Antecedents and outcomes of inter-municipal cooperation in health services – A relational and contextual approach

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Summary

Background: In recent decades, inter municipal cooperation (IMC) has become an important strategy to cope with steadily increased demands and standards in local service delivery throughout Europe. Despite its widespread use and recognition, however, the existing research literature on the antecedent conditions of IMC and its outcomes has mainly been limited to "hard" and technical services, primarily focusing on the potential to gain economic benefits through economies of scale. Although important, this literature is not very helpful in providing a better understanding of the complexity and diversity of IMC established in "softer" health and human services, requiring a broader approach that also consider the contextual and relational aspects of IMC and the various types of benefits and costs associated with this type of cooperation.

Purpose and aim: Going beyond traditional economic and atomistic explanations, the *overall purpose* of this thesis was to identify some of the contextual and relational factors that may help explain variation in the participation and outcomes of IMC in health services. The *overall aim* was to provide local managers and policymakers with a better and more nuanced understanding of the complex and diverse nature of IMC in health services and offer some suggestions for how to improve this type of cooperation.

Design, data, and methods: The three studies included in the thesis used a quantitative cross-sectional research design. Analyses were based on survey- and registry data obtained from a sample of Norwegian municipalities involved in IMC in health services. In study 1, hierarchical linear regression analysis was used to analyze survey- and registry data obtained from 335 municipalities involved in various levels of IMC in health services. In study 2, structural equation modeling (SEM) was used to analyze survey data obtained from 266 municipalities taking part in IMC in out-of-hours services. In study 3, ordinary least squares regression (OLS) was used to analyze data obtained from survey- and registry data obtained from 122 municipalities taking part in IMC organized according to a host-municipality model.

Results: In our study of the *antecedent* conditions of IMC in health services

(study 1), we found not only traditional factors related to small size and fiscal stress acting as important internal drivers of IMC, but also geographical distances and heterogeneity in size relative to neighboring municipalities acting as contextual barriers. In our two studies of the *outcomes* of IMC in health services (studies 2 and 3), we found both the perceived benefits and costs of IMC to be closely associated with variation in the cooperative relationship itself, both with regard to its quality (trust and consensus), structure (complexity, stability, and governance form), and asymmetry (differences in municipal size).

Conclusions: We conclude that the traditional focus on internal characteristics of individual municipalities typically related to size and fiscal stress are not sufficient to understand the antecedents and outcomes of IMC in health. Rather, our findings suggest a broader approach, an approach that also accounts for the relational and contextual aspects of IMC.

List of papers

Paper 1

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2018). Drivers and barriers of inter-municipal cooperation in health services – the Norwegian case, Local Government Studies, 44:3, 371-390.

Paper 2

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2020). Associations between structures, processes and outcomes in inter-municipal cooperation in out-of-hours services in Norway: A survey study, Social Science & Medicine, 258, 113067.

Paper 3

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2021). Asymmetry in inter-municipal cooperation in health services – how does it affect service quality and autonomy? Social Science & Medicine, 273, 113744.

Abbreviations

CFA (confirmatory factor analysis)
CHC (child health clinics)
CR (critical realism)
CV (control variable)
DV (dependent variable)
GP (general practitioner)
HLC (healthy life centers)
ICA (institutional collective action)
IMC (inter-municipal cooperation)
IMV (intermediate variable)
IOR (inter-organizational relations)
IV (independent variable)
KOSTRA (Municipal State Reporting System/KOmmune-STat-RApportering)
MAU (municipal acute bed units)
OOH (out-of-hours services)
PAI (Personnel Administrative Information System)
RDT (Resource Dependence Theory)
SEM (structural equation modeling)

Content

Tables and figures

1 Introduction

1.1 Background

During the last decades, municipalities across Europe have been confronted with a series of developments that have challenged their role as providers of public services. (Hulst & Montfort, 2012). Together with increased urbanization, depopulation of rural areas, marketization, and an ageing population, municipalities have been expected to deal with steadily rising demands and standards in terms of the quality, efficiency, and complexity in public service delivery (Hulst & Montfort, 2007). To compensate for small size and limited access to resources, several alternative strategies have been proposed to address the growing "mismatch between capacity and expectations" (Askim, Klausen, Vabo, & Bjurstrøm, 2017, p. 557).

Although amalgamation and privatization have been high on the European political agenda (Bel, Fageda, & Mur, 2014; Hulst & van Montfort, 2007a; Teles & Swianiewicz, 2018), the most frequently used strategy has been inter-municipal cooperation (IMC), defined as "contracts or joint production with other local governments as a means to gain economies of scale, improve service quality, and promote regional service coordination across fragmented local government regions" (Bel & Warner, 2016, p. 91). Forming or joining these types of cooperation's seems to represent a more politically viable alternative compared to amalgamation or privatization as it may help municipalities cope with issues of scale and rising pressure while retaining local identity and control over the policies or tasks involved (Bel & Warner, 2016; Feiock & Scholz, 2009; Hulst & Montfort, 2007). As a result, IMC is now widespread and has become an integral part of public service delivery in most European countries, with healthcare being one of the domains in which it is most frequently used (Hulst & Montfort, 2007; Hulst, Montfort, Haveri, Airaksinen, & Kelly, 2009; Mildred E. Warner, 2011).

Norway is no exception to these developments. In the context of local healthcare, in particular, Norwegian municipalities have in recent years been subject to reforms and developments which have put additional pressure on increasing the

efficiency and quality of local health services (Romøren, Torjesen, & Landmark, 2011; Zeiner & Tjerbo, 2014, 2015). Especially in the wake of the Coordination Reform in 2012 (Norwegian Ministry of Health and Care Services, 2009), which transferred additional responsibility and tasks to the municipalities, IMC seems to have gained momentum. Combined with a fragmented and diverse municipal structure characterized by many small and sparsely populated municipalities and the deeply embedded values of universalism and equality, these developments have profoundly challenged many Norwegian municipalities (Jacobsen, 2014; Leknes et al., 2013). Besides territorial up-scaling through amalgamation of municipalities and an increased use of private service providers has (Meagher & Szebehely, 2013), IMC has traditionally been the preferred strategy used to address the steadily increasing pressure in health services. Encouraged and facilitated by the Norwegian government, most Norwegian municipalities today participate in IMC in health (ECON, 2006; Zeiner & Tjerbo, 2014). More specifically, this type of cooperation is most frequently used in the provision of health services related to acute and emergency care (Blåka, Tjerbo, & Zeiner, 2012; Monkerud, Stokstad, & Indset, 2019; Morken, Myhr, Raknes, & Hunskår, 2016; Vinsand & Langset, 2016; Zeiner & Tjerbo, 2014), although it is also commonly used to provide services related to disease prevention and health promotion (Ekornrud & Thonstad, 2016; Torjesen & Hoflund, 2012).

In response to the emergence of IMC across Europe, we have also seen a growth in the research literature on IMC over the past decades (Bel & Warner, 2016; A. Y. Park, Krause, & Feiock, 2019). However, we argue that most of this literature suffers from some limitations that prevents us from gaining a deeper and more nuanced understanding of the complexity and diversity that characterizes these types of cooperation's.

1.2 The literature on IMC and its limitations

Even though IMC has received more attention during the recent decades, the general research literature on its *antecedents* , or " predisposing conditions for collaboration" (B. Chen, 2010, p. 382), and *outcomes* still remains limited and mainly descriptive (Hulst & Montfort, 2007; Pawel Swianiewicz & Teles, 2018). In this regard, Hulst and Montfort (2007, p. 211) note that "research into the way

cooperative arrangements operate and perform and in the factors that determine its presence and performance is relatively rare". To the extent that the antecedents and outcomes of IMC in public service delivery have been more analytically addressed, the empirical focus has mainly been on "hard" and technical services (e.g., waste management and water supply) and the potential of IMC to reduce service costs through economies of scale. (Bel & Warner, 2015; Blåka, 2017; Carr & Hawkins, 2013; Citroni, Lippi, & Profeti, 2013; Dollery, Kitchen, McMillan, & Shah, 2020; Jacobsen, 2017a). The results, however, seem to be inconclusive (see Bel & Sebő, 2021; Bel & Warner, 2015; Bel & Warner, 2016 for literature reviews). While this literature is important, we argue that it tends to ignore certain aspects of IMC that limits our understanding of the complex and diverse nature of this type of cooperation and how it can be improved. There are several reasons for this.

First, the existing literature leaves us with little knowledge about the *non-economic benefits* that usually motivate municipalities to cooperate in "softer" health and human services, such as a stronger and more professional workforce and improved service quality (Bel & Warner, 2015; Høverstad, 2019; Tjerbo, 2010; Mildred E Warner, 2006; Zeiner & Tjerbo, 2014). Second, it usually does not account for the additional *costs and challenges* associated with this type of cooperation, including the time and effort used to establish the IMC (bargaining and information costs), maintaining the IMC (coordination costs), and the potential loss of autonomy (autonomy costs) (Antonio F Tavares & Feiock, 2018). Finally, the current research literature tends to focus on internal resource constraints of individual municipalities (i.e., municipal size and fiscal stress) when trying to understand the antecedents and outcomes of IMC, thus neglecting to consider the *relational and contextual nature* of this type of cooperation. Ultimately, IMC involves one municipality establishing and maintaining a relationship with other municipalities in their environment. Thus, our point of departure is that we cannot understand the antecedents and outcomes of IMC in health services without considering the environmental context in which municipalities are embedded and the relational processes through which benefits and costs are likely to accrue. Following Richard Feiock (2005, p. 9), the basic assumption of this thesis is therefore that "accounting for the contextual and relational elements of bargaining and collective action are necessary to understand cooperation among local governments".

Given the above limitations, however, we argue that most of the existing literature on the antecedents and outcomes of IMC falls short in accounting for the complex and diverse nature of IMC set up to provide health services. Ultimately, this also leaves local managers and practitioners involved in these types of cooperation's empty handed when it comes to suggestions for how to improve IMC and its outcomes (Hulst & Montfort, 2007, 2012). This is also one of the reasons why scholars have called for a broadening of the theoretical and empirical literature on IMC in Europe that extends traditional economic and atomistic explanations, to also include the contextual and relational aspects of IMC in other service areas (Bel & Warner, 2015, 2016; Feiock, 2005, 2007; H. J. Park, 2005).

1.3 Aims, research questions, and model

Going beyond traditional economic and atomistic explanations, the overall *purpose* of the studies presented in this thesis was to identify some of the contextual and relational factors that may help explain variation in the participation and outcomes of IMC in health services. The *overall aim* was to provide local health managers and policymakers with a better and more nuanced understanding of the complex and diverse nature of IMC in health services and ultimately offer some suggestions as to how to improve it. Below, we give a brief overview of the aims and research questions of the three studies included in this thesis.

Study 1

The aim of the first study was to provide a better understanding of the internal drivers and contextual barriers to IMC in health services by asking *why some municipalities engage in IMC more frequently than others when providing local health services or what the predisposing conditions are under which this type of cooperation emerges. (RQ1)*

Study 2

The aim of the second study was to provide a better understanding of the relational nature of IMC in health services by asking *how the structure and quality of cooperation processes interact to influence the perceived benefits and*

costs of being involved in IMC in out-of-hours services ('legevakttjenester'). (RQ2)

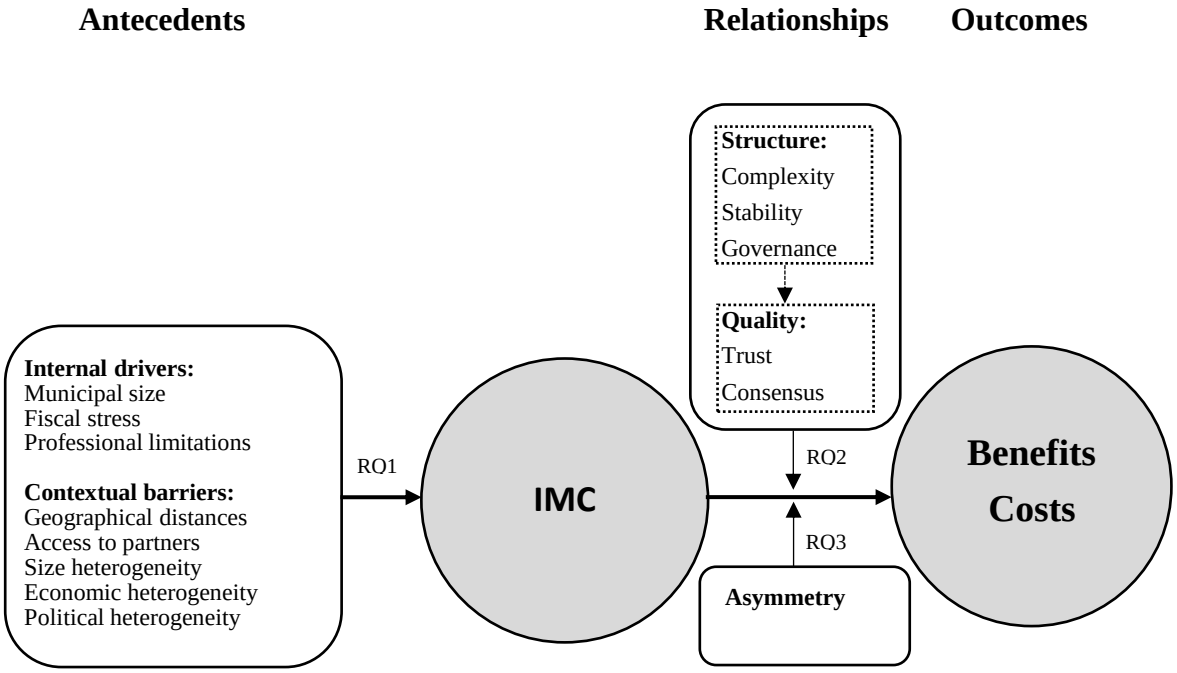
Study 3

The aim of the final study was to provide a better understanding of the implications of the asymmetry and power imbalances usually inherent in host-municipality arrangements set up to provide health services by asking *how size asymmetry between host municipalities and their partners affect the perceived service quality and autonomy costs resulting from IMC. (RQ3)*

As displayed in our conceptual model below (fig. 1.), we structure and organize our thinking on IMC in health services according to three dimensions commonly used in the literature on inter-organizational cooperation: antecedents, relational processes, and outcomes (B. Chen, 2010; Gray & Wood, 1991; Thomson & Perry, 2006). Following Bin Chen (2010, p. 398), we argue that "understanding the dynamics between antecedents, processes, and outcomes of collaboration will help organizations take proactive steps to address potential problems in the formation and functioning of interorganizational networks".

As indicated in the model , this thesis rests on two basic assumptions. The first assumption is that the antecedent conditions of IMC formation in health services will be associated with not only internal resource constraints of individual municipalities but also the *context* in which these municipalities are embedded (study 1). The second assumption is that when first established, the outcomes of IMC (benefits and costs) will be shaped by the structure and quality of the cooperative *relationships* (study 2) as well as the *asymmetry* inherent in them (study 3).

Figure 1. Conceptual model of the antecedents and outcomes of IMC in health services.



1.4 Study context

The three studies included in this thesis were conducted within a Norwegian health care context that comprises a division of responsibility between two main levels. Whereas the state level is responsible for hospitals and specialist healthcare services, the local municipal level is responsible for primary healthcare services. Apart from long-term care (care for the elderly and disabled) and general practice, primary health care includes the responsibility for providing acute and emergency services and services related to disease prevention and health promotion (Saunes, Karanikolos, & Sagan, 2020). The Norwegian healthcare context also reflects a decentralized and publicly funded Scandinavian welfare model (Ministry of Local Government and Modernisation, 2017; Saunes et al., 2020). This model is based on the core values of universalism and equality,

as reflected in the *principle of generalist municipalities* ("generalistkommuneprinsippet"), which entails that all municipalities, regardless of size and capacity, are assigned the same set of statutory tasks aimed at securing equal access to services for all inhabitants (Leknes et al., 2013; Romøren et al., 2011; Saunes et al., 2020).

Nevertheless, faced with a growing "mismatch between capacity and expectations" (Askim, Klausen, Vabo, & Bjurstrøm, 2017, p. 557), many small municipalities with limited access to resources have found it increasingly challenging to keep up with the role as a generalist municipality (Jacobsen, 2014; Jacobsen, Kvelland, Kiland, & Gundersen, 2010; Leknes et al., 2013). We believe these developments are best illustrated by the steadily rising pressure in local healthcare resulting from recent reforms, and the subsequent growth in IMC to cope with this pressure. Especially in the wake of the implementation of the Coordination Reform in 2012 (Norwegian Ministry of Health and Care Services, 2009), IMC seems to have got a new momentum. This Reform entailed transferring additional responsibility and tasks from the hospitals to the municipalities, putting additional pressure on the municipalities both in terms of increased efficiency, service quality and access to qualified personnel (Zeiner & Tjerbo, 2014, 2015). The municipalities now became responsible for patients ready for discharge from hospital, and as of 2016, the reform also mandated all Norwegian municipalities to deliver 24-hour acute services to their inhabitants, thus making them responsible for providing health services to patients who need immediate, but not highly specialized, help.

Coping through IMC

Although a recent amalgamation reform implemented in 2014 and the use of private service providers has increased in recent years (Meagher & Szebehely, 2013), the solution for coping with steadily rising pressure has traditionally been sought through joining or forming IMC. As we shall see, this has resulted in an extensive use of IMC within a wide range of health services in Norway.

The health services most frequently provided through IMC among Norwegian municipalities are statutory acute and emergency services. In 2015, as many as 80% of all Norwegian municipalities provided *out-of-hours services* (OOH

services) through IMC (Norwegian Ministry of Health and Care Services, 2015). These are statutory acute and emergency services provided to inhabitants of a municipality when GP's offices are closed (usually from 3:00 p.m. to 8:00 a.m. on weekdays and 24 hours on weekends). Moreover, as part of the implementation of the coordination reform in 2012, Norwegian municipalities were also mandated to provide their inhabitants with 24-hour emergency services in the form of so-called *municipal acute bed units* (MAUs) ("kommunal akutt døgnenhet"). These are services intended to reduce acute hospital admissions by requiring municipalities to provide short-term stays for patients diagnosed with acute conditions that are manageable by primary health care, or chronic conditions requiring re-evaluation of treatment (Norwegian Directorate of Health, 2016). According to Tjerbo and Skinner (2016), 73% of all Norwegian municipalities provide these types of services through IMC.

Nevertheless, IMC is also frequently used to provide other types of services related to both disease prevention and health promotion (Zeiner & Tjerbo, 2015). *Child health clinics* (CHC) ("helsestasjon") are statutory and involve health-promoting and preventive services aimed at pregnant women, children and young people (0-20 years old), including diet, infant nutrition and breastfeeding information and support (Ministry of Health and Care Services, 2007). These CHCs are frequently provided through IMC (Thonstad & Ekornrud, 2019). *Healthy Life Centres* (HLC) ('frisklivssentral') are a primary healthcare service offering effective, knowledge-based measures for people with, or at high risk of, disease who need support in changing their health behavior and in coping with health problems and chronic disease (Norwegian Directorate of Health, 2017). Although HLCs as such are not statutory, the Norwegian Directorate of Health strongly encourages all municipalities to establish HLCs to improve and better manage statutory services related to disease prevention and health promotion. According to statistics Norway, as many as many as 264 Norwegian municipalities (62%) had established an HLC in 2016, of which 43% were established through IMC (Thonstad, Ekornrud, & Stølan, 2020).

Forms of IMC commonly used in health services

The widespread use of IMC has not only been highly encouraged by the central government but also facilitated through an extension and adjustment of the legal framework, allowing Norwegian municipalities to choose from a wide spectrum

of different forms of IMC.

