31.2
Slovenia	.	1.1	1.1	1.1	1.1
Spain	.	31.3	.	.	.
United Kingdom	0	0	0	0	.

Table A.2
Private health expenditure in % of GDP.

	2009	2011	2013	2015	2017
Austria	.	.	2.67	2.68	2.65
Belgium	.	.	.	.	2.13
Czech Republic	1.22	.	1.28	1.18	1.26
Denmark	1.66	1.66	1.60	.	.
Estonia	1.45	1.35	1.47	1.58	1.61
Finland	2.24	2.26	2.36	2.44	2.42
France	2.63	2.69	2.72	2.69	.
Germany	1.83	1.79	1.76	1.74	1.69
Hungary	2.30	2.53	.	.	.
Iceland	.	1.69	.	1.60	.
Israel	2.65	2.52	2.49	2.64	.
Italy	.	2.03	.	2.28	2.31
Latvia	.	.	.	.	2.84
Lithuania	.	1.88	2.07	2.12	.
Netherlands	1.80	.	2.06	.	.
Norway	1.41	1.37	1.34	1.46	.

(continued on next page)

Table A.2 (continued)

	2009	2011	2013	2015	2017
Poland	1.87	1.82	.	.	.
Portugal	2.97	3.08	3.01	3.04	3.00
Slovenia	.	2.28	2.52	2.40	2.16
Spain	.	2.38	.	.	.
United Kingdom	1.41	1.47	1.99	2	.

Table A.3
Public health insurance coverage.

	2009	2011	2013	2015	2017
Austria	.	.	99.9	99.9	99.9
Belgium	.	.	.	.	98.7
Czech Republic	100	.	100	100	100
Denmark	100	100	100	.	.
Estonia	95.7	94	93.6	94	94.1
Finland	100	100	100	100	100
France	99.9	99.9	99.9	99.9	.
Germany	89	88.8	89	89.2	89.4
Hungary	97	96	.	.	.
Iceland	.	99.8	.	99.7	.
Israel	100	100	100	100	.
Italy	.	100	.	100	100
Latvia	.	.	.	.	100
Lithuania	.	91.4	91.8	92.4	.
Netherlands	99.6	.	99.8	.	.
Norway	100	100	100	100	.
Poland	97.6	96.6	.	.	.
Portugal	100	100	100	100	100
Slovenia	.	100	100	100	100
Spain	.	99	.	.	.
United Kingdom	100	100	100	100	.

Table A.4
Full regression models

	Baseline 1	WF regime	Baseline 2	HC typology	Baseline 3	Decom. typology
Private beds (within)	0.121**>*** (0.0464)	0.0986*>*> (0.0456)	0.119*>*> (0.0485)	0.120*>*> (0.0489)	0.213**>*** (0.0808)	0.220**>*** (0.0792)
Private beds (between)	0.0207*>*> (0.0102)	-0.0141 (0.0148)	0.0217+>+> (0.0116)	0.0120 (0.0114)	0.000298 (0.00919)	-0.0144+>+> (0.00845)
PrivHE (within)	-0.525 (0.448)	-0.537 (0.442)	-0.598 (0.487)	-0.491 (0.491)	-1.199**>*** (0.380)	-0.963**>*** (0.365)
PrivHE (between)	-0.906*>*> (0.415)	-1.025**>*** (0.390)	-0.816+>+> (0.472)	-0.816*>*> (0.414)	-0.213 (0.488)	-0.329 (0.310)
Pub. coverage (within)	0.122 (0.0795)	0.125+>+> (0.0682)	0.153+>+> (0.0825)	0.0975 (0.0814)	0.0831 (0.0549)	-0.293*>*> (0.115)
Pub. coverage (between)	0.176**>*** (0.0641)	0.102+>+> (0.0529)	0.217**>*** (0.0776)	0.110 (0.0817)	0.113+>+> (0.0580)	-1.321**>*** (0.425)
Welfare regimes (Anglo-Saxon ref.)						
Bismarckian		1.789+>+> (1.074)				
Scandinavian		0.444 (0.670)				
Southern		0.554 (0.931)				
Eastern		-0.781 (0.678)				
Healthcare regimes (Type 1 ref.)						
Type 2				0.257 (0.514)		
Type 3				-0.120 (0.466)		
Type 4				-1.203**>*> (0.598)		
Healthcare decommodification regimes (Type 2 ref.)						
Type 1						15.11***>*** (4.277)
Type 3						14.21***>*** (4.193)
Type 4						14.39***>*** (4.280)
Constant	-10.50+>+> (6.261)	-2.568 (5.282)	-14.80+>+> (7.604)	-3.775 (8.087)	-4.697 (5.727)	124.4**>*** (38.46)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-year level variance	0.674 (0.231)	0.314**>*** (0.115)	0.657 (0.243)	0.476+>+> (0.182)	0.208**>*** (0.103)	0.0562***>*** (0.0394)

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Table A.4 (continued)

	Baseline 1	WF regime	Baseline 2	HC typology	Baseline 3	Decom. typology
Country-year level variance	0.107***>*** (0.0234)	0.108***>*** (0.0235)	0.116***>*** (0.0267)	0.119***>*** (0.0275)	0.0455***>*** (0.0139)	0.0449***>*** (0.0146)
Individual level variance	4.854***>*** (0.0191)	4.854***>*** (0.0191)	4.800***>*** (0.0203)	4.800***>*** (0.0203)	4.445***>*** (0.0239)	4.445***>*** (0.0239)
Nindividuals	129,076	129,076	112,055	112,055	69,377	69,377
Ncountry-years	67	67	59	59	34	34
Ncountry	21	21	18	18	10	10

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