Strategic alliances and their influence on healthcare quality throughout Europe: a quantitative study

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Abstract

This study examines the involvement of European countries in strategic alliances and the impact this involvement has on their national healthcare quality. The strategic alliances are categorized based on geographical differences: inter-country, cross-Europe and cross-world. Results show no significant influence of inter-country, cross-Europe nor cross-world alliances on healthcare quality. Thus, policy makers should focus on other forms of collaboration.

Keywords
Strategic alliances; healthcare; healthcare quality; Europe

Introduction

Throughout Europe, healthcare industries are based on different societal, organisational and financial choices. Nevertheless, they share values such as equity and solidarity. Over the last years, common problems started to arise as well. This is causing healthcare costs to increase throughout Europe (European Commission, 2014). As a result, healthcare industries are increasingly shifting towards becoming a sector based on competition and market principles. This might be a perfect opportunity, as competition is being named by various scholars as the ideal approach. It is assumed to increase options, to lower prices and thus to deliver high-quality care (Dayaratna, 2013). However, more competition forces healthcare organizations to adapt to more rapid market changes (Porter, 1996), and thus they have to change their strategic approach.

One strategy to cope with this change is to engage in strategic alliances. A strategic alliance is a formal arrangement among two or more organizations regarding cooperation, gain and risk sharing (Burns, Bradley, & Weiner, 2011) and to reach common goals (Link,

2015). In other industries, strategic alliances are used to achieve strategic purposes which are not possible to achieve alone (Zuckerman, Kaluzny, & Ricketts III, 1995). According to Burns et al. (2011) strategic alliances can reduce duplication by improving collaboration and therefore create more efficient delivery of care.

As the use of strategic alliances is a relatively new phenomenon to healthcare, research on the matter is scarce. Of the few studies, most focus on the United States. Its healthcare system is largely private and faces more competition than any other country does (Porter & Teisberg, 2004). Although some studies already show positive results, failing and absence of economic value of strategic alliances is not rare. Hence, the impact of strategic alliances on European healthcare industries is still relatively unclear. Meanwhile, the use of strategic alliances in European healthcare industries is already increasing. More in-depth knowledge about the influence of strategic alliances can benefit policy makers and healthcare managers in their decision making process by providing a foundation for evidence-based policy making. Thus, this study aims at improving our understanding of strategic alliances and their influence on European healthcare industries.

Based upon the increasing interest in strategic alliances, it would not be surprisingly to find various European countries to be involved in health related strategic alliances. However, although focus is set on Europe as whole, cross-country differences might influence a country its involvement in strategic alliances: (1) the part of Europe in which the country is located, (2) being a member of the European Union, and (3) the way healthcare is financed. The latter can be distinguished in the Bismarck system versus the Beveridge system. The Beveridge system is based on taxation and is mainly organized via the central government. In contrary, the Bismarck system is based on an insurance system and contains several players. Therefore, it would be expected to find more involvement in strategic alliances within so called "Bismarck countries".

Since 2006, the Health Consumer Powerhouse Ltd. is comparing European countries based upon several healthcare quality indicators. This report is called the Euro Health Consumer Index (EHCI). Since their first publication, the Netherlands has been part of the top three. In their latest report, 2014, the Netherlands was again rewarded first place. Switzerland was rewarded second place and Norway third place. We expect to find a positive relationship between countries' involvement in strategic alliances and high EHCI scores. This hypothesis is based on previous research suggesting that strategic alliances improve healthcare quality

Material and methods

This quantitative, cross sectional study was conducted using secondary data from 36 European countries. European countries were only included if they were rated in the EHCI 2014.

Data collection

Data regarding a countries' involvement in strategic alliances was derived from the SDC platinum database. Two different search strategies were used to select strategic alliances. For both strategies the SDC platinum strategic alliances/joint venture sub database was used. Additionally, only strategic alliances announced between January 1st, 2000 and December 31, 2013 were included. Alliances were included if they were either pending or complete/signed.