In addition to simple contractual agreements without any formal governance arrangement established to coordinate the cooperation, the Norwegian legal framework allows for various ways of organizing and governing these types of IMC arrangements. The most common way of organizing IMC in health services in Norway is to centralize the operational and administrative governance responsibility to either one of the participating municipalities, which acts as a *host municipality* (based on the Local Government Act §28b) or to a separate and legally independent inter-municipal *company* with unlimited liability and its own administration (based on the Law on Inter-municipal Companies). There are also more decentralized and less formalized forms of IMC in OOH services in use such as *joint boards* (based on the Local Government Act §27) in which all the participating municipalities share the responsibility for governing the IMC (Andersen, 2011; Jacobsen, 2014). However, as of 2020, the new local government act of 2018 requires Norwegian municipalities to replace IMC based on Local Government Act §27 by a new and more regulated form of IMC known as a municipal task community ('kommunalt oppgavefellesskap'). The aim of this change was to reduce the potential for disagreement and uncertainty among the participants by requiring them to regulate and formalize more aspects of their cooperative activities, including the legal status of the IMC (Norwegian Ministry of Local Government and Modernization, 2016).

The future of IMC

Taken together, the widespread use of IMC throughout recent decades illustrates that this type of cooperation has grown to become an integral part of the provision of local health services in Norway, a development that has been facilitated by the central government. Nevertheless, with the implementation of the Norwegian local government reform in 2014, one of the aims was to limit the need for this type of cooperation through amalgamation of municipalities into larger units (Ministry of Local Government and Modernisation, 2017; Vabo et al., 2014). An important question in this regard will therefore be whether IMC will become superfluous? Although such reforms may reduce the extensive use of IMC, we still believe that the need for IMC will remain in the future. There are several reasons for this.

First of all, as of January 2020, the Norwegian local government reform has only resulted in a reduction of municipalities from 428 to 356 with over half having less than 5000 inhabitants (Brandtzæg et al., 2019), thus still leaving the Norwegian municipal structure fragmented and vulnerable. Second, given the fact that one of the underlying goals of implementing such reforms is to make municipalities "able to take on more tasks and deal with new welfare reforms" (Ministry of Local Government and Modernisation, 2017), we would also expect a need for IMC also in the future. Finally, even if such reforms would result in a dramatic reduction of municipalities into larger units, experiences from Denmark and Sweden show that IMC seems to prevail. Even though the Danish structural reform implemented in 2007 resulted in a reduction in the number of municipalities from 275 to 98 over a short period of time, IMC seems to have prevailed and still continues to be an important part of public service delivery in Denmark (Kjær, 2011). Similarly, despite that the number of municipal amalgamations in Sweden increased significantly in during the 1990s, in the same period the level of IMC seemed to have remained fairly stable (Sundell, Gilljam, & Lapuente, 2009).

1.5 Structure of the thesis

This thesis is structured as follows. After this introduction, chapter 2 presents the theory and hypotheses of the three studies included in this thesis. Chapter 3 starts out by giving a description of the philosophical underpinnings of the thesis before providing an overview of the research design, data, and statistical methods used. Next, chapter 4 presents the results of the three studies, which are then discussed and integrated in chapter 5. Chapter 6 sums up the main findings and conclusions, before elaborating on some of the limitations and practical implications of the thesis.

2 Theory

European research literature on the antecedents and outcomes of IMC in public service delivery seems to be dominated by economic theory, primarily focusing on narrow atomistic explanations related to the size and economy of individual municipalities and their potential to gain economic benefits through economies of scale (Bel & Warner, 2015, 2016). However, the empirical results from this literature are inconclusive, suggesting that economic theory alone is not sufficient to understand the antecedents and outcomes of IMC. We believe that one reason for this may be that these types of explanations fail to capture the more contextual and relational nature of IMC set up to provide complex services such as health care.

There are several other supplementary theories and frameworks that may help to shed light on the more complex and diverse nature of IMC set up to provide health services, including institutional collective action (ICA) (Feiock, 2013), theories of inter-organizational relations (IOR) (Cropper, Huxham, Ebers, & Ring, 2009; Provan & Sydow, 2008) and traditional resource dependence theory (RDT) (Pfeffer & Salancik, 1978). Although these theories have some overlapping elements, they emphasize somewhat different aspects of cooperation. Whereas ICA primarily focuses on the antecedent factors that promote or hinder the establishment of cooperation between organizations in the first place, the theoretical framework of IOR emphasizes the nature of relationships between these organizations and RDT the distribution of resources and power. What they have in common, however, is that they all stress the need to consider both the benefits and potential cost of cooperation and how these may be shaped by the relational context in which organizations are embedded.

2.1 IMC as institutional collective action

Scholars have argued for the need to extend the current research agenda on the emergence of IMC in Europe by applying the theoretical framework of ICA (Andersen & Pierre, 2010; Bel & Warner, 2016; António F Tavares & Feiock, 2014). Similarly, we believe this framework provides a valuable starting point for studying the antecedents of IMC in health services in the first study of this thesis.

In ICA, “the critical question is under what conditions cooperation will emerge” (Feiock, Steinacker, & Park, 2009, p. 267) and the focus is thus on a broad set of factors and conditions that both promote and hinder the emergence of cooperation (Andersen & Pierre, 2010; Feiock, 2005, 2013; Holum, 2019; S. S. Post, 2004; António F Tavares & Feiock, 2014).

On the one hand, the *benefits* of addressing ICA problems where “two or more municipalities in a region or metropolitan area make individual decisions leading to a collective outcome less valued than the one that would be obtained if they acted together” are likely to promote IMC (António F Tavares & Feiock, 2014, p. 2). On the other hand, IMC is likely to be hindered by the additional *transaction costs* of establishing such cooperation, including the time and effort spent on gathering information (information costs) and negotiating a cooperation agreement (bargaining costs), in addition to the potential costs of sacrificing localized autonomy (autonomy costs) (Feiock, 2013; Jang, Feiock, & Saitgalina, 2016; Kim et al., 2020). Ultimately, ICA argues that the willingness of local governments to establish cooperation will depend on “how local government officials perceive and weigh the various costs and benefits of cooperation as they contemplate interlocal service agreements and other forms of intergovernmental cooperation” (2007, p. 48).

Central to ICA, however, is that the anticipated “benefits and costs will differ greatly by organizations based on internal conditions and relationships with other entities” (Jang et al., 2016, p. 166). Put differently, ICA argues that how municipalities will perceive and weigh these expected benefits and costs will be contingent not only on their *internal need* to cooperate (e.g. small size and fiscal stress) but also on the *context* in which they are embedded (e.g. heterogeneity and geographical location relative to their neighboring municipalities) (Andersen & Pierre, 2010; Blaeschke, 2014; Feiock et al., 2009; Jang et al., 2016; Kwon & Feiock, 2010; LeRoux & Carr, 2007). Thus, although simple means-end rationality may influence the decision to cooperate in the first place, according to ICA, this rationality is always context-bound in the sense that the context sets the stage or “action arena” for which the decision to cooperate or not takes place (Andersen & Pierre, 2010). Below, I will elaborate further on how these various conditions of benefits and costs may result in different levels of IMC among Norwegian municipalities in the context of health services.

2.1.1 Internal drivers of IMC

Internal resource constraints "have been regarded as the basic reason to collaborate to address issues that are beyond the capabilities of a single agency to resolve" (Jang et al., 2016, p. 171). Several such internal constraints have been identified in the research literature over the years, of which small municipal size, fiscal stress and professional limitations are among the most common ones (Feiock, Krause, & Hawkins, 2017; Jang et al., 2016; Kwon & Feiock, 2010). According to Kwon and Feiock (2010, p. 877), these constraints are likely to shape a municipality's' *need and demand for cooperation* and therefore act as internal drivers in the first stage in their consideration of whether to cooperate or not:

> *At the first stage, local governments consider whether they need to cooperate in their service provision. At this stage, the decision-making process is determined by demand-side factors...that shape the potential efficiencies or service improvements from service cooperation*

Given the steadily increasing demand in local healthcare, together with a fragmented municipal structure with many small municipalities, the focus of research on IMC has mainly been concentrated on these internal constraints. Probably the most common assumption in the literature on IMC has been that municipalities constrained by *small size* will need to cooperate, as this may allow them access to resources needed to provide high quality services and capture the benefits of economies of scale, implying that the average cost per service user decreases as production increases (see Bel & Warner, 2016 for a literature review). A related and widely accepted argument is that the value of the potential cost reductions will be more important in municipalities with tight budgets and a high degree of *fiscal stress*, thus making them more motivated to cut costs through cooperation (Bel & Warner, 2015; Blaeschke, 2014; Carr, LeRoux, & Shrestha, 2009; Kwon & Feiock, 2010; LeRoux & Carr, 2007; Zafra-Gómez, Pedauga, Plata-Díaz, & López-Hernández, 2014). Although the main focus has been on size and fiscal factors, we also expect municipalities that suffer from *professional limitations* in terms of insufficient level and density of skilled health

personnel to have a stronger need for cooperation (Jang et al., 2016).

Building on the above arguments, we hypothesized that *internal municipal conditions related to small size, fiscal stress and professional limitations will constitute drivers of IMC in health services.*

2.1.2 Contextual barriers to IMC

Even though internal resource constraints may motivate municipalities to cooperate in the first stage, ICA posits that the additional risks and costs of cooperation will act as potential barriers in the second stage. According to ICA the demographic, economic and political context in which cooperation must be established is likely to shape how municipalities perceive and experience these risks and costs, thus acting as potential barriers to IMC. As Kwon and Feiock (2010, p. 877) note:

> *At the second stage, local governments seek to create an institutional mechanism to implement service cooperation, given they find that agreements can provide service benefits that make them better off. At this stage...costs pose additional barriers to successfully creating an interlocal agreement*

The research literature on ICA has identified several factors and conditions that may shape how municipalities will perceive such costs. In their sharpening of ICA, Andersen and Pierre (2010) point in particular to the importance of the configuration of surrounding actors in the environment, including the heterogeneity and geographical location of a focal municipality relative to its neighbors.

Heterogeneity

A focal municipality is located within a larger surrounding geographical area in which the population size, economy, and political preferences of its neighbors may differ from one's own. Despite recognizing that municipalities may seek partners that possess resources that they lack (Pfeffer & Salancik, 1978), ICA

still holds that heterogeneity in interests, needs, and resources may enhance the perceived risks and costs associated with cooperation and that the larger the heterogeneity, the less likely it is that cooperation will be implemented (Carr & Hawkins, 2013; Feiock, 2007; Kwon & Feiock, 2010; António F Tavares & Camöes, 2007; António F Tavares & Feiock, 2014). There are several reasons for this. First, great heterogeneity may make disagreements and conflicts more likely, ultimately making it more difficult and time consuming to negotiate and bargaining a cooperation agreement (bargaining costs). Second, heterogeneity may also result in an unequal bargaining power that may lead the stronger municipality to push for the bulk of the gains and dominate in decision making, leading the weaker partner to abstain from taking part in the cooperation for fear of being dominated or overrun (autonomy costs) (Feiock, 2007; Feiock et al., 2009).

Norwegian studies of IMC have found similar challenges to IMC, including disagreement about financial issues (Baaske, Bringedal, Halvorsen, & Torgersen, 2013; Zeiner & Tjerbo, 2015), the presence of time-consuming processes (Baaske et al., 2013; Leknes et al., 2013), and an uneven balance of power (Andersen & Pierre, 2010; Holen-Rabbersvik, Eikebrokk, Fensli, Thygesen, & Slettebø, 2013). Building on the framework of ICA, we therefore expect these types of costs and challenges to increase with large differences in size, economic situation, and political preference relative to neighboring municipalities, thus undermining IMC.

Geographical location

Two additional contextual factors that might affect the likelihood of cooperation are access to potential cooperation partners and the geographical distances to them (Feiock et al., 2009; Kwon & Feiock, 2010; LeRoux & Carr, 2007; S. Post, 2002).

One of the most important contextual barriers to IMC is great *geographical distances* (Feiock, 2007), which may contribute to increased transaction costs. First, large geographical distances are expected to make communication more difficult and thus increase the search costs of gathering information about the preferences and resources of potential cooperation partners (information costs). Second, large geographical distances may undermine a trusting and reciprocal

relationship based on familiarity, repeated and long-lasting interaction (Feiock et al., 2009). This may in turn increase the risk of opportunistic behavior, ultimately making it more difficult and demanding to bargain and negotiate a cooperation agreement (bargaining costs). Previous studies have found local governments located close to larger cities to be more prone to cooperate compared to those located in more peripheral areas (Morgan & Hirlinger, 1991). We should also keep in mind that IMC in health services often require cooperating municipalities to establish a physical base in one municipality, and that great travel distances for patients may prevent municipalities from participating in IMC.

Another similar geographical condition commonly expected to influence the willingness to cooperate is *access to cooperation partners*, often operationalized as the number of adjacent neighboring municipalities (Blaeschke, 2014; LeRoux & Carr, 2007). Although recognizing that access to a large number of potential cooperation partners may increase complexity and the subsequent information- and bargaining costs (Feiock et al., 2009), ICA still argues that "having a greater number of potential partners in close proximity provides more choices for a local government to improve service efficiency and can increase interactions." (Kwon & Feiock, 2010, p. 878). Thus, having access to a larger number of municipal neighbors may create a larger pool of known potential partners available and thus more choice of cooperation partners (Andersen & Pierre, 2010; Blaeschke, 2014; Feiock et al., 2009; Kwon & Feiock, 2010; Morgan & Hirlinger, 1991; S. Post, 2002). Conversely, we would expect lacking such access to adjacent cooperation partners acting as a barrier to IMC in health services among Norwegian municipalities.

All things considered, we therefore hypothesized that *external municipal conditions related to large geographical distances, increased heterogeneity, and lacking access to adjacent cooperation partners, will act as barriers to IMC.*

2.2 IMC as interorganizational relations

Although valuable, however, the main focus of the above ICA framework still remains on understanding the antecedent conditions of cooperation "not on understanding the interaction pattern between or among actors that may have

been generated out of the particular nature of the joint problem linked to a particular service" (Shrestha, 2005, p. 6). This is also the point of departure of Kim et.al. (2020, p. 18), arguing that "ICA scholars face an important task of treating integration mechanisms as the key factors influencing performance and social outcomes, not only the dependent variables of interest". In doing so, the ICA framework tends to disregard what Thomson (2006, p. 21) terms the "doing" of cooperation, or the relational process of cooperation through which benefits and costs are likely to accrue. In the second study of this thesis, we therefore shift the focus towards the relational aspects of IMC and the actual process of working together, to see how it affects outcomes.

In this regard, we believe theory and research on *interorganizational relations (IOR)* provide a valuable starting point from which to analyze the relational aspects of IMC, as

> *IOR focuses on the properties and overall patterns of relations between and among organizations pursuing a mutual interest while remaining independent and autonomous in the course of following their separate interests(Cropper, Ebers, Huxham, & Ring, 2009, p. 14)*

Relations between organizations are thus treated not only as a dependent variable but also as an independent variable that is likely to affect the outcomes (Cropper, Ebers, & Ring, 2013; Jacobsen, 2017b; Raab & Kenis, 2009; Shrestha, 2005; Van de Ven, 1976). Drawing from several theories, IOR provides an integrated and comprehensive framework for studying the complex and diverse nature of IMC and its outcomes. In their meta-study of core theories underlying research on IOR, Oliver and Ebers (A. L. Oliver & Ebers, 1998) point to four dominant theories that tend to emphasize somewhat different aspects of IOR and how these may affect success, including social network theory emphasizing the structural features of an IOR and an actor's position within this structure (Burt, 1992); institutional theory emphasizing the role of norms of reciprocity and trust in IOR (Powell & DiMaggio, 2012); transaction cost theory emphasizing the "comparative costs of planning, adapting and monitoring task completion under alternative governance structures ; and resource dependence theory emphasizing the role

of resource dependence and issues of power in an IOR (Pfeffer & Salancik, 1978).

Theory and research on IOR have informed frameworks specifically developed for studying cooperation among health-care organizations (see e.g. D'Amour, Goulet, Labadie, Martín-Rodriguez, & Pineault, 2008; Lasker, Weiss, & Miller, 2001), and several relational indicators have been used in the research literature over the years (for an overview, see Cropper, Huxham, et al., 2009 ; Provan & Sydow, 2008; Van de Ven, 1976). In their framework for evaluating IOR, Provan and Sydow (2008, p. 30) suggest categorizing and analyzing these indicators according to three interactive dimensions that are sequential in time (the structure, processes and outcomes of IOR) to see "how and if structure and process indicators interact to affect outcomes." Drawing from parts of this literature, we developed a conceptual model for analyzing the relational aspects of IMC in OOH services in our second study, with the quality of cooperation processes (trust and consensus) included as a mediator between the structure (governance, complexity, and stability) and outcomes (benefits and costs) of IMC (Fig. 2).

Figure 2. Conceptual model of the association between the structure, process quality and outcomes of IMC in OOH services.

Treating IMC as an example of such IOR, we will, in the next section, elaborate further on how we expect these three dimensions, and the indicators included in them, to interact within the context of IMC in health services. Drawing from the framework of IOR, we start out by presenting the various types of outcomes (benefits and costs) that may result from IMC before elaborating further on how

we expect these outcomes to be influenced by the quality (trust and consensus) and structure (governance form, complexity, and stability) of IMC.

2.2.1 Outcomes of cooperation

The question of what outcomes to measure, and how to measure them, has been widely debated in the literature on IOR in recent decades. Two major challenges have been that involvement in IOR is likely to contribute to a variety of different outcomes, making it problematic to pick one single indicator by which to measure them, and that some of these outcomes are hard to assess using objective performance measures. These challenges may be addressed by using a multidimensional and subjective approach, applying *composite outcome measures* based on multiple indicators as perceived by the organizations involved in the cooperation (Kenis & Provan, 2009; Mandell & Keast, 2008; Provan & Sydow, 2008). To measure benefits and costs of IMC in study 2, we therefore constructed two composite variables based on several indicators as reflected in the discussion below (see table 1. for a closer description and measurements of benefits and costs).

Benefits

When evaluating beneficial outcomes of IOR involvement, Provan and Sydow (2008) suggest considering three main types: financial performance, non-financial performance and innovation and learning. These also reflect some of the expected benefits from providing health services through cooperation both in Norway (Zeiner & Tjerbo, 2014, 2015) and elsewhere (Grol, Giesen, & van Uden, 2006; Huibers, Giesen, Wensing, & Grol, 2009; Huibers et al., 2014; Leibowitz, Day, & Dunt, 2003; Leutgeb et al., 2014; Philips et al., 2010; Smits, Huibers, Oude Bos, & Giesen, 2012). The first type, *financial performance*, refers to the potential for reducing service costs resulting from economies of scale and efficiency gains, and have been the main focus in most studies of outcomes of IMC in public services delivery (Bel & Warner, 2015). The second type, *non-financial performance*, includes improved service quality and a stronger workforce since cooperation is expected to facilitate joint investment and resource exchange, reduce workloads, and facilitate recruitment of health personnel and allow them to work in larger teams, etc. Finally, cooperation may

also lead to *innovation and learning* because it allows for spreading best practices, shared training programs, peer support, etc.

Costs

A central feature of IOR that even though cooperation may result in a wide range of beneficial outcomes, bringing together several legally autonomous organizations with potentially different interests, preferences, and resources is not straightforward and usually comes with some additional costs and challenges (Cropper, Huxham, et al., 2009; Provan & Sydow, 2008; Van de Ven, 1976). Besides traditional ex-ante transaction costs of establishing a cooperative arrangement (e.g., bargaining and information costs), IOR also point to the additional ex-post costs of maintaining and coordinating joint decisions and activities after it has been established (coordination costs).

Gulati and Singh (1998, p. 782) define *coordination costs* as "the ongoing coordination of activities to be completed jointly or individually across organizational boundaries and the related extent of communication and decisions that would be necessary". Examples of these types of costs could be the time and resources participants must use on reaching joint decisions, preparing for and attending meetings, writing reports, traveling, communication, etc. (Agranoff, 2012; Van de Ven, 1976). In their review study, Pettigrew et al. (2019) found coordination costs from providing health-care services through cooperation rather than individually, and similar costs have also been reported by Norwegian municipalities taking part in IMC (Andersen & Pierre, 2010; Baaske et al., 2013). Thus, we believe, as do Provan and Sydow (Provan & Sydow, 2008, p. 24), that the "costs of establishing and maintaining an IOR must be considered in any evaluation effort and balanced carefully against more positive evaluation criteria" and, moreover, that minimizing these costs may be just as effective as providing additional benefits (Lasker et al., 2001).

Nevertheless, central to IOR is that these various types of benefits and costs are not given in IOR, but commonly expected to depend on a number of different factors and conditions related to both the structure and quality of the relational processes of cooperation (Cropper, Ebers, et al., 2009; Provan & Sydow, 2008; Thomson & Perry, 2006; Van de Ven, Delbecq, & Koenig Jr, 1976).

2.2.2 The quality of the cooperation process

The term cooperation processes refers to those actions and activities that are likely to result in various types of outcomes (Provan & Sydow, 2008), and the idea that the quality of these processes may be compromised due to lack of *trust and consensus* is one of the central tenets of IOR (Benson, 1975; T. K. Das & Teng, 2001; Head, 2008; Levine & White, 1961; Popp, Milward, MacKean, Casebeer, & Lindstrom, 2014; Provan & Sydow, 2008; Vangen & Huxham, 2013). In this regard, Provan and Sydow (2008, p. 13) argue that the presence of trust and consensus is "a necessary condition for enabling organizations and their managers to work together in ways that can ultimately produce desired outcomes." If we look at the literature on IOR, this has also been a key point in several frameworks developed specifically for studying cooperation in the context of health care (see e.g. D'Amour et al., 2008; Lasker et al., 2001). However, as with outcomes, trust and consensus are complex and multidimensional concepts that are not easily captured through single generic measures (Provan & Sydow, 2008). In this study, we therefore constructed two composite variables based on several indicators reflected in the discussion below (see table 1. for a closer description and measurements of trust and consensus).

Trust

Trust has been an important part of research on IOR and is commonly known to be an essential precondition for successful cooperation. However, "trust is a relevant factor only in risky situations" (T. K. Das & Teng, 2001, p. 4), and cooperating with other autonomous actors with their individual goals, preferences, and resources, entails exposing oneself to a certain degree of risk, especially when the stakes are high and valuable and asset-specific investments are required (Chua, Ingram, & Morris, 2008; M Sako, 1997). A key assumption is that the presence of trust between the participants may help to reduce these risks and ensure predictability and stability, not only reducing the time and resources necessary to coordinate joint activities and decisions (coordination costs) but also increasing participants' willingness to make the risky investments and resource exchanges needed to produce beneficial outcomes (Edelenbos & Klijn, 2007; Korthagen & Klijn, 2014; M Sako, 1997).

However, as with outcomes, dealing with the complex and multidimensional concept of trust in IOR is not straightforward (Provan & Sydow, 2008). Drawing

from the work of McAllister (1995), Chua et al. (2008, p. 437) distinguish between two principal forms of trust:

> *Cognition-based trust refers to trust 'from the head', a judgment based on evidence of another's competence and reliability…By contrast, affect-based trust refers to trust from the heart, a bond that arises from one's own emotions and sense of the other's feelings and motives*

While we recognize the importance of both forms of trust in IMC in health services, we generally expect cognition-based trust to play an especially important role in these types of instrumental, task-oriented, and risky cooperative arrangements, as several previous studies have found (see e.g. Chua et al., 2008; Edelenbos & Klijn, 2007; Willem & Lucidarme, 2014). This is also probably why this form of trust has been included in several frameworks specifically developed for studying inter-professional and inter-organizational cooperation within the context of health care (see e.g. D'Amour et al., 2008; Lasker et al., 2001). However, as indicated above, cognition-based trust includes two dimensions (competence and reliability) that correspond to two distinct types of trust (Chua et al., 2008; Mari Sako, 2006). Whereas *competence trust* refers to the belief that the other participant(s) is "capable of doing what it says it will do" *contractual trust* refers to the belief that the other participant(s) actually will "carry out its contractual agreements" (Mari Sako, 2006, p. 3). Although these two aspects of cognitive-based trust are emphasized somewhat differently in the literature on cooperation in healthcare (see e.g. D'Amour et al., 2008; Lasker et al., 2001), we argue that both should be considered when analyzing IMC in health services.

Consensus

Even though municipalities may trust each other to have sufficient competence and follow-through when it comes to their contractual obligations in the cooperation, this is not to say that this kind of cooperation is without conflicts. Early studies on IOR have pointed to high levels of conflict as undermining

success in cooperation (Benson, 1975; Levine & White, 1961) as this is likely to make the coordination of the cooperation slow and time consuming and impair trust building, ultimately making it harder to achieve beneficial outcomes (Korthagen & Klijn, 2014; Vangen & Huxham, 2013).

However, conflicts may arise for a variety of reasons. In the IOR literature, difficulty reaching agreement on *common goals* has been regarded as an especially important obstacle because different goals may lead organizations to seek different and sometimes conflicting outcomes (Vangen & Huxham, 2013). This is also a key point in the model proposed by D'Amour et al. (2008) for analyzing collaboration within and among healthcare organizations. Nevertheless, even if the participants were to agree on common goals, there may still be disagreement about the *distributive fairness* in the cooperation (Carr & Hawkins, 2013) or whether there is a "fair or just distribution of the final value created in an IOR via negotiations" (Provan & Sydow, 2008, p. 14).

Taken together, what all these different aspects of trust and consensus have in common is that they are likely to shape the perceived risk and uncertainty among the participants about whether the relational process of cooperation will be satisfactory (relational risk) and whether the cooperation will perform as expected (performance risk) (T. K. Das & Teng, 2001). Ultimately, these perceived risks are expected to increase the time and resources needed to make decisions and coordinate and monitor activities, as well as making the participants less willing to make the necessary investments and resource exchanges to produce beneficial outcomes (Edelenbos & Klijn, 2007; Head, 2008; Korthagen & Klijn, 2014; Mari Sako, 2006).

Based on the above assumptions, we hypothesized that *increased levels of trust and consensus among the participants will increase the perceived benefits and reduce the coordination costs of IMC.*

2.2.3 The structure of the cooperation process

The term "structure" has been used to describe a variety of properties of IOR, and Provan and Sydow (Provan & Sydow, 2008, p. 10) note that "structural indicators of IORs are those that focus on the connections between

organizations”, including the governance, complexity, and stability of these connections. What they all have in common, however, is that they are thought to have the potential to influence the quality of cooperation processes and ultimately the outcomes (Cropper, Ebers, et al., 2009; Provan & Sydow, 2008). A basic assumption in the second study of this thesis will therefore be that the association between these three structural factors and the final outcomes of IMC will be indirect and mediated by trust and consensus between the participants.

Complexity has been conceptualized in a variety of ways, and one of the most common measures of complexity in the literature on IOR (O'Toole Jr & Meier, 1999; Van de Ven, 1976; Van de Ven et al., 1976; Verweij, Klijn, Edelenbos, & Van Buuren, 2013) and IMC (Paweł Swianiewicz & Teles, 2019; Antonio F Tavares & Feiock, 2018) is the number of organizations involved in the cooperation process. As the number of participants increases, so does heterogeneity and the number of potential relationships that must be coordinated and integrated into joint action, thus making it harder to reach consensus and maintain the dense interaction needed to build trusting relationships (Milward & Provan, 2003; Provan & Kenis, 2007; Van de Ven et al., 1976). Because complexity undermines the quality of the cooperation processes in this way, we expect it to increase the costs of cooperation and making it more difficult to achieve beneficial outcomes.

Stability is another key factor in the research literature on IOR (A. L. Oliver & Ebers, 1998), and has also been conceptualized in a variety of ways in the research literature. Stability, in this study, refers to the overall maturity (duration) of the cooperation over time (Jacobsen, 2014; Johansen & LeRoux, 2013; Li, Veliyath, & Tan, 2013; Milward & Provan, 2000). Stability over time is expected to be an important condition for generating predictability and familiarity and “organizations may need to work together for a number of years to develop true trusting relationships” (Popp et al., 2014, p. 57), which are key to reducing the costs and increasing the benefits of cooperation (Mandell & Keast, 2008).

The more complex concept of *governance* “involves the use of institutions and structures of authority and collaboration to allocate resources and to coordinate and control joint actions” (Provan & Kenis, 2007, p. 231). Governance constitutes an important part of the analytical frameworks of D'Amour et al.

(2008) and Lasker et al. (2001), both of whom argue for the importance of having some central authorities to provide a clear direction, clarify expectations and responsibilities and play a strategic role in coordinating collaborative processes in health services. From a purely managerial perspective, the use of more centralized governance mechanisms may contribute to improving the cooperation processes and subsequent outcomes. Findings to support this view are also found in several studies of inter-organizational collaboration within the context of health care (Pettigrew et al., 2019; Provan & Milward, 2010; Sheaff, Endacott, Jones, & Woodward, 2015; Sheaff et al., 2014).

Given the great variation in Norwegian IMC in OOH services in terms of the number of participants involved, their maturity and their governance form (Morken et al., 2016), we hypothesized that *reduced complexity, increased stability, and the use of more centralized forms of governance will be positively related to benefits and negatively related to costs through trust and consensus.*

2.3 IMC as resource dependence and power imbalances

The final study of this thesis set out to investigate the implications of the size asymmetry that usually characterizes host-municipality arrangements, specifically concentrating on how asymmetry affects service quality and autonomy costs.

Theoretical arguments about the effects of organizational size can be divided into two types: relative size effects, *which* will depend on the size of other partner organizations, and absolute size effects, which will not (Belgraver & Verwaal, 2018; Dobrev & Carroll, 2003; Hannan, Carroll, Dobrev, & Han, 1998). Arguments about *absolute size effects* emphasizing the need for municipalities to cooperate to address issues of scale and internal resource constraints due to their small size have formed the basis of most of our thinking on IMC (Hulst & Montfort, 2007; Teles & Swianiewicz, 2018). However, arguments about *relative size effects* of IMC emphasizing the positive and negative implications of being smaller or larger than other municipalities taking part in the IMC have received little attention in the research literature.

According to Dobrev and Carrol (2003), arguments about the effects of the relative size of organizations forms the very basis of *resource dependence theory* (Pfeffer & Salancik, 1978), developed in response to the dominating focus on the internal resource conditions of individual organizations. In this regard, Aldrich and Pfeffer (1976, p. 83) notes that:

> *"The resource dependence model proceeds from the indisputable proposition that organizations are not able to internally generate either all the resources or functions required to maintain themselves, and therefore organizations must enter into transactions and relations with elements in the environment that can supply the required resources and service"*

Consequently, these types of relationships are often characterized by asymmetry in terms of size and resources, an asymmetry that may provide both resource opportunities and power constraints for the organizations involved (S. Das, Sen, & Sengupta, 1998; Gulati, 1998; Pfeffer & Salancik, 1978). On the *opportunity side*, asymmetry in size may give small and less resourceful organizations the ability to acquire scarce and critical resources from relatively larger and more resourceful organizations in their external environment (Guo & Acar, 2005; Kwon & Feiock, 2010; Teng, 2007). On the *constraint side*, this very same type of asymmetry may also result in power imbalances that make the relatively smaller and more dependent organizations "vulnerable to influence and lack of autonomy" (Pfeffer & Salancik, 1978, p. 126). Similarly, our point of departure is that the varying degrees of size asymmetry inherent in IMC organized according to a host municipality model will have the potential to affect the opportunity to gain access to the resources needed to improve service quality while also creating autonomy costs for the municipalities involved.

2.3.1 Size asymmetry and service quality

Improved service quality would appear to be the single most important goal for providing public services through IMC both in Norway (Frisvoll, Gjertsen, Farstad, & Moseng Sivertsvik, 2017; Høverstad, 2019; Leknes et al., 2013; Tjerbo, 2010) and elsewhere (Aldag & Warner, 2018; Bel & Warner, 2015;

Mildred E Warner, 2006). Small municipalities with limited capacity and access to internal resources have traditionally been thought to benefit greatly from the resource opportunities offered by IMC. There are several reasons for this. IMC may help small municipalities make large and specialized investments and gain access to resources needed to provide high-quality services (i.e., equipment, technology, personnel, infrastructure, etc.); it may ease the process of recruiting qualified and specialized personnel to full-time positions, as well as building a sufficiently large and stable professional environment (Graddy, 2008; Hulst & Van Montfort, 2007b; Jacobsen, 2014, 2015; Leknes et al., 2013).

However, building on resource dependence theory (Pfeffer & Salancik, 1978), we argue that the resource opportunities of a given municipality depend not only on its own internal resource needs but also on its ability to acquire these necessary resources from the other external municipalities involved in the IMC. Put differently, we believe there must be a good "fit between one organization's resource needs and another's resource provision" (Seabright, Levinthal, & Fichman, 1992, p. 124). From the perspective of the relatively smaller partner municipalities, we therefore expect size asymmetry in favor of their host to represent a good fit simply because a substantially larger host will be more capable of "filling in" for their resource deficiencies compared to a host of similar size that would be more likely to encounter some of the same resource deficiencies (Andersen, 2011; Andersen & Pierre, 2010; Jacobsen, 2015; Teng, 2007). From the perspective of the larger host, on the other hand, we expect the same type of asymmetry to have the opposite effect on service quality as this would entail the host being increasingly larger and more self-sufficient and its relatively smaller partners being less capable of "filling in."

Based on the above assumptions, we hypothesized that *increased size asymmetry in favor of the host will be positively related to service quality as perceived by the relatively smaller partner municipalities and negatively as perceived by the relatively larger host.*

2.3.2 Size asymmetry and autonomy costs

Although there may be resource opportunities associated with IMC, we also argue for the need to consider the potential costs of establishing this type of

cooperation. Among the most significant costs that theorists have attributed to involvement in interorganizational relationships are *autonomy costs*, or the potential loss of organizational decision-making autonomy (Guo & Acar, 2005; C. Oliver, 1990; Pfeffer & Salancik, 1978; Provan, 1984; Provan & Gassenheimer, 1994; António F Tavares & Feiock, 2014).

Central to resource dependence theory (Pfeffer & Salancik, 1978, p. 53) is the idea that power will accrue to those organizations that control scarce resources and that "the potential for one organization's influencing another derives from its discretionary control over resources needed by that other and the other's dependence on the resource." In this respect, we believe that the size asymmetry inherent in most host–municipality cooperation is also likely to result in varying degrees of power constraints and autonomy costs for the participants involved. However, this will obviously depend on whether we take the perspective of the larger host or smaller partner (i.e., the direction of the asymmetry).

From the perspective of the relatively smaller partner municipalities, we believe that increased size asymmetry in favor of the host may entail a loss of decision-making autonomy because this enables the larger hosts to directly or indirectly use their power to impose their will on decision-making processes at the expense of their relatively smaller partners. This potential loss of influence over decision-making by the relatively smaller partners has also been highlighted as one of the potential disadvantages of the host municipality model (Brandtzæg et al., 2019; Frisvoll et al., 2017; Monkerud et al., 2019; Nilsen, 2013; Vinsand, 2010; Vinsand & Langseth, 2012) and is probably the reason why the model is frequently referred to as "asymmetrical" (Frisvoll et al., 2017; Holum, 2019; Vinsand, 2010) and "imbalanced" (Nilsen, 2013; Vinsand & Langseth, 2012). From the perspective of the relatively larger host, on the other hand, this type of asymmetry is likely to result in lower autonomy costs due to the relatively smaller partners' having less power to influence the decision-making of the host.

Looking at all of these factors together, we hypothesized that *increased size asymmetry in favor of the host will be positively related to autonomy costs as perceived by the relatively smaller partner municipalities and negatively as perceived by the relatively larger host.*

3 Data and methodology

This chapter presents the data and methodological approach used to fulfill the purpose and aim of this thesis. However, we start by giving a brief introduction to the philosophical underpinnings of the chosen methodology before presenting the research design, data and questionnaire, and the methods used.

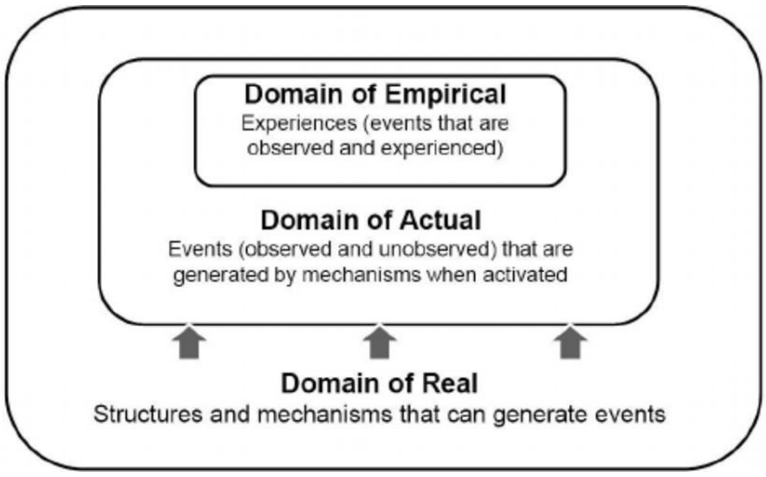
3.1 Philosophical underpinnings

In the literature on inter-organizational relations and networks, the ontological and epistemological tension between the positivist and interpretivist views has dominated (for a discussion see Bevir & Rhodes, 2003; Bevir & Rhodes, 2006; Bevir & Rhodes, 2010). On the one hand, we have the *positivist position* based on the belief that there exists a given objective reality "out there" that is independent of the researcher and that may be observed and explained through causal laws based on quantitative measures. Within the literature on inter-organizational relations and networks, this positivist view has dominated and is "best illustrated by the abundant structural approaches that focus on objectively detecting allegedly stable patterns of interconnections and then, their behavioral and economic consequences" (Provan & Sydow, 2008, p. 5). The dominance of this positivist position in network research led to strong criticism during the 1980s and positivism was supplemented by a more *interpretive position* arguing that "that there is no one reality that can be established objectively, but rather, multiple, subjective, and fluid realities…best documented and, finally, understood by using 'thick' descriptions that require a method very different from structural or quantitative methods" (Provan & Sydow, 2008, p. 6).

Although the philosophical underpinnings of this thesis are obviously far from interpretivist, they do not align with a purely positivist position either. Rather, we argue, the philosophical underpinnings of this thesis can be said to resonate well with the middle position of *critical realism* (CR). Although CR

shares the ontological positivist view that an objective reality exists independent of our thoughts and perceptions, it does not share the epistemological view that this reality is necessarily directly accessible through our observations and experiences (Sayer, 2004). Rather, CR argues for a deep and multilayered view of reality consisting of three related levels or domains, each with its own propensities (fig. 3.), an ontological view that has important epistemological implications (Archer, Bhaskar, Collier, Lawson, & Norrie, 2013).

Figure 3. The three domains of the real (Mingers, 2004)



1) The *empirical domain* consists of those events that manifest themselves through our experiences and observations.
2) The *actual domain* consists of all events (observed or not) and may therefore differ from what is observed at the empirical level.
3) The *real domain* consists of the inherent properties and powers in an object or structure that act as causal forces to generate events appearing at the empirical level (generative events).

Although events that appear in the *empirical domain* can be observed and measured empirically, simply observing a constant conjunction of events is neither a sufficient nor a necessary condition for a causal law. According to Bhaskar (2010, p. 13) we should therefore "mark a difference between causal laws and patterns of events." Patterns of events only represent the tip of the iceberg and do not mean that the rest of the unobservable iceberg in the *actual*

and real domain does not exist or is unconnected to what we see (Easton, 2010). Put differently, events observed in the empirical domain may be conditioned by other events (observable or not) at the actual level, which in turn may be conditioned by the generating mechanisms and structures taking place at the deeper and unobserved level of the real. From this perspective, simply observing a stable relationship for example between the size of municipalities and the benefits gained from IMC will not be sufficient. Benefits may depend on other underlying generative mechanisms (observable or not), such as the quality of the cooperation processes, which in turn will be conditioned by the structures in which these processes take place and other mechanisms. From the perspective of CR, this makes the reality an *open and stratified* system (as opposed to a closed and flat one) in which the Humean law-like concept of causality should be replaced by a concept of causation based on power and *tendencies*. Thus, instead of just describing what we observe in the empirical domain, CR suggests we should strive to explain how these observations are connected to the deep-rooted mechanisms generating those events (generative mechanisms) in the real domain (Easton, 2010). As noted by Mingers (2004, p. 94) "science is not just recording constant conjunctions of observable events but is about objects, entities and structures that exists (even though perhaps unobservable) and generate the events that we observe".