The search strategies were based on alliance activities and Standard Industrial Codes (SIC) related to "Health", "Care", "Hospital" and "Medicine". Afterwards, the selected alliances were checked manually to exclude duplications, alliances focusing on a different sector and alliances with unknown partners. Combining both search strategies, 390 strategic alliances were included in this study. The selected strategic alliances were divided into inter-country alliances (ICA), cross-Europe alliances (CEA) and cross-world alliances (CWA). Alliances were labelled ICA if all partners were head quartered in the same country. Alliances were labelled as CEA if the partners were head quartered in at least two different European countries. Alliances were labelled CWA if at least one partner was head quartered in a European country and at least one partner outside Europe. Countries were assigned one point whenever involved in a strategic alliance regardless of the amount of organizations involved per country.

Data analysis

Non parametric tests were conducted to test the relationship between "Sum of strategic aliances"and the variables "Part of Europe", "EU membership" and "Health System". A linear regresssion analysis was conducted to test the relationship between the involvement in strategic alliances and EHCI scores. Three different regression models were used: (1) ICA, (2) CEA and (3) CWA. All three regression models additionally contained the variables "EU membership", "Health System", "Mortality under five (MU5)", "total population (Pop)" and "total health expenditure in percentage of the gross domestic product (THE)".

Results

Out of the 36 included countries, twenty are involved in strategic alliances. Twelve countries are involved in inter-country alliances, 18 in cross-Europe alliances and 17 in cross-world alliances. Countries not involved in any strategic alliance (0 points) were Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Estonia, Hungary, Iceland, Lithuania, Luxembourg, Macedonia, Malta, Montenegro, Poland, Serbia, Slovakia and Slovenia. The United Kingdom shows most involvement in strategic alliances with a total of 158 points. Other countries showing high involvement in strategic alliances are Germany (75 points) and France (44 points).

Test results

A significant difference was found between the part of Europe in which a country is located and the total sum of alliances they are involved in ($p=0.013<\alpha=0.05$). Only countries from Southern Europe and Western Europe differ significantly from each other ($p=0.008<\alpha=0.0083$). Based on Sum of Ranks, Western European countries are more involved in strategic alliances than Southern European countries. A slightly significant difference is found between EU members and non-EU members and their involvement in strategic alliances ($p=0.099<\alpha=0.1$). Based on Sum of Ranks, EU members are more involved in strategic alliances. Additionally a small significant difference is found between "Health System" and the total sum of alliances ($p=0.067<\alpha=0.1$). Bismarck countries are more involved in strategic alliances than Beveridge countries.

All three regression models are significantly explaining the variety in EHCI scores ($p=0.001< \alpha=0.05$). As shown in table 1, 2 and 3, only mortality under five and total health expenditure add significantly to all three regression models. No significant relationship is found between inter-country alliances, cross-Europe alliances nor cross-world alliances in respect to EHCI scores.

Table 1. Regression table for model 1

Variables	B	Std. Error	p Value
Constant	521.742	122.573	.000
Member EU	18.066	44.131	.685
Health System	-38.351	39.243	.337
ICA	1.485	3.127	.638
MU5	-16.437	7.397	.034*
Pop	-6.488E-007	0.000	.537
THE	29.231	10.543	.010*

Table 2. Regression table for model 2

Variables	B	Std. Error	p Value
Constant	537.425	121.328	.000
Member EU	19.697	43.517	.654
Health System	-34.039	38.466	.383
CEA	4.437	4.222	.302
MU5	-16.535	7.285	.031*
Pop	-1.152E-006	0.000	.319
THE	26.712	4.222	.018*

Table 3. Regression table for model 3

Variables	B	Std. Error	p Value
Constant	557.473	120.473	.000
Member EU	19.560	44.678	.650
Health System	-38.142	36.983	.311
CWA	2.164	1.439	.144
MU5	-16.689	7.150	.027*
Pop	-1.587E-006	0.000	.186
THE	25.160	10.530	.024*

Discussion/Conclusion

In contrast to our expectations, only twenty countries show involvement in health related strategic alliances. The United Kingdom is by far the most involved in strategic alliances, having more than twice as many points than runner-up Germany. This counts for either inter-country, cross-Europe as cross-world alliances. The United Kingdom's involvement in strategic alliances can be partially explained by the measures taken to increase competition within England. Other countries with a relatively high involvement in strategic alliances are Germany, France and the Netherlands (>30 points). Moderate involvement (20-30 points) in strategic alliances is found in Sweden and Switzerland. Interesting to notice is that Denmark, England, the Netherland and Sweden have a shared view on patient empowerment and competition as instrument to achieve this empowerment.