Methodologically, Sayer (1999, p. 19) argues that "compared to positivism and interpretivism, critical realism endorses or is compatible with a relatively wide range of research methods, but it implies that the particular choses should depend on the nature of the object of study and what one wants to learn about it." Within the framework of critical realism, both qualitative and quantitative methodologies may therefore be used for the purpose of researching the underlying mechanisms that drive actions and events, including *structural equation modeling (SEM)* and other quantitative methodological approaches and techniques (Bisman, 2010; A. Brown, Hecker, Bok, & Ellaway, 2020; Krauss, 2005; Perry, Alizadeh, & Riege, 1997).

Following the philosophy of CR, the three studies that makes up this thesis do not proclaim to convey any law-like and causal mechanisms in our studies of the

antecedents and outcomes of IMC. We do believe, however, that our studies may help to shed light on some of the tendencies and generating mechanisms that underlie the formation of IMC and its outcomes. Following Jeppesen (2005, p. 5) "the aim of Critical Realism is to explain the relationship between experiences, events and mechanisms. The perspective emphasizes questions of 'how and why' a particular phenomenon came into being," be it the formation of IMC or the benefits and costs that may accrue from it.

3.2 Research design

The three studies included in this thesis used a quantitative *cross-sectional design* based on survey- and registry data obtained from a sample of Norwegian municipalities involved in IMC in health services conducted between October 2015 and January 2016. Previous studies of interorganizational cooperation have most often used a cross-sectional research design (A. L. Oliver & Ebers, 1998; Van de Ven & Ring, 2006), as is the case with most studies of IMC in public service delivery (Bel & Gradus, 2018; Bischoff & Wolfschütz, 2020). Despite the limitations of cross-sectional design in terms of the difficulty of making causal inferences and providing only a snapshot of IMC based on data collected at one point in time, its strengths in the study of IMC and other types of interorganizational cooperation are that it is relatively inexpensive, not too time-consuming, and allows for working with large sample size.

3.3 Data and questionnaire

3.3.1 Data

The data used in the three studies included in the thesis were collected using an online survey conducted among the top health managers in Norwegian municipalities combined with registry data obtained from KOSTRA (Municipal State-Reporting system) collected by Statistics Norway, and the PAI registry (Personnel Administrative Information System) collected by the Norwegian Association of Local and Regional Authorities ("KS").

On October 28, 2015, we sent an e-mail to the top health manager in all 428 Norwegian municipalities (fig. 4) inviting them to participate in an extensive

web-based survey concerning different aspects their municipality's involvement in and experiences with IMC in health services. The e-mail addresses were obtained from the municipalities' webpage or by phone. Along with a brief description of the study, the e-mail invitation included a link to a three-minute video that provided the managers with additional information about the study. After sending out three reminders, we received responses from 349 of 428 (82%) municipalities, 14 of which were missing answers to all or most of the items. These were deleted from the dataset, leaving us with a total of 335 municipalities (78%) representative of all Norwegian municipalities in terms of population size, economic situation, and geographic centrality (see flowchart on data collection in fig. 4 below).

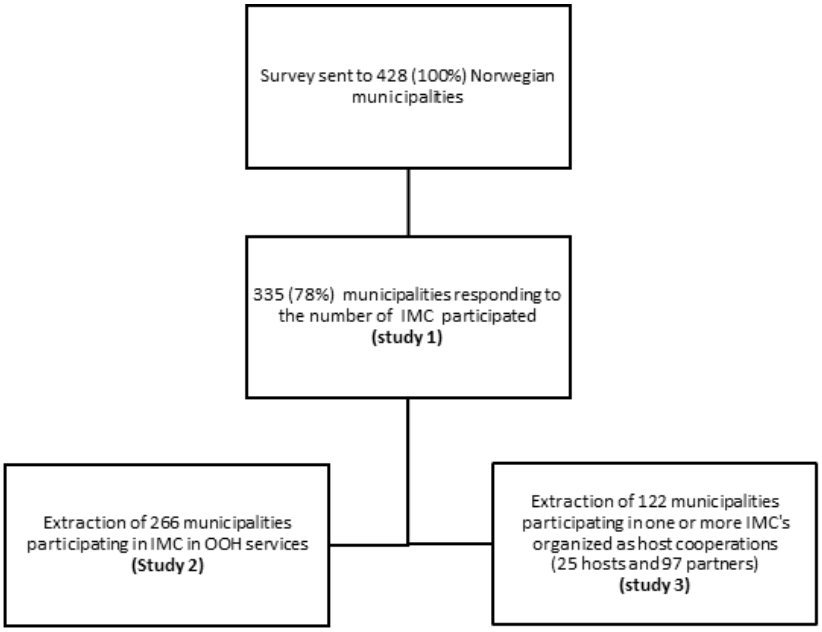
Data used in study 1 were obtained from the 335 municipalities, representing 79 % of all Norwegian municipalities, that responded to the following question in the first part of the survey: "How many instances of formal intermunicipal cooperation in health services does your municipality participate in (do not include social services and child welfare services)?" These survey data were combined with registry data derived from KOSTRA and PAI (see table 1. For an overview).

Data used in study 2 were obtained from 266 municipalities that responded to the part of the survey that specifically dealt with IMC involvement in out-of-hours services (OOH), representing 77% of all 347 Norwegian municipalities taking part in IMC in OOH services in 2016 (Morken et al., 2016). These respondents provided information on different aspects of their IMC participation, including the structure of the IMC (number of participants, governance form and stability), the perceived quality of the IMC (trust and consensus), and the positive and negative outcomes of the IMC (service quality, cost reduction, professional robustness, time-consuming decisions and activities).

Data used in study 3 were obtained from 122 municipalities (25 hosts and 97 partners) that reported that they were participating in IMC organized according to a host municipality model in one or more of the focal health service areas (OOH, MAU, CHC, HLC). The respondents from each of the 122 municipalities provided us with survey data on different aspects of their municipality's involvement in IMC, including the duration of the IMC, the number of

participants in the IMC and the extent to which their involvement in IMC had contributed to better service quality and loss of decision-making autonomy. These survey data were combined with registry data obtained from Statistics Norway on municipal economy, municipal size, and size asymmetry (based on differences in municipal size).

Figure 4. Data-collection flowchart



3.3.2 Ethical considerations

This project was approved by the Norwegian Centre for Research Data (project number 43163) (see appendix 3) and supported by the Association of Local and Regional Authorities (KS) in Agder (see support letter in appendix 4). In October 2015, we sent an invitation by e-mail to the top health manager in all 428 Norwegian municipalities to participate in the survey. In the invitation, as well as in the introductory part of the survey, the respondents were provided with information about the survey (see appendix 1), specifying that the data would be treated confidentially, and that participation was voluntary. All participants provided their consent through the digital questionnaire in SurveyXact. In the

invitation we also provided general information about the project, including the purpose, content, and target group.

3.3.3 Questionnaire

To our knowledge, there are no validated instruments for measuring the concepts included in the three studies that make up this thesis. The content of the questionnaire (see appendix 2) was therefore based on core concepts and questions derived from earlier studies on IMC and frameworks specifically developed for analyzing interorganizational and inter-professional cooperation within the context of health care (Cropper, Ebers, Huxham, & Ring, 2008; D'Amour et al., 2008; Jacobsen, 2014; Lasker et al., 2001; Provan & Sydow, 2008).

The survey consisted of three main parts: *Part 1* consisted of seven questions regarding the respondent's background (age, education, position, and number of years in present position), the name of their municipality, and the number of IMC agreements in health services in which their municipality participates. In the final question, the respondents were asked to report whether they provided the following health services through IMC: OOH, MAU, CHC and HLC. *Part 2* consisted of standardized sub-questionnaires in each of the specific service areas in which the municipality reported participating in IMC in part 1 of the questionnaire. In these standardized sub-questionnaires, the respondents were asked questions about different aspects of their involvement in IMC, including the organizational form, duration, and size of the IMC, as well as how they perceived different types of benefits, costs, trust, and consensus associated with IMC. *Part 3* consisted of two general questions regarding their overall goals for IMC and the extent to which these goals had been achieved through IMC.

3.3.4 Variables and measurements

A total of 26 variables were included in the three studies that make up this thesis, of which 5 were included as dependent variables (DV) and the rest as intermediate (IMV), independent (IV) and control variables (CV) (see table 1). As indicated in table 1, some of the variables (municipal size, fiscal stress related to revenues, complexity, and stability) were included in more than one study,

serving either as IVs or CVs. Four of the variables included in study 2 (benefits, coordination costs, trust, and consensus) were derived from composite measures based on several items in the questionnaire.

Table 1. Variables included in the three studies of the thesis and their measurements and sources

VARIABLES	MEASUREMENTS	SOURCE
	Study 1	
Level of IMC (DV)	How many unique formal IMC does your municipality participate in?	Survey
Municipal size (IV)	Number of inhabitants living in the municipality	KOSTRA
Fiscal stress (IV)	Pct of free revenue per inhabitant relative to national average	KOSTRA
Fiscal stress (IV)	Municipal net debt per capita (NOK) (1000)	KOSTRA
Professional limitations (IV)	FTEs of physicians, physiotherapists, ergo therapists, and nurses per 10,000 inh.	KOSTRA
Professional limitations (IV)	Pct of unskilled FTEs n local healthcare	PAI
Heterogeneity in economy (IV)	Pct of neighboring municipalities with large debt differences (>20,000 NOK per inh.)	KOSTRA*
Heterogeneity in pol. pref. (IV)	Pct of neighboring municipalities with different political party in majority	KOSTRA*
Heterogeneity in size (IV):	Deviation from group median of the size of neighboring municipalities	KOSTRA
Positive heterogeneous	Moore than 40% larger	
Negative heterogeneous	Moore than 40% smaller	
Similar	Not deviating by more than ± 40%	
Geographic distances (IV):	Municipality travel distance to urban settlements of different size:	KOSTRA
Very central	Within 75 min from urban settlements of at least 50,000 inhabitants	
Central	Within 60 min from urban settlements of at least 15,000 inhabitants	
Less central	within 45 min from urban settlements of at least 5,000 inhabitants	
Peripheral	Municipalities that do not satisfy any of these criteria	
Access to adjacent partners	Number of adjacent neighboring municipalities	Kartverket*
Population age (CV)	Pct of population above 67 years	KOSTRA
Unemployment rate (CV)	Pct of unemployed	KOSTRA
Life expectancy (CV)	Average life expectancy (years)	KOSTRA
Depopulation (CV)	People emigrating to another municipality or abroad per 1 000 inhabitants	KOSTRA
	Study 2	
Benefits (DV):	***To what extent has IMC contributed to the following benefits for your municipality:***	Survey
1. Service quality	*Better service quality*	
2. Professional robustness	*A stronger professional environment*	
3. Cost efficiency	*Reduced service costs*	
4. Learning and innovation	*Increased learning and innovation*	
Coordination costs (DV):	***To what extent has IMC contributed to the following costs for your municipality:***	Survey
1. Decision making	*More demanding and time-consuming decision-making processes*	
2. Activities	*More time-consuming activities (reporting, meetings, travelling, etc.)*	
Trust (IMV):	***To what extent do you trust the other participants to:***	Survey
1. Competence based trust	*Have sufficient competence and resources*	
2. Contractual trust	*Loyally follow through on their contractual commitments*	
3. Contractual trust	*Not withdraw from the IMC if conflict*	
Consensus (IMV):	***To what extent do you agree with the following statements:***	Survey
1. Goal consensus	*The participants agree on the goals of the IMC*	
2. Distributive fairness	*The participants agree on the distribution of benefits and costs*	
3. Level of conflict	*There is a low level of conflict in the IMC*	
Complexity (IV)	Number of municipalities participating in the IMC	Survey
Stability (IV)	Average number of years that the participants had been part of the IMC	Survey
Governance form (IV):	**What org. form and legal superstructure is used for the IMC?**	Survey

Host municipality model	IMC based on the Law on Local Government Act §28b	
Company model	IMC based on the Law on Inter-Municipal Companies	
Written agreement	IMC based on the Local Government Act §27 or a simple agreement	
	Study 3	
Service quality (DV)	***To what extent has IMC contributed to better service quality for your municipality?***	Survey
Autonomy costs (DV)	***To what extent have IMC contributed to loss of influence over decisions?***	Survey
Size-asymmetry (IV)	Ratio of population size of host and partner	KOSTRA
Type of service (CV):	Type of health service in focus	Survey
Acute and emergency	OOH services and MAU services	
Preventive and promoting	CHC services and HLC services	
Municipal size (CV)	Number of inhabitants living in the municipality	KOSTRA
Fiscal stress (CV)	Percentage of free revenue per inhabitant relative to national average	KOSTRA
Complexity (CV)	Number of municipalities participating in the IMC	Survey
Stability (CV)	Number of years the participant had been part of the IMC	Survey

Note: all measurements indicated in italics are based on survey questions measured on a Likert scale (1-5), and all variables indicated by numbers constitutes individual indicators making up the composite variables.
**Obtained from kommunebygger.no, a tool developed for comparing Norwegian municipalities that integrates data and information from several sources, including KOSTRA and the Norwegian Mapping Authority ("kartverket").*

Validity and reliability

Before sending out the questionnaire, the items included in the survey were *pretested* on a small number of representatives of the target group to assess the relevance of the questions, the clarity of the language, and the content of the questionnaire. Only minor adjustments were made. We also tested the representativeness of our final sample of 335 municipalities, and they were found to be representative of all the 428 Norwegian municipalities in terms of population size, economic situation, and geographical centrality.

Our two IMVs (trust and consensus) and two DVs (benefits and costs) included in study 2 were *composite variables* based on several items in the questionnaire. To test the *structural validity* of these composite variables, i.e., to make sure that the items tapped into different dimensions, we conducted a principal component analysis (PCA) using direct oblimin rotation. Prior to the PCA, we assessed the suitability of data for analysis, finding correlation coefficients above 0.3 among the 12 items, a Kaiser-Meyer-Olkin value of 0.79 and a p-value < 0.05 in a Bartlett's test of sphericity. We extracted four components and found that all 12 items loaded as theoretically expected, explaining 68% of the total variance. Furthermore, the results showed high factor loadings above 0.5, demonstrating *convergent validity*, and no high cross-loadings, indicating divergent validity. These four composite variables were also checked for *internal consistency*

through calculation of Cronbach's alpha coefficients, and all showed values above the widely accepted cut-off value of 0.7, except “trust” (0.695). We also performed a confirmatory factor analysis (CFA) in AMOS (SPSS) to test the *fit of the measurement* model of latent factors with our data. The results of the CFA showed that the overall fit of our measurement model was good (GFI = 0.969, CFI = 0.992, RMSEA = 0.026, PCLOSE = 0.947).

Moreover, because our data are self-reported and based on the same source, we checked for potential *common method bias*, or variance that is due to the measurement method rather than the constructs themselves (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To do this, we performed a Harman's single-factor test, in which all study indicators were inserted in a principal component analysis (unrotated) constrained to one factor. The result showed that no one factor accounted for the majority of the explained variance (i.e., not more than 32%), indicating that common method bias does not appear to be a concern in this study.

3.4 Statistical methods

Three types of statistical methods with somewhat different strengths were used to analyze data in the three studies that make up this thesis: ordinary least square (OLS) regression, hierarchical regression, and structural equation modeling (SEM). Prior to the analysis, we checked for normality, linearity, and heteroscedasticity. Due to non-normal distribution (positive skewness) in some of the variables, we performed a log transformation (log). We also checked for potential issues of multicollinearity/collinearity among the independent variables included in our analyses, all of which showed acceptable variance of inflation factor values (below 5) and bivariate correlations (below 0.7) (Tabachnick & Fidell, 2007). Missing values were replaced by series means, except for our independent variables measured on a cooperation level in study 2, where missing values were replaced with the group mean (in the case of stability and complexity) or the same value (in the case of governance form) as the municipalities belonging to the same unique IMC (Tabachnick & Fidell, 2007).

3.4.1 Regression analysis

This thesis uses two variants of regression analysis. In study 3, *ordinary least squares regression* (OLS) was used to analyze the predictive power of one single independent variable on two dependent variables while controlling for several others. In study 1, we used *hierarchical linear regression* analysis. The strength of this type of regression is that it offers the opportunity to predict not only the power of single variables separately but also how groups or sets of variables add unique explained variance (change in R^2) above and beyond that explained by variables included earlier in the model. This allowed us to assess and compare the amount of variance explained by each group of variables after previously included variables are controlled for, rather than just the effects of each individual variable (Cohen, Cohen, West, & Aiken, 2013).

3.4.2 Structural equation modeling

In study 2 we used *structural equation modeling* (SEM) in AMOS (SPSS). There are several reasons for this. First, SEM is particularly well suited to investigate "how sets of variables define constructs and how these constructs are related to each other" (Schumacker & Lomax, 2004, p. 2). Second, through path analysis, SEM lets us analyze complex "systems" of relationships as it allows several dependent and intermediate variables in the analysis simultaneously, estimating both direct and indirect effects as well as accounting for measurement error (Cohen et al., 2013; Schumacker & Lomax, 2004). Finally, SEM also allows us to estimate model fit or the extent to which our model fits the data used in the analysis rather than just how well the predictors explain the dependent or endogenous variables (Tabachnick & Fidell, 2007).

4 Results

In this section, the main findings for each of the three studies included in this thesis will be presented. Before the findings are presented, however, the aim and research question of each study is stated.

4.1 Paper 1

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2018). Drivers and barriers of inter-municipal cooperation in health services – the Norwegian case, Local Government Studies, 44:3, 371-390.

The aim of the first study was to provide a better understanding of the internal drivers and contextual barriers to IMC in health services, asking *why some municipalities engage in IMC more frequently than others when providing local health services or what the predisposing conditions are under which this type of cooperation emerges? (RQ1)*

As many as 315 (93%) of a total of 335 responding municipalities reported participating in one or more IMC arrangements in health services (mean of 3.6), a substantially higher rate than reported in earlier Norwegian studies (Leknes et al., 2013; Zeiner & Tjerbo, 2014). Nevertheless, the level of participation in IMC seemed to vary considerably among the municipalities, and the findings from this study may help to explain some of this variation. After controlling for variation in municipal socio-demographic conditions (population age, unemployment rate, life expectancy and depopulation), we found that *internal conditions* related to a decreasing municipal size and fiscal stress acted as important drivers of IMC on health services among Norwegian municipalities as hypothesized. Internal conditions related to professional limitations, on the other hand, did not seem to significantly affect the level of IMC. More importantly, we also found that *external contextual* conditions related to geographical distances and heterogeneity in size relative to neighboring municipalities acted as potential barriers to this type of cooperation, also as anticipated. Although only included as controls, the results also suggested that socio-demographical characteristics related to high population age, life expectancy, and level of depopulation had the

potential to increase the level of IMC in health services.

All things considered, the results from this study points to the need to consider a broad set of factors and conditions to understand the antecedents of IMC in health services, not only related to the internal characteristics of individual municipalities but also the context in which each of these municipalities are embedded.

4.2 Paper 2

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2020). Associations between structures, processes and outcomes in inter-municipal cooperation in out-of-hours services in Norway: A survey study, Social Science & Medicine, 258.

The aim of the second study was to provide a better understanding of the relational nature of IMC in health services by asking *how the structure and quality of cooperation processes interact to influence the perceived benefits and costs of being involved in IMC in OOH services. (RQ2)*

The overall results from this study showed that Norwegian municipalities generally seem to perceive the benefits of IMC in OOH services as high and the costs of cooperation as low. However, the results also suggested that how municipalities perceived these benefits and costs seems to depend on the structure and quality of the cooperative relationship itself. More specifically, we found that the *quality* of cooperation processes (trust and consensus) was crucial, not only to enhance benefits but also to essentially reduce the coordination costs of IMC. Moreover, we also found trust and consensus to fully mediate the association between the structure of IMC and its outcomes. More specifically, the results suggested that cooperation *structures* characterized by more centralized forms of governance, stability over time, and reduced complexity were likely to enhance the benefits and reduce the costs of IMC indirectly through trust and consensus.

The overall results from this study suggest turning the focus to the relational aspects of IMC in health services to gain a better understanding of its benefits

and costs, more specifically to the complex interplay that seem to exist between the structure and quality of cooperation processes.

4.3 Paper 3

Bjørnulf A., Torjesen, D. O., & Karlsen, T. I. (2021). Asymmetry in inter-municipal cooperation in health services - how does it affect service quality and autonomy? Social Science & Medicine, 273.

The aim of the final study was to provide a better understanding of the implications of the asymmetry and power imbalances inherent in host-municipality arrangements set up to provide health services by asking *how size asymmetry between host municipalities and their partners affects the perceived service quality and autonomy costs of IMC. (RQ3)*

After controlling for variation in characteristics of the municipality (size and fiscal stress), the IMC itself (complexity and stability) and the type of health service, we found that size asymmetry had the potential to affect both service quality and autonomy costs. However, this seemed to depend on the perspective taken. From the perspective of the relatively *smaller partners*, the results suggest that they are likely to benefit greatly from size asymmetry (i.e., an increasingly larger host) in terms of improved service quality, although this seems to come at the expense of decision-making autonomy. From the perspective of the relatively *larger hosts*, on the other hand, this very same type of asymmetry is likely to affect service quality negatively while having no effect on decision-making autonomy.

Taken together, the results from this study suggest a broadening of the traditional focus on the absolute size of municipalities to also include their relative size, to understand why municipalities involved in host-municipality arrangements experiences service quality and autonomy costs differently.

5 Discussion

In this chapter, I discuss and integrate the main findings of the three papers included in this thesis. However, I start by summing up some of the main limitations in the research literature on IMC as well as presenting the overall purpose and aim of this thesis, linking it to the main results of this thesis.

This thesis started out by pointing to several gaps in the current research literature on the antecedents and outcomes of IMC that limit our understanding of the complex and diverse nature of IMC set up to provide health services. In addition to a general lack of focus on "softer" health and human services, I pointed to the tendency to ignore the non-economic benefits of IMC, the additional costs and challenges associated with IMC, and the contextual and relational nature of IMC. Based on these limitations, the overall purpose of this thesis was to identify some of the contextual and relational factors that may help explain variation in the participation and outcomes of IMC in health services. The overall aim was to provide local health managers and policymakers with a better and more nuanced understanding of the complex and diverse nature of IMC in health services and offer some suggestions as to how to improve it. We identified several contextual and relational factors and conditions that may help local managers and policymakers better understand the complexity and diversity of IMC in health services and how to improve it.

Taken together, the overall findings of this thesis suggest that the traditional focus on internal characteristics of individual municipal typically related to size and fiscal stress are not sufficient to understand the participation and outcomes of IMC in health. Rather, it points to the need for a broader approach, an approach that also considers variation in the context in which these municipalities are embedded and the relationships they establish with other municipalities. Below, I provide a more detailed discussion of the main findings of this thesis and how to understand them.

5.1 Understanding the antecedents of IMC in health services

Drawing from ICA (Feiock, 2013; António F Tavares & Feiock, 2014), the point of departure in the first study of this thesis was the assumption that to understand the antecedents of IMC in health services, we should not only consider the traditional internal factors that shape the anticipated benefits of IMC, but also the contextual factors that shape the anticipated costs and challenges (Feiock et al., 2009). Ultimately, we argued that it will be the weighting of the benefits and costs of cooperation that will determine the level of IMC in health services. Given that we found that 93% of Norwegian municipalities participated in one or more unique IMC in health services, this could indicate that the overall benefit of cooperation seems to outweigh the potential costs and challenges for most Norwegian municipalities. However, the results from our analysis suggest that the propensity to participate in IMC in health services vary considerably and seems to depend on a range of both internal and contextual factors and conditions.

5.1.1 Internal drivers of IMC

As expected, findings from study 1 suggest that the *smaller and more fiscally constrained* the municipality, the more likely it is to provide health services through IMC. This is in accordance with one of the most common assumptions in the literature on IMC, namely that small and fiscally constrained municipalities are more willing to join or form IMC to deal with internal issues of capacity and resource constraints and diseconomies of scale. This is also supported by other Norwegian studies that have found population size and fiscal factors to affect participation in IMC in the context of health care (Zeiner & Tjerbo, 2014). Depending on the perspective adopted, these findings may be interpreted somewhat differently.

From a purely economic perspective, the results may of course imply that municipalities constrained by their size will be motivated by the potential of *reducing service costs* through economies of scale, implying that the average cost per service user decreases as production increases (Bel et al., 2014; Blaeschke, 2014; Carr et al., 2009; Kwon & Feiock, 2010; LeRoux & Carr, 2007; Zafra-

Gómez et al., 2014). One could argue that these potential cost reductions will be more important in municipalities suffering from fiscal stress resulting, thus making them more motivated to cut costs through cooperation (Bel & Warner, 2015; Blaeschke, 2014; Carr et al., 2009; Kwon & Feiock, 2010; LeRoux & Carr, 2007; Zafra-Gómez et al., 2014). It should also be noted that of our two indicators of fiscal stress (free revenues and debt burden), only reduced levels of revenues seem to affect IMC participation. One reason for this may be that free revenues is more important than debt burden in determining the economic leeway of a municipality, as it constitutes approximately 72% of the available income of Norwegian municipalities. Moreover, it may also be that variation among municipalities in free revenues are greater than in debt burden.

However, although reduced service costs and economic considerations may motivate municipalities to join IMC, the opportunity to build a stronger professional environment and *improve service quality* would appear to be the single most important goal for joining IMC both in Norway (Frisvoll et al., 2017; Høverstad, 2019; Leknes et al., 2013; Tjerbo, 2010) and elsewhere (Aldag & Warner, 2018; Bel & Warner, 2015; Mildred E Warner, 2006). From a resource dependence perspective (Pfeffer & Salancik, 1978), a more plausible explanation would therefore be that IMC may help small and fiscally constrained municipalities make large, expensive, and specialized investments needed to provide their inhabitants with high-quality health services (e.g., medical equipment, technology, personnel, infrastructure, housing, etc.). Moreover, IMC may also help small municipalities build a sufficiently large, stabile and attractive professional environment (Graddy, 2008; Hulst & Montfort, 2007; Jacobsen, 2014, 2015; Leknes et al., 2013), something that in turn may ease the process of recruiting qualified and specialized health personnel to full-time positions. We know from previous studies both in Norway (Sandvik, Zakariassen, & Hunskår, 2007) and elsewhere (Giesen, Smits, Huibers, Grol, & Wensing, 2011), that scaling up emergency care services through cooperation may help municipalities reduce the workload of their GPs. Finally, small municipalities may also benefit from innovation and learning because cooperation allows for spreading best practices, shared training programs, peer-support, etc. (Bel & Warner, 2016).

Nevertheless, regardless of the potential benefits related to reduced costs or

increased service quality , we should also keep in mind that small municipalities may have *no other option* but to cooperate to even be able to provide their inhabitants with statutory health services requiring large and specialized investments (Andersen, 2011; Zeiner & Tjerbo, 2015). In study 3 of this thesis, for example, we found no significant relationship between municipal size or fiscal stress and the perceived improvement in service quality from IMC organized according to a host municipality model (see section 5.3 for a more detailed discussion). Hence, the choice of small and fiscally constrained municipalities to participate in IMC may very well be made from pure necessity just as much as out of the need to improve service quality and/or reduce service costs.

Regarding internal constraints related to *professional limitations*, reduced density and levels of skilled health personnel did not seem to have any significant effect on municipalities' willingness to join IMC. Similar measurements of professionalism used by Jang, Feiock, and Saitgalina (2016) also showed no influence on the willingness of municipalities to cooperate. However, this is not to say that professional considerations are unimportant. Rather, it may be that the professional benefits of IMC are obtained primarily from the scale and capacity effects mentioned above, not from its ability to increase the level and density of skilled health personnel or improve competence level. Put differently, although scaling up health services through IMC may provide small municipalities access to a larger and more robust professional environment and facilitate recruitment, the density of specialized skills and competence level may remain the same.

5.1.2 External barriers to IMC

Our first study started from the assumption that although internal constraints may act as important drivers of IMC, they are not sufficient to explain variation in the level of IMC in health services. In accordance with the framework of ICA, we also found contextual factors related to geographical distances and size heterogeneity relative to neighboring municipalities to constitute external barriers to IMC. This is also in line with Bel and Warner (2016, p. 95), who argue that despite the benefits of IMC, "differences in wealth, demographic makeup, and geographical location of participating communities may still produce problems in

creating a willing market of participating municipalities, and result in coordination problems after the cooperation is in place".

The negative relationship between *geographical distances* corresponds to similar Norwegian studies on the impact of distance on IMC in health services (Tjerbo & Skinner, 2016; Zeiner & Tjerbo, 2015). These findings are in line with the assumptions of ICA, arguing that great distances may undermine cooperation because they are likely to limit the communication and repeated interaction needed to build a strong, trusting, and reciprocal relationships between municipalities. Ultimately, we would expect this to increase the time and resources needed to negotiating a cooperation agreement (bargaining costs), as well as gather information about the preferences and resources of the other partners (information costs) (Feiock, 2007). Municipalities in close geographical proximity, on the other hand, are more likely to deal with each other on a variety of issues over long periods of time, fostering both trust and interdependencies that limit the risk of opportunistic behavior, and thus reducing bargaining- and information costs (Feiock, 2007). However, the effect of geographical distances found in this study could also reflect the simple fact that some mandatory health services are often dependent on establishing a physical service base in one of the participating municipalities, and that the costs of using a service located far away, in terms of travel distances for patients, may make municipalities more likely to provide this service on their own. Norwegian studies have, for example, found that the use of emergency care services is significantly lower among municipalities with great travel distances from the host municipality (Raknes, Morken, & Hunskår, 2015).

Turning to *heterogeneity*, although resource dependency theory argues that differences in size may create resource complementary that facilitates cooperation (Pfeffer & Salancik, 1978), the results from our analysis suggest otherwise. We found that small municipalities surrounded by increasingly larger ones (i.e., negative heterogeneous) participated significantly less in IMC compared to those with neighbors of similar or smaller size. Large municipalities surrounded by increasingly smaller ones, on the other hand, did not seem to participate less. This finding indicates that heterogeneity per se does not necessarily constitute a barrier to IMC as predicted by most theorist, but rather that this will depend on the direction of the heterogeneity. Drawing from ICA,

we could argue that small municipalities surrounded by larger ones may be less willing to join IMC in health services because they fear being overrun or dominated by their larger and more powerful neighbors (autonomy costs) (Feiock, 2007; Feiock et al., 2009). Moreover, another central claim of ICA is that due to conflicts and disagreements, the time and resources needed to negotiate a cooperation agreement (bargaining costs) are also likely to increase when the preferences, needs, and resources of the partners differ (Feiock, 2007). This corresponds with findings from Norwegian studies of IMC which report that municipalities see unequal bargaining power (Andersen & Pierre, 2010) and the need for time consuming processes (Leknes et al., 2013) as a challenge to cooperation. Larger municipalities surrounded by relatively smaller ones, on the other hand, may not experience these types of problems as they are the stronger partner. Moreover, larger municipalities surrounded by smaller ones may also be attractive and popular cooperation partners as they may function as a regional "hub" that is well-equipped to fulfill the function of host for the IMC since it has a larger and more professional staff compared to its smaller neighbors (Andersen & Pierre, 2010). Heterogeneity in economy and political preference, on the other hand, did not seem to influence the level of IMC. One possible reason for this may be that differences in economy (debt burden) and political preferences among Norwegian municipalities are not sufficiently large to constitute any real barrier to IMC, compared to differences in size which varies greatly.

The third and final contextual factor included in our analysis, *access to adjacent partners*, did not seem to have any significant influence on the level of IMC in health services, contrary to what we expected. One possible explanation for this may be that having many adjacent partners to choose from may contribute to increasing the complexity and the subsequent time and effort needed to gather information (information costs) and negotiating a cooperation agreement (bargaining costs) (Feiock et al., 2009). Ultimately, these costs may cancel out the potential positive effect of having more cooperation partners to choose from. Only having a few neighboring municipalities to relate to, on the other hand, may make the search for information and bargaining a cooperation agreement more simple and less time consuming.

All things considered, although we found traditional considerations of small size and fiscal stress of individual municipalities to constitute important drivers of

IMC, the results from our first study also suggest the need to consider the contextual barriers, both in terms of geographical distances and heterogeneity in size relative to their surrounding municipalities.

5.2 Understanding the outcomes of IMC in health services

Turning now to the positive and negative outcomes of IMC in health services, in studies 2 and 3 we found the perceived benefits of IMC to be generally high and the coordination- and autonomy costs to be low. However, how municipalities perceive these types of outcomes seemed to vary, and the results of our two studies point to several factors that may help to better understand why. Taken together, the overall results suggest turning the focus from simple characteristics of individual municipalities to the relationship that links them together, more specifically to the quality and structure of such relationships (study 2) and the size asymmetry inherent in many of them (study 3).

5.2.1 The quality and structure of IMC

The important role played by trust and consensus found in study 2 lends strong support to the idea that increased quality of the relationship between municipalities is likely to reduce the time and resources needed to coordinate joint activities, as well as increase participants' willingness to make the necessary investments to produce beneficial outcomes (B. Chen, 2010; Edelenbos & Klijn, 2007; Head, 2008; Korthagen & Klijn, 2014; Mari Sako, 2006). The implication of these findings may be that active efforts to build trust and consensus in IMC in health services may pay off in terms of both reduced coordination costs and enhanced benefits, and the results from this study provides some suggestions as how to structure the IMC to help municipalities build such trust and consensus.

The quality of IMC

In our second study, we found trust and consensus to be particularly important for reducing the coordination costs associated with IMC in OOH but also for enhancing associated benefits. However, because "trust is a relevant factor only in risky situations" (T. K. Das & Teng, 2001, p. 4), we believe that we must

consider the potential risk inherent in IMC in OOH services (Tjerbo & Skinner, 2016) related to the consequences of both unsatisfactory cooperation (relational risk) and unmet objectives (performance risk) (T. K. Das & Teng, 2001). There are several reasons why health services may be particularly sensitive to these types of risks.

First, OOH services can be described as a type of collective public service in which there is a need for fail-safe service delivery (Mildred E. Warner, 2011) because the consequences of a potential breakdown or failure could be particularly harmful as it would affect many people in need of acute medical treatment. Two other service characteristics that are commonly understood to affect the risk of cooperation between organizations are asset specificity and measurement difficulty (Williamson, 1981). IMC in OOH services requires participants to make asset-specific investments (medical technology, equipment, infrastructure, personnel, etc.), which may not be easy to deploy for alternative uses or to attain separately if the cooperation were to fail or breakdown (Tjerbo & Skinner, 2016). Moreover, as noted by Brown and Potoski (2005, p. 330), "it is easier to measure the quality of trash collection than of mental health care services," and the difficulty of measuring and evaluating the performance and outcomes of IMC in health services may increase the level of perceived uncertainty and risk (Tjerbo & Skinner, 2016). All things considered, we therefore believe that the important role of trust and consensus identified in this study may be due to the need for municipalities to ensure predictability and stability in the provision of OOH services because of the potential consequences of unsatisfactory cooperation (relational risk) and unmet objectives (performance risk) (T. K. Das & Teng, 2001).

It is worth noting that the results from study 2 also show a strong positive association between consensus and trust, the two variables making up the dimension of relationship quality. This suggests that efforts to build consensus on central issues, such as the goals of the cooperation and the distribution of costs, may contribute to enhance the level of trust between the participants involved in IMC as found in other studies of inter organizational cooperation (Y.-H. Chen, Lin, & Yen, 2014). This is also in accordance with Siv Vangen and Chris Huxham's (2013) theory of collaborative advantage, which holds that forming clear goals and expectations about the future of cooperation is key to reducing

risk and building trust.

The structure of IMC

Given that the quality of cooperation appears to play such a critical role in enhancing the benefits and reducing the costs of IMC in OOH services, it is important to identify the *structures* that may help municipalities improve trust and consensus. In this respect, the results from study 2 provide some insight into how the complexity, stability, and governance form of IMC may affect outcomes indirectly through trust and consensus.

First, our findings indicate that limiting the number of municipalities involved in IMC in OOH services may help to *reduce the complexity* of cooperation needed to improve the quality of cooperation processes and their outcomes. These findings are in accordance with the assumption of IOR that reaching the level of trust and consensus needed to increase benefits and reduce the costs of cooperation will be easier when there are fewer organizations to coordinate and integrate into joint action (Milward & Provan, 2003; Provan & Sydow, 2008; Van de Ven et al., 1976). This explanation also seems reasonable given the great variation in the number of participants in IMC in OOH services, ranging from dyads of municipalities to more complex networks consisting of a large number of participants (Morken et al., 2016).

Second, the negative relationship found in this study between the *stability* of the cooperative arrangements and coordination costs flowing through trust suggests that building the trust necessary to reduce costs takes time. This finding may reflect the fact that as IMC in OOH services continues over time, participants will be familiarized and better able to evaluate other participants' track record of carrying out tasks and duties in the past, thus making their behavior and actions more predictable in the future (McAllister, 1995). In contrast, in the early phases of cooperation, this type of familiarization and track record may be absent, leading to more uncertainty and less trust, something that ultimately will increase the time and effort needed to coordinate the cooperation. The lack of relationship observed between stability and consensus may be due to the fact that most of the IMC arrangements investigated in the study had already gone through the critical

initial phase of negotiating an agreement and dealing with conflicts (Mandell & Keast, 2008).

Turning to the last structural variable, *governance*, our findings suggest that centralizing the responsibility for governing the IMC to a host municipality or an inter-municipal company through more formalized agreements helps participating municipalities build the consensus and trust needed to enhance the benefits and reduce the coordination costs of cooperation. Given the relational and performance risks involved in IMC in OOH services, we believe that these results support the assertion that "governance structures which attenuate opportunism and otherwise infuse confidence are evidently needed" (Williamson, 1979, p. 242). Similar concerns have also been raised by the Norwegian Ministry of Health and Care Services (2015), which recommends that IMC in OOH services be set up with a centralized and strong professional and administrative body that defines the division of responsibilities and makes sure that participants follow up on agreements (e.g., the distribution of resources, internal control routines, conflict management, etc.). Moreover, in a recent evaluation of the legal framework regulating IMC in Norway, one of the recommendations was that the least regulated form of IMC (i.e., based on §27 with a common board or based on a simple written contract) be replaced by new forms of IMC embedded within a more regulated legal framework to reduce uncertainty and disagreement between participants (Norwegian Ministry of Local Government and Modernization, 2016). As of 2020, the new local government act of 2018 therefore requires Norwegian municipalities to replace IMC based on Local Government Act §27 with a new and more regulated form of IMC known as a municipal task community ("kommunalt oppgavefellesskap").