Our study shows a significant difference between Western and Southern European countries regarding their involvement in strategic alliances. This difference might be caused by Western countries having a more insurance based (Bismarck) healthcare system, whereas Southern countries mainly use taxation (Beveridge). Our study supports this statement by showing a small significant difference between Bismarck and Beveridge countries. Also, positive correlations are found between total health expenditure and involvement in strategic alliances. In general, Western European countries have higher total health expenditure than Southern countries. Thus, supporting the difference between Western and Southern European countries.

As expected, Bismarck countries are more involved in strategic alliances than Beveridge countries. However, over the past years, convergence started to increase between these two systems. Both systems face difficulties with financing our ageing population (Biffl, 2012; CESifo-group, 2008). This convergence might cause us to only find a slight difference between both systems. Additionally, member states of the European Union are significantly more involved in strategic alliances than non-member states. This is not surprisingly, as different factors increasingly interconnect health systems across the European Union.. This increased connection between countries expands the healthcare market, thus increasing competition. Healthcare organizations within the European Union supposedly use strategic alliances to adjust to this market expansion.

This study is the first one to explore the characteristics of countries involved in strategic alliances. When summarizing the results, strategic alliances are mainly found within Western countries who are part of the European Union and who use a Bismarck oriented

financing system. England, Germany and France show most involvement in strategic alliances. As most of the impact of strategic alliances on European healthcare is still unclear, our results suggest to conduct more extensive research in these countries.

Based on the results from the linear regression analyses, strategic alliances are not related to EHCI results. Unexpectedly, these results would suggest that quality of care is not influenced by the involvement in strategic alliances. The absence of a positive relationship between strategic alliances and quality of care has several implications for current policy making. Previous studies show increased interest in strategic alliances. Governments increasingly create partnerships within their country and the European Union is increasingly focussing on cross-border collaboration in respect to healthcare. However, this study does not recommend strategic alliances as the ideal strategy to increase healthcare quality throughout Europe.

There are a two final remarks. First, no positive relationship is found between strategic alliances and EHCI scores. However, this does not imply that collaboration does not have a positive influence on quality of care. Only strategic alliances are included in this study and all other forms of collaboration are excluded. Therefore, we do not suggest that collaboration in general does not have any added value. We only suggest that the focus should shift from strategic alliances to other forms of collaboration. Second, it is evident that many alliances still fail. This suggests that strategic alliances do not yet function optimally. Strategic alliances might still positively influence quality of care once we increase their value. Therefore, strategic alliances and their influence on quality of care should constantly be revised.

In contrast to previous research, this study is the first one to focus on Europe as a whole. Also, this study is the first time strategic alliances are compared with national health quality outcomes. Based on these new viewpoints, two recommendations for future policy making are drafted. The way in which strategic alliances are currently organized does not improve healthcare quality. Thus, we need to either 1) improve effectiveness of our strategic alliances or 2) focus on other forms of collaboration.

Implications and recommendations for further research

The results are based upon data which is derived from one database. The reliability of these results therefore depends on the completeness of the SDC platinum database. No additional search for strategic alliances is conducted. Further research can benefit from

combining databases or use other additional information sources regarding strategic alliances. Additionally, this study focused on health in general and did not specifically focus on hospital and other health service organizations. Complementary research should be conducted to specify the relationship between strategic alliances in different subsectors within healthcare in relation to healthcare quality.

Conclusion

Although the focus on strategic alliances within European healthcare in increasing, they are not significantly related to EHCI results. These results would suggest that strategic alliances do not positively influence healthcare quality on national level. It is therefore important for future policy making to emphasise on other forms of collaboration.

Role of the student

Yvon Heijmans was a bachelor student Health Sciences at Maastricht University. She was supervised by Federica Angeli, PhD. The topic was proposed by the supervisor. The design and execution of the study as well as formulation of conclusions and writing were done by the student.

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