Regarding governance, however, we should keep in mind that the above logic largely reflects an instrumental and managerial perspective on IMC, a perspective that typically values centralization and formalization as a tool to increase control and efficiency in public service delivery. This perspective would not necessarily hold if we were to focus on other types of IMC or other types of outcomes. There are several reasons for this. First, the recommendation to use more centralized and formalized governance forms would for example not necessarily hold if we were to focus on other types of IMC (e.g., benchmarking and learning networks or policy networks) valuing other aspects of cooperation

such as involvement, interaction, learning, and flexibility. Second, it should also be noted that centralized governance may involve issues of accountability and loss of autonomy that should be balanced against control and efficiency. In a previous study, Winsvold (2013) found that Norwegian municipalities considered centralized governance through a host municipality or company to be problematic as regard to accountability and autonomy. Finally , this study solely concentrated on *cognitive-based trust* based on more rational evidence and belief in another's competence and reliability, a form of trust that may differ from more affect-based trust "that arises from one's own emotions and sense of the other's feelings and motives" (Chua et al., 2008, p. 437). Following Chua et al. (2008, p. 436), we believe that "these processes of trusting differ experientially and have distinct antecedents and consequences." If we were to focus on more affect-based trust, we could, for example, argue that more centralized and formalized forms of governance might undermine the interaction and familiarity needed to build affect-based trust among the participants.

5.2.3 The asymmetry in IMC

In study 3 we found that the varying degrees of size asymmetry inherent in host arrangements have the potential to affect both service quality and autonomy costs. Taken together, our findings suggested that increased size asymmetry in favor of the host is likely to benefit the relatively smaller partners but not the larger hosts in terms of improving the quality of health services through IMC. However, benefits for the relatively smaller partners in terms of quality appear to be at the expense of decision-making autonomy. Ultimately, these findings may suggest turning the focus from traditional considerations of a municipality's absolute size to its relative size.

Size asymmetry and service quality

Although we found small municipal size to be an important driver of IMC in study 1, the results from study 3 suggest that it is not sufficient if we want to explain why some municipalities benefit more than others in terms of service quality. More important than the absolute size of a given municipality appears to be its size relative to other(s) involved in the same IMC, giving rise to various levels of size asymmetry between the host and partner municipalities. More

specifically, we found that increased size asymmetry in favor of the host is likely to enhance the service quality as perceived by the smaller partners while undermining the service quality among the relatively larger hosts. These findings indicate the presence of *relative size effects* in IMC in health services (Dobrev & Carroll, 2003) and lend strong support to resource dependence theory (Pfeffer & Salancik, 1978), which emphasizes the importance of considering not only the internal resource needs of a given organization but also its ability to acquire such resources from other organizations in their external environment.

From the perspective of the partner municipalities, the results of this study indicate that they would be better off in terms of service quality by establishing cooperation with an increasingly larger host that could offer better access to the scarce resources and capacities needed to provide quality health services to their inhabitants including expensive medical equipment and technology, infrastructure and housing, highly specialized health personnel, a sufficiently large and professional environment, etc. (Graddy, 2008; Hulst & Montfort, 2007; Leknes et al., 2013). Thus, greater size asymmetry in favor of the host appears to represent a better *resource fit* for these partners simply because it may entail both a greater need for resources on the part of the smaller partner and the ability to acquire them from their host. Put differently, a substantially larger host will be more capable of "filling in" for the resource deficiencies of a partner compared to a host of similar size that is more likely to encounter some of the same types of resource deficiencies (Andersen, 2011; Andersen & Pierre, 2010; Jacobsen, 2014; Teng, 2007). However, from the perspective of the relatively larger and more self-sufficient host municipalities, this very same type of asymmetry is likely to represent a worse resource fit because it entails both a reduced need for and a reduced ability to acquire resources from its partners.

All things considered, the results indicate that whereas increased size asymmetry in favor of the host appears to represent a good fit for the smaller partners in terms of service quality, the opposite appears to be the case for their relatively larger hosts. Although this can lead to disagreement regarding who should serve as the host in the early stage of the cooperation process, it would still appear that the largest municipality in the group is almost exclusively chosen as the host. This raises an interesting question: if service quality does not appear to improve for significantly larger hosts, why bother to assume the demanding role of a host

or even join an IMC in the first place? We believe that one possible answer to this question is that there may be additional considerations that motivate larger municipalities to assume a host role, which are not part of this analysis, including increased legitimacy, influence, and reputation (B. Chen & Graddy, 2010). Moreover, given the specialized requirements necessary to provide many of the health services included in this study, the largest municipality may be the only municipality capable of taking on this role and may also feel obliged to assume the responsibility as a "big brother" within a group of significantly smaller neighboring municipalities.

Size asymmetry and autonomy costs

Although it may seem obvious that partner municipalities lose a degree of decision-making autonomy by delegating tasks and authority to a host municipality (Nilsen, 2013; Vinsand, 2010), the results of this study suggest that the degree of loss depends on the degree of size asymmetry and subsequent power imbalances between the host and its partners.

From the perspective of the relatively smaller partner municipalities, the results showed that increased size asymmetry in favor of the host appears to increase the perceived loss of decision-making autonomy among the smaller partner municipalities, indicating that power may be an issue in this type of cooperation. These findings are also in accordance with the resource dependence perspective (Pfeffer & Salancik, 1978, p. 53), which holds that "the potential for one organization's influencing another derives from its discretionary control over resources needed by that other," and may indicate that greater size asymmetry enables the host to impose its will on decision-making processes at the expense of its smaller partners. Thus, it would seem that the potential challenges of power imbalance associated with this type of cooperation (Brandtzæg et al., 2019; Frisvoll & Rye, 2009; Nilsen, 2013; Vinsand, 2010) are dependent on the level of size asymmetry between the host and its partners. An alternative explanation, of course, may be that smaller partners will be more willing to entrust more decisions and authority to larger hosts on a voluntary basis than to similar sized ones. Thus, although size asymmetry may carry the negative implication of having "power over" someone, it may also carry a more positive implication of having increased "power to" get things done, not only in terms of superior expertise, resources, capacity, etc. but also the ability to more effectively impose

decisions and prevent time consuming decision-making processes (Agranoff & McGuire, 2001). Agranoff and McGuire (2001, p. 315) refer to this as the dual role of power, meaning that power can either prevent or facilitate joint action.

From the perspective of the host, although being increasingly larger relative to its partner(s) seemed to reduce the perceived service quality from IMC as expected, this did not appear to make any difference regarding their loss of autonomy. Put differently, a host cooperating with partners of similar size did not result in greater loss of autonomy compared to cooperating with relatively smaller and less powerful partners. This is also supported by previous Norwegian studies finding the size of the hosts unrelated to their perceived loss of autonomy (Winsvold, 2013)

Nevertheless, the overall results of this study support the claim of Broom et al. (1997, p. 30) that "scarcity of resources prompts organizations to form asymmetric relationships, even if the formation of relationships necessitates the loss of autonomy." We believe this is because small municipalities may have little choice but to cooperate to fulfill their statutory tasks and for coping with steadily rising requirements in terms of service quality and efficiency (Andersen & Pierre, 2010), even if this entails a substantial loss of autonomy. This argument is also supported by Norwegian studies reporting that some municipalities see IMC as a necessity for delivering services that require a certain scale of production and level of specialized skills (Leknes et al., 2013; Zeiner & Tjerbo, 2014). For example, individually establishing an acute and emergency service such as an OOH or a MAU would be difficult, if not impossible, for some small Norwegian municipalities given their limited access to resources and capacity.

5.3 Antecedents and outcomes of IMC – The missing link

In sections 5.1 and 5.2, I mainly discussed the results regarding the antecedents and outcomes of IMC of each study in this thesis separately. Taken together, however, there are several important observations to be made regarding the commonly expected link between the antecedents and outcomes of IMC in health services. In this section, I will integrate some of the results from the three studies included in the thesis and elaborate further on how they may help to shed light on

the relationship between the antecedents and outcomes of IMC in health services.

Generally speaking, there has been a tendency in the research literature IMC and other types of interorganizational cooperation to directly link the antecedent factors driving cooperation to its outcomes, or to "positively equate the presence of collaboration with improved organizational performance" (A. Y. Park et al., 2019, p. 4). In this regard, Chen (2010, p. 388) argues that "this stream of research would depict motivations to collaborate…as directly producing collaboration outcomes, while ignoring the role of collaboration processes in contributing to outcomes". This is also the reason why Angela Park et.al. (2019) concludes that future research on IMC may benefit significantly from comparing the factors and conditions motivating IMC (antecedents) to see how they relate to outcomes.

We believe the results from this thesis may help to shed light on the link (or lack thereof) between the antecedents and outcomes of IMC in health services. Although having a somewhat different empirical focus, the results from study 1 and 3 still point to some interesting comparisons, indicating that it does not exist a simple one-to-one relationship between the antecedents and outcomes of IMC. In study 1, we found that factors such as municipal size, fiscal stress, and size differences (heterogeneity) constituted important antecedents of IMC. In study 3, on the other hand, we found these factors either had no relationship to outcomes (as regards size and fiscal stress) or had a somewhat ambiguous relationship to outcomes (as regards size differences). This is also in line with similar findings of Bel and Warner (2016, p. 110) in their meta-regression analysis of factors explaining IMC, who argue that "while fiscal constraints may drive cooperation, it is not clear that cooperation will result in efficiency gains." Below, we provide a brief discussion of some potential explanations of this "missing link" that seem to exist between the antecedents and outcomes of IMC in health services.

The role of municipal size and fiscal stress

Within the context of IMC, the anticipated direct link between antecedents and outcomes is best illustrated by the common assumption that small and fiscally constrained municipalities that have the greatest need for cooperation are also the ones most likely to benefit from IMC. This assumption is reflected in both the research literature on IMC (see e.g. Bel & Sebő, 2021; Blaeschke, 2014;

Jacobsen, 2014) and in Norwegian policy documents (see e.g. Norwegian Ministry of Health and Care Services, 2009). The findings of this thesis, however, suggest otherwise. Although we found small size and fiscal stress acting as important antecedent drivers of IMC in study 1, we found size and fiscal stress to be unrelated to quality benefits in study 3. While the two studies had a somewhat different empirical focus (study 3 only focusing on host arrangements), we believe there may be other explanations as to why the two main factors that seem to motivate municipalities to cooperate in the first place did not affect outcomes.

Following the above notion of Chen (2010), one possible explanation may be that there are likely to be several *other factors and conditions* besides size and fiscal stress that may contribute to moderate and blur a direct link between the antecedents and outcomes of IMC. The results from study 2 and 3 in this thesis points to several such factors, including the quality, structure, and asymmetry of the cooperation processes. In other words, although size and fiscal factors may be important antecedent drivers of IMC in the first stage, when first established, the characteristics of the actual relational process of IMC (quality, structure, asymmetry) may have the potential to affect the benefits and costs of cooperation in the second stage.

As mentioned earlier, an alternative explanation could be that small municipalities are more motivated to participate in IMC simply *because they have to*, not necessarily because IMC provides them greater opportunities for improved service quality compared to larger ones. Put differently, IMC may be a pure necessity and the only option for many small and fiscally stressed municipalities to provide their inhabitants with certain mandatory health services (Jacobsen et al., 2010; Leknes et al., 2013; Zeiner & Tjerbo, 2014), regardless of whether it improves outcomes or not. Thus, small municipalities may be more likely to participate in IMC to be able to provide certain types of mandatory health services to their inhabitants, but they will not necessarily enjoy more benefits in terms of service quality. Large municipalities, for their part, do not necessarily have to cooperate with others to be able to provide these types of services, but they may still enjoy benefits from IMC in terms of quality. Contrary to expectations, a recent Norwegian study by Leknes et al. (2019) found that large municipalities struggle with issues of recruitment and access to specialized

competence in health services just as much as small ones. Although not imperative, as is the case with many small municipalities, IMC may still be an equally important tool for these larger municipalities to receive benefits from cooperation in the form of improved service quality.

The role of size differences

Findings from this thesis also suggested that the role of size differences seems to be somewhat ambiguous. In study 1, we found differences in size relative to neighboring municipalities (i.e., negative size heterogeneity) acting as an important barrier to IMC. Drawing on the framework of ICA, one of the arguments was that municipalities may abstain from cooperating with substantially larger municipalities in their surroundings due to the fear of "scarifying localized autonomy" (autonomy costs) (Kim et al., 2020, p. 7). If we take a closer look at the results from study 3, they lend some support to this argument as they suggest that increased size differences between partner municipalities and their larger hosts (i.e., size asymmetry) tend to increase the perceived loss of decision-making autonomy among the smaller partners. On the other hand, in the same study we also found this type of asymmetry to play a crucial role in increasing the service quality among these smaller partner municipalities. In other words, there seems to be a tension and trade-off effect between the positive quality benefits gained from partnering up with larger municipalities and the negative loss of autonomy.

We believe this tension may serve as an example of what Siv Vangen and Chris Huxham (2013, p. 52) terms *the paradoxical nature of collaboration* in which they argue that:

> *Collaborations are conceptualized as paradoxical in nature with inherent contradictions and mutually exclusive elements caused by inevitable differences between partners; differences that contain the very potential for collaborative advantage*

Put differently, although size differences make the relatively smaller municipalities abstain from taking part in IMC in the first place, this very same differences seem crucial to create the synergy needed to achieve quality benefits.

So then, if size asymmetry seems to constitute such an important element in gaining service quality in study 3, why does it act as a barrier to IMC-participation in study 1? We believe there may be several possible explanations to this paradox. Apart from study 1 differing from study 3 in terms of its empirical focus (only host arrangements) and measurement of size asymmetry (asymmetry relative to host), we believe there may be other additional explanations. One explanation may be that whereas future benefits resulting from size differences are likely to be unknown, the actual challenges and costs of bargaining an agreement caused by size differences are very real and may abstain the relatively smaller municipalities from establishing IMC. Moreover, even if future benefits resulting from size differences were known to the municipalities before establishing the IMC, they might still be outweighed by high ex-ante costs (e.g., bargaining- and information costs) and expected ex-post costs (e.g., coordination- and autonomy costs).

All things considered, the overall findings from this thesis indicates that it does not seem to exist a simple one-to-one relationship between the antecedents and outcomes of IMC in health services. These findings challenge the common assumption that the factors that motivates municipalities to join IMC in the first place, are the same that determines its outcomes.

6 Conclusion

This thesis started out by pointing to some limitations in the current literature on IMC in public service delivery, which seems to have largely neglected the *contextual and relational* aspects of IMC and the broader set of benefits and costs involved in this type of cooperation. Although important, this literature is not very helpful in providing a better understanding of the complex and diverse nature of IMC established in "softer" health and human services. The purpose of this thesis was therefore to shed light on some of the contextual and relational factors and conditions of IMC to see how they affect the participation and outcomes of IMC in health services, and more importantly, to offer local health managers and policymakers some suggestions as to how to improve this type of

cooperation.

Indeed, the overall results from our three studies suggested that to understand the antecedents and outcomes of IMC in health services we need to go beyond individual municipalities' problems related to scale and fiscal stress to also consider the context and relationships in which these municipalities are embedded. In our study of the *antecedents* of IMC (study 1), we found internal constraints resulting from small size and fiscal stress acting as important drivers of IMC while geographical distances and heterogeneity relative to neighboring municipalities seemed to act as barriers. In our two studies of the *outcomes* of IMC we found the perceived benefits and costs of IMC to be closely associated with the interplay between the structure and quality of IMC (study 2) and the degree of size asymmetry inherent in IMC organized according to a host municipality model.

Based on these results, we can conclude that the traditional economic and atomistic approach to IMC seems to be insufficient to understand the various types of antecedents and outcomes of IMC in health services. Rather, our findings suggest that a broader approach to IMC is necessary, one that also includes the characteristics of the context in which these municipalities are embedded and the relationships they establish with other municipalities in their environment. Moreover, this thesis also questions the simple and direct link often made between the antecedent conditions of IMC and its outcomes. Instead, it argues for the need to focus on the relational process, the actual "doing" of IMC, to see how it may affect both benefits and costs. Only then can we gain a better understanding of the complex and diverse nature of IMC and provide local managers, practitioners, and policymakers with some tools for improving it.

We believe this thesis provides several insights that are relevant to both practitioners, policy makers and researchers. Below, we therefore elaborate on some of the theoretical and practical implications of some of the results of this thesis.

6.1 Theoretical and practical implications

Theoretically, the studies included in this thesis expands and supplements the traditional economic and atomistic approaches to IMC that have dominated most of the European research literature. This is in line with the recommendations of Bel and Warner (2016, p. 110) who, in their meta-regression analysis of factors explaining IMC, conclude that:

> *Cooperation requires a broader theoretical framing that includes factors beyond the standard efficiency concerns. Studies of alternative service delivery reforms must move beyond individual service level analyses and focus on the policy challenges affecting local government as an organization in its spatial and structural contexts. Future scholarship needs to give more attention to these organizational and spatial concerns*

Drawing on more integrated and comprehensive approaches such as ICA and IOR, the results from this thesis show that the antecedents and outcomes of IMC in health services cannot be fully understood without considering the contextual and relational nature of this type of cooperation and the associated risk and costs. Moreover, by focusing on IMC in more complex health services, the thesis also contributes to a broadening of the traditional empirical focus of European research literature that typically concentrates on IMC in more technical and "hard services" such as waste management. This is also in line with the assessment of Bel and Warner (2015, p. 63) that "in Europe, data on more diverse sectors than solid waste are needed."

From a practical point of view, the results show that IMC is not fixed, and its outcomes not given. IMC seem to vary both in terms of its structure, quality, and asymmetry, variation seem to have important practical implications. First, the results from our second study may offer municipalities some practical suggestions as to how to structure and govern their IMC to foster the trust and consensus needed to increase benefits and reduce costs of cooperation. Local managers and others involved in IMC struggling to obtain trust and consensus

might, for example, consider limiting the number of participants or centralizing the governance responsibility with a host or an inter-municipal company. Moreover, they should also be aware that even though trust may seem difficult to obtain early in the cooperation process, it often grows over time. Second, the results may help groups of municipalities considering forming or joining host agreements choose host and partner municipalities, as well as shedding light on some of the potential consequences and trade-offs of choosing one over another. From the perspective of the smaller partner municipalities, for example, although our findings indicate that choosing a substantially larger host may be beneficial in terms of service quality, they should also keep in mind that this may come at the expense of decision-making autonomy. The partner municipality may therefore have to balance the value of service quality against the risk of losing autonomy.

We also believe the findings of this thesis may have some important implications for *policymakers* responsible for designing future local reforms and shaping the legal framework regulating these types of cooperation's. In the past, we have seen that the benefits and costs of IMC have been emphasized differently. This is best illustrated by the somewhat contradictory reasoning behind two local reforms implemented by the Norwegian government. Whereas the coordination reform argued for more use of IMC by emphasizing the beneficial aspects of IMC (i.e., service quality and cost savings), the "perceived downsides with IMCs have been important arguments in the ongoing local government reform in Norway" emphasizing the cost-side (i.e., complexity and loss of control) (Eythórsson, Kettunen, Klausen, & Sandberg, 2018, p. 108). We believe the results from this thesis may help to nuance future discussions on the role of IMC, by suggesting that the benefits and costs are not given, but rather seems to depend on several factors and conditions that should be considered. Moreover, during the few past years, the Norwegian legal framework regulating IMC have been subject to discussions and changes to better fit the need of Norwegian municipalities. We believe some of the findings of this thesis may be relevant and contribute to future discussions on how to adapt the legal framework of IMC to better fit the various needs of the municipalities.

6.2 Limitations

The three studies included in this thesis obviously also have some limitations. First, all the studies are based on analyses of *cross-sectional data* collected at a single point in time and specifically focusing on IMC used to provide health services within a Norwegian healthcare context. We must therefore be cautious about generalizing as the results cannot automatically be assumed to apply to other types of services or geographical contexts or at other points in time. Future studies of IMC should consider using longitudinal data collected at multiple points in time as this may help us better understand how different aspects of IMC develop over time. Moreover, comparative studies of IMC across different services and countries may offer better insight regarding the antecedents and outcomes of IMC.

Second, despite the qualitative and subjective nature of some of the concepts and factors included in this study (e.g., trust and consensus), the results are purely based on *quantitative methods* used to analyze survey data obtained from local health managers on items derived from previous theory and research. However, measuring such subjective concepts is not straightforward and may leave us with a somewhat narrow and unnuanced picture of the complexity inherent in them. To gain a more in-depth and nuanced understanding of IMC, future studies may therefore benefit from triangulation of different methods and sources of data (qualitative and quantitative). Moreover, a mixed methods approach, using in-depth interviews or focus group discussions prior to the development of the survey, would also be particularly valuable as it may help to "ensure construct and item applicability for respondents and provide insights for interpreting survey results" (Human & Provan, 1997, p. 373).

Third, like most studies of IMC and other types of inter-organizational cooperation, the *level of analysis* in our outcome variables was limited to the organizational level (i.e., municipal) as perceived by local health managers (Provan & Milward, 1995; Provan & Sydow, 2008). However, even though the IMC is made up of individual municipalities, how outcomes such as quality improvement are perceived among health managers representing these individual municipalities may differ from those on other levels of analysis (network and

individual level). This was also one of the main findings in the seminal work of Provan and Milward (1995, p. 29) on network effectiveness in mental health, which concludes that "the factors that best explain network outcomes appear to depend on whose effectiveness perspective is considered." Moreover, while individuals, municipalities, and networks may experience IMC differently, they are also embedded in different contexts. Individuals are nested in municipalities, which are nested in IMC networks, that in turn are nested in regions, and so on. This suggests a need to account for potential differences in perceived outcomes across different levels of analysis and an acknowledgment that these may represent different contextual levels. We therefore call for more studies on IMC that include and combine data obtained from different contexts and levels of analysis. In this regard, analytical statistical techniques such as multilevel modeling may be appropriate, allowing measurement of variance at lower levels of analysis while at the same time taking into account variation at higher levels (Steenbergen & Jones, 2002).

Finally, many of our variables were based on subjective and *self-reported data* measured on a Likert scale and are thus subject to potential response biases (social desirability, common method, etc.). Although more objective indicators of some of some of our outcome variables (e.g., service quality) would be preferable, the diverse and complex nature of service quality within the context of health care makes it difficult to capture through objective measures (T. L. Brown & Potoski, 2005). As noted by Brown and Potoski (2005, p. 330), "it is easier to measure the quality of trash collection than of mental health care services," something that also may explain the scarcity of literature on this topic (Bel & Sebő, 2021).

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Appendices

Paper 1

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Drivers and barriers of inter-municipal cooperation in health services – the Norwegian case

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ABSTRACT

Inter-municipal cooperation in service delivery is widespread, as is the notion that this type of cooperation is primarily driven by economies of scale. However, the empirical results appear to be inconclusive, suggesting that additional explanatory factors are needed to explain why municipalities cooperate. This study aimed to identify the factors and conditions that influence the level of inter-municipal cooperation in health services by exploring a broad set of explanatory factors that go beyond simple economic concerns. In addition to confirming that a small population-size and fiscal stress constitute important drivers of inter-municipal cooperation, the results from this study also demonstrates the need to consider geographical location and heterogeneity relative to neighbouring municipalities as potential barriers to such cooperation.

KEYWORDS Inter-municipal cooperation; inter-local cooperation; service delivery; health care; Norway; institutional collective action

1. Introduction

Inter-municipal cooperation (IMC) has become an important strategy to cope with steadily rising demands and standards in local service delivery throughout Europe (Hulst and Montfort 2007). Norway is no exception to this development, and local healthcare in particular, has in recent years been subject to far-reaching reforms which have put additional pressure on municipalities to increase the efficiency and quality of their services (Tjerbo and Zeiner 2014; Zeiner and Tjerbo 2015; Torjesen et al. 2017). Combined with a fragmented and diverse municipal structure characterised by many small and sparsely populated municipalities and the deeply embedded values of universalism and equality as reflected in the principle of generalist municipalities,[1] these developments have profoundly challenged many Norwegian municipalities (Leknes et al. 2013; Jacobsen 2014). The local response to deal with these challenges has traditionally

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been to form or join an IMC arrangement; and in the wake of the implementation of the Coordination Reform in 2012 (Norwegian Ministry of Health and Care Services 2009), giving additional responsibility and tasks to the municipalities, this type of cooperation seems to have got a new momentum. Today, IMC constitutes an important form of service delivery in areas such as acute and emergency services, rehabilitation services, public health services, and in this study we ask why some Norwegian municipalities engage in IMC more frequently than others when providing these types of services: what are the conditions under which this type of cooperation emerges?

European literature addressing these types of questions is scarce, and what little exists appears to have been dominated by traditional economic explanations typically highlighting cost reduction and efficiency gains as the primary motivators (Bel and Warner 2015a; Bel and Warner 2015b; Tavares and Feiock 2014). Although most scholars would agree that these types of economic considerations constitute an important driver of IMC in service delivery, the inconclusiveness of the empirical results seems to have fostered a growing consensus on the need for a broader theoretical framing as to why municipalities choose to cooperate in service delivery (Warner 2015; LeRoux and Carr 2007; Blaeschke 2014). In a recent meta-study on the determinants of IMC in service delivery, Bel and Warner (2015a) conclude that future research should extend its focus beyond simple concerns with costs and efficiency gains to include how the geographical contexts affect the decision to cooperate. Similarly, Tavares and Feiock (2014) argue for a broadening of the research agenda beyond traditional issues of scale to consider the risks and transaction costs associated with IMC by applying the theoretical framework of institutional collective action (ICA) within a European context.

Drawing from parts of ICA, this study seeks to respond to these calls by examining a broad set of explanatory factors that reflects both internal municipal conditions expected to foster IMC (small population size, fiscal stress, and professional limitations) and contextual conditions that may have the potential to limit this type of cooperation (heterogeneity, geographical location, and number of potential partners). Thus, the study not only adds to the European literature on IMC by supplementing the dominant research focus on cost and efficiency gains, but also extends the US-centred literature on ICA by consolidating parts of the theoretical framework within a European context focusing on IMC in health services among civil servants operating outside traditional-local-political institutions.

The article is structured as follows: in the next section, we elaborate on the literature and theoretical framework of ICA and its application to the study of IMC in Norwegian local health services, in addition to presenting our hypotheses. Section 3 provides a description of the data and

methodology applied in the study and the variables included in the study. In section 4, we present and discuss the results of the study according to our hypothesis, and in the last section, section 5, we summarise the conclusions and present some suggestions for future research.

2. Conditions for cooperation – theory and hypotheses

Although the vast majority of the literature trying to explain the emergence of cooperation in service delivery originates from United States (Bel and Warner 2015a), several European studies have appeared recent years (e.g. Rodrigues, Tavares, and Araújo 2012; Zafra-Gómez et al. 2014; Plata-Díaz et al. 2014). However, the literature generally seems to be fragmented and based on somewhat different theoretical, conceptual, and empirical frameworks. Whereas the European literature on IMC primarily focuses on joint production of services and the economic benefits derived from this type of cooperation, the extensive literature on inter-local contracting developed within the context of metropolitan areas in the United States gives more attention to how different conditions of transaction costs may affect cooperation (Bel and Warner 2015b). These differences result in part from greater heterogeneity among US municipalities due to a higher level of fiscal autonomy and service responsibility, compared to those in Europe (Bel and Warner 2015a; Tavares and Feiock 2014). An important contribution to this US literature comes from the theoretical framework of ICA introduced by Richard Feiock (2007). Building directly from Ellinor Ostrom's (1990; 2005) work on individual collective action, ICA provides a coherent and systematic tool for studying the determinants of IMC (Blaeschke 2014) by integrating elements of different theoretical research traditions such as the public economy framework, network theories of social embeddedness, and transaction cost theories of organisations (Feiock 2013).

Although ICA recognises that the delegation of more service responsibilities to municipalities may provide both resilience and responsiveness to local needs, one of its central tenants is that fragmentation also produces various types of ICA dilemmas 'in which two or more municipalities in a region or metropolitan area make individual decisions leading to a collective outcome less valued than the one that would be obtained if they acted together' (Tavares and Feiock 2014, 2). Besides unwanted spillovers and common property problems, one of the most common ICA dilemmas arises when individual and uncoordinated decisions undermine the ability to take advantage of *collective benefits* resulting from economies of scale, and ICA especially points to an insufficient population size and fiscal stress as important driving conditions for reaping such benefits (Feiock 2005; Feiock 2007; Feiock and Scholz 2010; Carr et al. 2009). However, central to ICA is that municipalities pursuing these benefits also face barriers of *transaction costs*

resulting from time and resources spent on gathering information (information costs), agreeing on the division of benefits and costs (division costs), as well as negotiating (bargaining costs) and monitoring (enforcement costs) a cooperation agreement, and that these costs could outweigh the benefits of cooperation (Feiock 2007). These transaction costs are expected to be dependent on how the local actors perceive the risks and uncertainties associated with cooperation, and according to Feiock (2013 pp 397),

> Incentives to participate in a mechanism are hypothesised to favour those mechanisms that provide the greatest gain for the least costs under different conditions of collaborative risk as determined by the nature of the underlying ICA problem, the compositions of affected jurisdictions, and institutional contexts.[2]

In the following, we will elaborate further on how some of these various conditions of both benefits and transaction costs of cooperation may play out and manifest themselves in different levels of IMC in the context of health services among Norwegian municipalities, in addition to presenting our hypotheses.

2.1. *Issues of scale and fiscal stress*

Feiock and Scholz (2010, 9) argues that 'a common ICA dilemma among local governments arises if the small size of governments is inefficient for production of the goods each government wishes to provide, and interlocal agreements to share services can provide mutual advantages'. Joint action through IMC may help small municipalities to mitigate these types of dilemmas, and probably the most common assumption in the literature is that municipalities constrained by their size will be motivated to cooperate to capture the benefits of economies of scale by extending the number of service users to capture the benefits of economies of scale, implying that the average cost per service user decreases as production increases (Bel and Warner 2015b). A related and widely accepted argument is that the value of these potential cost reductions will be more important in municipalities with tight budgets and a high degree of *fiscal stress*, thus making them more motivated to cut costs through cooperation (Carr et al. 2009; Kwon and Feiock 2010; Blaeschke 2014; Bel and Warner 2015b; LeRoux and Carr 2007; Zafra-Gómez et al. 2014).

However, in addition to reducing costs, there may also be issues of capacity and uncertainty as some small municipalities will find it difficult and risky to provide services on their own that require large-scale and asset-specific investments in physical, financial and human capital (Blaeschke 2014; Tavares and Feiock 2014; Tavares and Camões 2007; Hulst and Montfort 2007; Bel and Warner 2015b). Contesting the claim of Feiock

(2007) that services requiring asset-specific investments reduces the likelihood of cooperation due to higher risks and transaction costs, Andersen and Pierre (2010) argue that these types of services may foster cooperation because the investments would be difficult, if not impossible, to make alone. The assumption is that joint action through IMC allows these small and fiscally constrained municipalities to share the costs and risks of making the necessary investments to provide these types of services. Given the steadily rising service requirements and real growth in health expenditures in Norwegian local health care (Norwegian Directorate of Health 2016), together with a fragmented and diverse municipal structure in which half of the municipalities have fewer than 5,000 inhabitants, we expect Norwegian municipalities constrained by their size and financial resources to address these types of issues through IMC.

H1: The level of IMC is negatively related to municipal size.

H2: The level of IMC is positively related to fiscal stress.

2.2. *Professional limitations*

Local governments are expected not only to reduce the cost of service delivery, but simultaneously to comply with increasing professional demands and standards of service quality (Andersen and Pierre 2010), and Norway is in many ways illustrative of these developments. Today, Norwegian municipalities are responsible for providing a wide range of health services to its inhabitants, including general practice, emergency care, pregnancy and antenatal care, rehabilitation, health promotion, and preventive medicine (Norwegian Directorate of Health 2016). The implementation of the Coordination Reform (Norwegian Ministry of Health and Care Services 2009) in 2012 entailed transferring additional responsibility and tasks from the hospitals to the municipalities, putting additional professional pressure on the municipalities in terms of increased service quality and access to relevant qualified personnel (Tjerbo and Zeiner 2014; Zeiner and Tjerbo 2015). The municipalities now became responsible for patients ready for discharge from hospital, and as of 2016, the reform also mandated all Norwegian municipalities to deliver 24-hour acute services to their inhabitants, thus making them responsible for providing health services to patients who need immediate, but not highly specialised, help.

The professional capacity to respond to these service requirements is expected to be influenced by the availability of relevant competence and skills. During the years just before and after the implementation of the Coordination Reform we saw a general reduction in the share of unskilled health workers and a significant strengthening of professions relevant for

coping with the new service requirements following the reform, such as physicians, nurses, physiotherapists, and occupational therapists (Norwegian Directorate of Health 2016). However, Norwegian municipalities still vary greatly in terms of professional conditions for coping with these requirements on their own (Norwegian Directorate of Health 2016), thus expected to create different incentives for joining IMC.

H3: The level of IMC is positively related to professional limitations.

2.3. *Geographical location*

Two contextual factors that might affect the likelihood of cooperation are the number of adjacent cooperation partners and the geographical distances between them (Feiock, Steinacker, and Park 2009; Kwon and Feiock 2010; Post 2002; LeRoux and Carr 2007). One of the most important contextual barriers to cooperation is *geographical distances* (Feiock 2007). Great distances are not only expected to make communication more difficult and thus increase the costs of gathering information about the preferences and resources of the partners (information costs), but may also undermine a trusting and reciprocal relationship based on repeated and long-lasting interaction, and by this increasing the risk of opportunistic behaviour and the transaction costs of negotiating a cooperation agreement (bargaining costs). Previous studies have in particular found local governments located in urban areas adjacent to larger cities to be more prone to cooperate compared to those located in more peripheral areas (Morgan and Hirlinger. 1991). Another geographical factor expected to influence cooperation is *number of adjacent neighbours*. Although a large number of cooperation partners could potentially increase the transaction costs of negotiating and monitoring an agreement (Feiock, Steinacker, and Park 2009), having access to a larger number of municipal neighbours may also create a larger pool of known potential partners available and thus more choice of cooperation partners (Kwon and Feiock 2010; Feiock, Steinacker, and Park 2009; Post 2002; Blaeschke 2014; Morgan and Hirlinger. 1991; Andersen 2010).

H4: The level of IMC is negatively related to geographical distances from urban settlements in neighbouring municipalities.

H5: The level of IMC is positively related to the number of municipal neighbours.

2.4. *Heterogeneity*

Each municipality is located within a larger surrounding geographical area and the population size, economy, and political preferences of its neighbours may vary. While recognising that municipalities may seek partners that possess resources that they lack (Pfeffer and Salancik 1978), ICA still holds that heterogeneity in interests, needs, and resources may undermine cooperation because this may make the negotiation of a cooperation agreement more difficult (bargaining costs), and that the larger these differences are, the less likely is it that cooperation will take place (Feiock 2007; Tavares and Feiock 2014; Tavares and Camões 2007). Moreover, heterogeneity also tends to create an unequal bargaining power between the partners that may lead the stronger partner to push for the bulk of the gains, making the weaker partner to abstain from taking part in the cooperation in fear of being dominated or overrun (division costs) (Feiock 2007; Feiock, Steinacker, and Park 2009).

Norwegian studies of IMC have identified several challenges to IMC, including disagreement about financial issues (Deloitte 2013; Zeiner and Tjerbo 2015), the presence of time-consuming processes (Leknes et al. 2013; Deloitte 2013), and an uneven balance of power (Andersen 2010; Holen-Rabbersvik et al. 2013). We expect these types of challenges to be fostered by large differences in population size, economic situation, and political preferences relative to neighbouring municipalities, thus undermining IMC.

H6: The level of IMC is negatively related to heterogeneity in size, economic situation, and political preferences relative to neighbouring municipalities.

3. Data, variables, and methodology

3.1. *Data*

The data used to test the hypotheses were based on survey and registry data derived from a sample of 335 (78%) Norwegian municipalities. Data on our independent variables were obtained from registry data gathered from Statistics Norway[3] and the PAI (Personell Administrative Information System) registry collected by the Norwegian Association of Local and Regional Authorities.[4] Data on our dependent variable, the level of IMC in health services, were based on an extensive web-based survey that we conducted among top managers of local health services in all Norwegian municipalities (n = 428) collected between 28 October 2015 and 1 January 2016. In the survey, we asked about different aspects of their involvement in IMC, including the frequency of IMC in health services. The

questionnaire was pretested to assess the relevance of the questions, the clarity of language and the content matter of the questionnaire. Only minor adjustments were made. After sending out three reminders, we received responses from 349 of a total of 428 (82%) municipalities; 14 of the questionnaires were missing answers to the item asking the respondents about the frequency of IMC. These were deleted from the dataset, leaving us with a total of 335 municipalities, representative of all Norwegian municipalities in terms of population size, economic situation, and centrality, and a response rate of 78%.

3.2. *Variables and measures*

3.2.1. *Dependent variable*

Similar to other studies (e.g. Feiock 2016; Tavares and Camões 2007), the dependent variable records the frequency of IMC (both bilateral and multilateral), asking top managers of local health services in each municipality the following question: 'How many instances of formal inter-municipal cooperation[5] in health services does your municipality participate in (do not include social services and child welfare services)?' Given that all Norwegian municipalities are assigned the same set of statutory tasks through the principle of generalist municipalities, this measurement gives us a sound indicator of the level of IMC in health services and allows us to investigate the level of cooperation rather than the switch from in-house to shared service delivery as many previous studies have done (e.g. Kwon and Feiock 2010; Blaeschke 2014; LeRoux and Carr 2007; Tavares and Camões 2007).

3.2.2. *Independent variables*

A total of 15 independent variables were included in our analysis, and these were grouped into five sets of variables reflecting different conditions and motivational aspects of IMC. The first model includes five socio-demographic *control variables* that are commonly expected to influence the demand for local health services: population age (share of population above 67 years), average life expectancy, unemployment rate, share of immigrants, and depopulation (number of people emigrating to another municipality or abroad per 1,000 inhabitants).

Model 2 includes *population size and fiscal factors*. Population size is measured by the number of inhabitants living in the municipality. Fiscal factors include municipal revenues (percentage of free revenues per capita relative to national average) and debt burden (municipal net debt per capita). Model 3 includes two indicators of *professional limitations*. Density of specialised skills was measured by constructing an index based on the density in Full-Time Equivalents (FTE's) of physicians, physiotherapists, ergo therapists, and nurses per 1,000 inhabitants in the municipalities.

Competence level measures the share of unskilled FTE's within healthcare in each municipality.

Model 4 includes two variables reflecting the *geographical factors*. First, geographical location/distance was measured by the travel distance between a given municipality's population centre and urban settlements of different size, as defined by Statistics Norway. 'Central' denotes the municipalities within 75 min travel distance from urban settlements of at least 50,000 inhabitants, 'quite central' denotes municipalities within 60 min' travel distance from urban settlements of at least 15,000 inhabitants, 'less central' denotes municipalities within 45 min travel distance from urban settlements of at least 5,000 inhabitants, and 'least central' denotes the municipalities that do not satisfy any of these criteria. Second, we included the number of surrounding municipalities, measured as the number of geographical borders.

Model 5 includes three indicators of *heterogeneity*. First, size heterogeneity was measured by calculating a municipality's relative deviation from the group median of the population size of its neighbouring municipalities in expressed as a percentage. To capture the direction of size heterogeneity, we constructed three categories of municipalities (dummy variables): negative heterogeneous (more than 40% smaller than the group median), homogeneous (not deviating from the group median by more than ± 40%), positive heterogeneous (more than 40% larger than the group median). Political heterogeneity was calculated by taking the percentage of neighbouring municipalities having a different political party in the majority than the observed municipality. Fiscal heterogeneity was measured by taking the percentage of neighbouring municipalities with large debt differences (>20,000 NOK (Norwegian kroner) per inhabitant) relative to the observed municipality.

Missing values were replaced by series means, and extreme scores were winsorised and replaced with the next highest value not considered to be an outlier (Tabachnick and Fidell 2007). Even though the independent variables included a number of potentially interrelated independent variables, tests of multi-collinearity showed acceptable levels of bivariate correlations less than 0.7 and variance of inflation factor (VIF) levels well below 10 and tolerance above 0.20 (Tabachnick and Fidell 2007). A visual inspection of the normal P–P plot and scatterplot showed that the assumptions of linearity and homoscedasticity were met. Because of positive skewness, we performed a log transformation of the dependent variable and some of the independent variables (unemployment rate, depopulation, share of immigrants, population size, and density of specialised skills). In cases where both the dependent and independent variables are in log form (log-log model), the estimated coefficients demonstrate elasticity effects, and the interpretation will be that a 1% increase in the independent variable would yield an average of [beta value] per cent increase/decrease in the dependent

variable, all other included factors being constant. In the other cases where the independent variables are in their original metrics and the dependent in log form (log-linear model), the interpretation will be that one a unit increase in the independent variable would yield an average increase/decrease of 100*[beta value] per cent in the dependent variable, all other included factors being constant.

3.3. *Method*

To test the statistical association between groups of related independent variables and the dependent variable, we applied hierarchical multiple regression (SPSS version 19). Hierarchical regression was used to test a number of hypotheses based on our theoretical expectations and to show how groups of variables representing different internal and contextual conditions added unique variance above and beyond that explained by variables included earlier in the model. This allows us to assess and compare the amount of variance explained by each group of variables (models 1–5) after previously included variables are controlled for, rather than just the effects of each individual variable. A p value < 0.05 was defined as statistically significant. However, results with p values between 0.05 and 0.99 were considered near significant and are reported.

4. Results and discussion

IMC in health services among Norwegian municipalities was extensive, and as displayed in table 1 below, as many as 315 (93%) of the municipalities included in our study reported participating in one or more formal IMC arrangements with a mean of 3.6 IMC arrangements (SD 2.9), ranging from a minimum of 0 to a maximum 21 unique IMC arrangements. However, this study set out to examine the factors and conditions accounting for variation in the level of IMC, and Table 2 below displays the results from our hierarchical multiple regression analysis showing the associations between the level of IMC and 15 explanatory variables grouped into five sets of variables (models) representing different conditions for cooperation to take place.

Although only included as control variables in model 1, *socio-demographic factors* in model 1 explain 6% of the variation in the level of IMC (p < 0.01). Population age and life expectancy remain statistically significant (p < 0.01) and positively associated with the level of IMC across models 2–5, indicating that an ageing population with high life expectancy may have the potential to increase the demand for local health services, and thus the need to cooperate to cope with this demand (LeRoux and Carr 2007; Blaeschke 2014). Depopulation is also significant and positively related to the level of IMC, suggesting that a declining population may have the potential to

Table 1. Descriptive statistics.

Variables	Description	N	Mean	SD	Min	Max
Level of IMC (log)	Number of formal IMC arrangements in health services	335	3.56 (0.59)	2.87 (0.25)	0 (0)	21 (1.34)
Population age	Percentage of population above 67 years	335	16.90	3.40	8	28
Unemployment rate (log)	Percentage of unemployed	335	2.50 (0.36)	1.10 (0.19)	1 (0)	7 (0.90)
Life expectancy	Average life expectancy	335	80.69	0.73	79	82
Depopulation (log)	Number of people emigrating to another municipality or abroad per 1,000 inhabitants	335	50 (1.68)	14.44 (0.12)	22 (1.34)	110 (2.04)
Population size (log)	Number of inhabitants	335	9473 (3.70)	16,020 (0.49)	378 (2.31)	184,960 (5.30)
Geographical location/ distance:	Average municipal travel distance from urban settlements of different sizes	335				
Central	Within 75 min. from settlements of at least 50,000 inhab.	116	0.35	0.48	0	1
Quite central	Within 60 min. from settlements of at least 15,000 inhab.	62	0.18	0.39	0	1
Less central	Within 45 min. from settlements of at least 5,000 inhab.	38	0.11	0.31	0	1
Least central/peripheral	Does not satisfy any of the above criteria	119	0.35	0.49	0	1
Municipal neighbours	Number of municipal borders	335	4.2	2.2	0	11
Revenues	Percentage of municipal free revenue per capita relative to national average	335	103	10	93	167
Debt burden	Net debt per capita (NOK) (1000)	335	61.2	23.5	0	155
Competence level	Percentage of unskilled FTEs within local health-care	335	21	6.9	5	44
Density of specialised skills (log)	Number of FTEs of physicians, physiotherapists, ergo therapists and nurses per 10,000 inhabitants	335	8.01 (0.89)	2.40 (0.11)	4 (0.63)	18.75 (1.18)
Size heterogeneity:	Deviation from the group median number of inhabitants in neighbouring municipalities					
Positive heterogeneity	More than 40% larger than the group median	104	0.31	0.46	0	1
Similar	Not deviating more than ± 40%	117	0.35	0.48	0	1
Negative heterogeneity	More than 40% smaller than group median	114	0.34	0.47	0	1
Fiscal heterogeneity	Percentage of neighbouring municipalities with large debt differences (>20,000 NOK per inh.)	335	47,3	28,3	0	100
Political heterogeneity	Percentage of neighbouring municipalities with different political party in majority	335	59	30,8	0	100

Table 2. Factors explaining the level of IMC in health services in Norway (Hierarchical linear regression).

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
1. Controls					
Population age	0.004 (0.004)	0.013 (0.005)**	0.015 (0.005)***	0.017 (0.006)***	0.018 (0.006)***
Unemployment rate (log)	−0.010 (0.083)	−0.091 (0.081)	−0.104 (0.081)	−0.065 (0.083)	−0.074 (0.083)
Life expectancy	0.066 (0.022)***	0.056 (0.021)***	0.054 (0.021)***	0.072 (0.022)***	0.069 (0.022)***
Depopulation (log)	0.384 (0.131)***	0.399 (0.126)***	0.407 (0.129)***	0.400 (0.129)***	0.447 (0.131)***
Share of immigrants (log)	−0.087 (0.101)	0.051 (0.099)	0.050 (0.099)	0.052 (0.099)	0.029 (0.100)
2. Scale and fiscal factors					
Population size (log)		−0.107 (0.042)**	−0.099 (0.043)***	−0.109 (0.043)**	−0.160 (0.054)***
Revenues		−0.017 (0.003)***	−0.015 (0.003)***	−0.012 (0.003)***	−0.013 (0.003)***
Debt burden		−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)
3. Professional factors					
Competence level			−0.003 (0.002)	−0.003 (0.002)	−0.003 (0.002)
Density of specialised skills (log)			−0.221 (0.161)	−0.183 (0.168)	−0.179 (0.168)
4. Geographical factors					
Geographical location/distance[a]					
Less central				−0.003 (0.044)	0.016 (0.045)
Quite central				0.082 (0.044)**	0.110 (0.042)***
Central				0.062 (0.040)	0.096 (0.043)**
Number of municipal neighbours				0.013 (0.007)**	0.010 (0.007)
5. Heterogeneity factors					
Fiscal heterogeneity					0.000 (0.000)
Political heterogeneity					0.000 (0.000)
Size heterogeneity[b]					
Positive heterogeneous					0.008 (0.037)
Negative heterogeneous					−0.082 (0.035)**
Constant	−4.829 (1.795)***	−2.152 (1.795)	−2.072 (1.816)	−3.880 (1.942)**	−3.532 (1.960)*
R^2	0.06	0.16	0.17	0.19	0.21
ΔR^2	0.06***	0.10***	0.10	0.02*	0.02

Dependent variable: number of IMC participated (log). N = 335.
Unstandardised Beta coefficients (standard error in parenthesis) ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$
[a]Peripheral/least central municipalities are chosen as reference category
[b]Homogeneous municipalities are chosen as reference category

increase a municipality's need for cooperation to maintain a sufficient level of health services at a reasonable cost and to avoid excess capacities.

4.1. *Scale and fiscal factors*

The results show that including scale and fiscal factors in model 2 adds 10% ($p < 0.01$) to the prediction of the level of IMC, above and beyond that accounted for by socio-demographic factors alone. More importantly, the results show a statistically significant negative relationship between the level of IMC and *population size* as well as the *level of revenues* across all the models (2–5), suggesting that a small municipal size and fiscal stress constitute important drivers of IMC in health services, as we hypothesised (H1 and H2). These results are also supported by several Norwegian studies that have found population size (e.g. Vinsand and Langseth 2016; Tjerbo and Skinner 2016; Zeiner and Tjerbo 2015) and fiscal factors (Tjerbo and Zeiner 2014) to affect IMC in health services. There may be several explanations to these findings.

From the perspective of ICA (Feiock 2007), the results could indicate that Norwegian municipalities participate in IMC in health services to address potential ICA-dilemmas that may arise from individual and uncoordinated action among small and/or fiscally constrained municipalities, and thus allowing them to reap the collective benefits of economies of scale. This also make sense in the light of the steadily increasing demands put on Norwegian health-care services, combined with a fragmented municipal structure and a real growth in health expenditures (Norwegian Directorate of Health 2016). Having to do more with less, small Norwegian municipalities missing out on economies of scale and/or suffering from fiscal stress may be more prone to cooperate to cut costs in the provision of local health services.

However, IMC also allow municipalities that are restrained by their size and/or economy to share the costs and risks of making large and asset-specific investments in the equipment, technology, knowledge, buildings that are necessary to provide services that require a certain scale of production, service quality and breadth (Jacobsen 2014). In response to the claim of Feiock(2007) that services requiring highly asset-specific investments will reduce the likelihood of cooperation due to high transaction costs, Andersen and Pierre (2010)argues that some municipalities have very little choice but to cooperate to fulfil their commitments. This argument is also supported by several Norwegian studies reporting that some municipalities see IMC as a necessity for delivering services that require a certain scale of production and level of specialised skills (e.g. Leknes et al. 2013; Zeiner and Tjerbo 2015;). Individually setting up an emergency room or a 24-hour municipal acute ward, for example, would be difficult, if not impossible,

for some small Norwegian municipalities with limited resources and capacity. Indeed, these are two examples of health services in which IMC constitutes the dominant form of service delivery in Norway (e.g. Zeiner and Tjerbo 2015; Jacobsen et al. 2010; Leknes et al. 2013). Furthermore, IMC may also be a strategy for small municipalities to cope with the risk of future fluctuations in the demand for health services, as well as ease the recruitment of specialised personnel (Jacobsen 2014).

4.2. *Professional factors*

Adding professional factors in model 3 does not seem to contribute much to the prediction of IMC in Norwegian local health services and neither of the two variables included as indicators of professional limitations (density of specialized skills and competence level) had a significant impact on the level of IMC. Similar measurements of professionalism used by Jang, Feiock, and Saitgalina (2016) also showed no influence on the willingness of municipalities to cooperate. However, this is not to say that professional considerations are unimportant. On the contrary, several Norwegian studies reports that increased service quality and larger and a more robust professional environment are the most important motivating factor for joining IMC in health services (e.g. Deloitte 2013; Zeiner and Tjerbo 2015). Rather, it may be that the professional benefits obtained from the scale effects reported in model 2 are more important than our measures of professional conditions.

4.3. *Geographical factors*

Adding geographical factors in model 4 contributes an additional 2% ($p < 0.10$) to the explained variance in the level of IMC, above and beyond that explained by the variables already included in models 1–3. The results from our analysis suggest that centrally located ($p < 0.01$) and quite centrally located ($p < 0.05$) municipalities with shorter geographical distances to urban settlements cooperate significantly more compared to the group of peripheral municipalities with greater geographical distances to urban areas, as hypothesised (H4). These findings correspond with other similar studies on the impact of geographical distance on IMC in health services among Norwegian municipalities (e.g. Tjerbo and Skinner 2016; Zeiner and Tjerbo 2015).

These results are in line with the assumptions of ICA, which argue that great geographical distances may undermine cooperation because they limit the communication and repeated interaction needed to build a strong, trusting and reciprocal relationships between municipalities. In turn, this is expected to increase time and resources needed to gather information about the preferences and resources of the other partners (information costs), as well as negotiating a cooperation agreement (bargaining costs)

(Feiock 2007). Municipalities in close geographical proximity, on the other hand, are more likely to deal with each other on a variety of issues over long periods of time, fostering both trust and interdependencies that limit the risk of opportunistic behavior, and thus reducing the time and resources needed to negotiate and monitor an agreement (Feiock 2007). However, it is also likely that the results could also reflect the simple fact that some mandatory health services are often dependent on establishing a physical service base in one of the participating municipalities, and that the costs of using a service located far away, in terms of travel distances for patients, may make municipalities more likely to provide this service on their own. Norwegian studies have for example found that the use of emergency care services is significantly lower among municipalities with great travel distances from the host municipality (Raknes, Morken, and Hunskår 2014).

4.4. *Heterogeneity*

Taken together, the heterogeneity factors included in model 5 do not seem to yield any significant unique contribution to the prediction of the level of IMC in health services, beyond that already explained by the previously included variables. However, looking at the variables in model 5 separately, we see that municipalities surrounded by larger ones (negative heterogeneous) participate significantly ($p < 0.05$) less in IMC than those that neighbouring municipalities of a similar size. Municipalities that are surrounded by smaller ones (positive heterogeneous), on the other hand, do not seem to cooperate less compared to those of a similar size. This finding only give partial support to our hypothesis (H6), and the assumption of ICA that this heterogeneity per se (both negative and positive) would decreases the willingness to cooperate compared to homogeneous ones, thus suggesting that the direction of heterogeneity might play a role.

Although resource-dependency theory argues that differences in population size may create scale advantages and complementary interests that facilitate cooperation (Pfeffer and Salancik 1978), the results from our analysis suggest otherwise. From the perspective of ICA, we could argue that small municipalities surrounded by larger ones may be less willing to join IMC in health services because they fear being overrun or dominated by its larger counterparts with more bargaining power (division costs) (Feiock 2007; Feiock, Steinacker, and Park 2009). Moreover, the time and resources needed to negotiate an agreement (bargaining costs) are also likely to increase when the preferences, needs and resources among the partners differ (Feiock 2007). This is also in line with Norwegian studies of IMC which report that municipalities see an unequal bargaining power (e.g. Andersen 2010; Holen-Rabbersvik et al. 2013) and the presence of time consuming processes (Leknes et al. 2013; Deloitte 2013) as a challenge to cooperation.

Larger municipalities surrounded by smaller ones, on the other hand, may not experience these types of problems as they are the stronger part, and may also be attractive cooperation partners as they may function as a regional 'hub' that is well equipped to fulfil the function as a host of the IMC since it has bigger and more professional staff compared to the smaller ones (Andersen and Pierre 2010).

5. Conclusion

This study set out to investigate why municipalities cooperate in health services by identifying the factors and conditions accounting for variations in the level of IMC in health services among Norwegian municipalities. Drawing from parts of the theoretical framework of ICA (Feiock 2007), we included a broad set of explanatory factors reflecting both internal municipal conditions as well as characteristics of the context in which these municipalities are embedded. On the one hand, the results from our analysis suggested that internal conditions related to small population size and fiscal stress constituted important drivers of IMC in health services among Norwegian municipalities. On the other, we found that geographical location/distances and negative heterogeneity in size relative to neighbouring municipalities had the potential to limit this type of cooperation. Although only included as controls, the results also suggested that socio-demographical characteristics related to a high population age, life expectancy, and level of depopulation, had the potential to increase the level of IMC in health services.

From the perspective of ICA (Feiock 2007), these results may reflect that Norwegian municipalities join or enter into IMC in health services to address ICA problems arising from a small population size and fiscal stress that could undermine their ability to reap the collective benefits from economies of scale, and that the more serious these ICA problems are, the more likely it seems that cooperation will emerge (Feiock 2005; Feiock 2007). This interpretation also fits with recent developments in local health care in Norway, characterised by steadily growing demand and financial pressure (Norwegian Directorate of Health 2016) combined with a fragmented municipal structure with many small municipalities with limited resources and capacity (Jacobsen 2014). However, the results also indicate that pursuing these benefits through IMC may also involve some risks and costs (second-order ICA-dilemmas) arising from great heterogeneity in size and geographical distances relative to neighbouring municipalities that limit this type of cooperation. The results from this study not only support Bel and Warner (2015a) claim that about the need to consider the geographical context to understand the emergence of IMC in services delivery, it also shows that parts of the theoretical framework of ICA have applications for studying IMC within the context of health services among civil servants operating outside traditional-local-political institutions.

However, the study also involves some important limitations as it exclusively focuses on a specific type of cooperation (cooperation on operational tasks between municipalities) within one specific service area (local health services), and not cooperation on policy coordination related to the planning and coordination of local policies from a multipurpose and supra-local perspective (Hulst and Montfort 2007). Furthermore, we focus on formal IMC on mandatory tasks, as opposed to more informal types of cooperation and cooperation on voluntary tasks. To our knowledge, there are very few systematic studies on informal IMC, partly because this type of cooperation is difficult to pin down. Future research should also examine the scope, dynamics, and motivational factors of more informal types of cooperation and compare them with those of more formal ones. Furthermore, although the aforementioned differences between the European and the US contexts may constitute a challenge, the theoretical framework of ICA still provides us with some testable hypotheses that may open up for interesting future comparative studies.

Notes

1. These values are reflected in the principle of generalist municipalities, which entails that all municipalities, regardless of size, are assigned the same set of statutory tasks, financing system, and legislation aimed at securing equal access to services for all inhabitants.
2. Given the principle of generalist municipalities which entails that all Norwegian municipalities are assigned the same set of statutory tasks and legislation, and our focus on the level of IMC more than what characterise of a single service, we expect the composition of affected jurisdictions to be of most relevance when studying IMC within the Norwegian context.
3. Statistics Norway is the central agency responsible for collecting, producing, and communicating statistics related to the economy, population and society at national, regional, and local levels in Norway.
4. The Norwegian Association of Local and Regional Authorities (Norwegian: KS) is a Norwegian employers' and interest organization for municipalities, counties, and local public enterprises in Norway.
5. The respondents were explicitly asked only to provide information about IMC arrangements that are embodied in a written contract, agreement, or similar.

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Associations between structures, processes and outcomes in inter-municipal cooperation in out-of-hours services in Norway: A survey study

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A B S T R A C T

Inter-municipal cooperation (IMC) has gained widespread recognition as a beneficial strategy for improving efficiency and quality in the provision of out-of-hours emergency care services (OOH services). Little attention, however, has been given to the additional costs of cooperation and the relational processes through which benefits and costs are likely to result. Based on survey data from 266 (77%) Norwegian municipalities involved in IMC in OOH services in 2015, this study aimed to investigate how the structure (governance form, complexity and stability) and quality (trust and consensus) of cooperation processes interact to influence the perceived outcomes (benefits and costs) of IMC in OOH services. Using Structural equation modeling, we found trust and consensus fully mediated the association between the structure and outcomes of IMC. More specifically, the results suggest that cooperation structures characterized by centralized governance, stability over time, and reduced complexity were likely to enhance the benefits and reduce the costs of IMC through trust and consensus.

1. Introduction

Throughout Europe, the provision of out-of-hours emergency care services (OOH services) are increasingly being organized through various forms of cooperative arrangements that are expected to help service providers cope with steadily rising pressure in terms of increased efficiency and service quality (Grol et al., 2006; Huibers et al., 2009; Huibers et al., 2014; Leibowitz et al., 2003; Leutgeb et al., 2014; Philips et al., 2010; Smits et al., 2012). Norway is no exception to these developments. In Norway, 428 municipalities are by law responsible for providing primary health care to all inhabitants, including OOH services. During the last decades, however, the organisation of OOH services in Norway has changed from municipal-based to larger inter-municipal cooperation (IMC) (Morken et al., 2016; Norwegian Ministry of Health and Care Services (2015). As many as 80% of all Norwegian municipalities provided these types of services through voluntary IMC in 2015 (Norwegian Ministry of Health and Care Services, 2015).

Given this widespread recognition of scaling up OOH services through cooperation, it seems that most of the literature has primarily been focusing on assessing the expected *benefits*, such as reduced service costs (Broekman et al., 2017; Brogan et al., 1998; Grol et al., 2006; Hansen and Munck, 1998; Smits et al., 2017), enhanced service quality (Giesen et al., 2011; Hansen and Munck, 1998; Shipman et al., 2000; Smits et al., 2012; Tranberg et al., 2018) and reduced workloads for GPs (Giesen et al., 2011; Grol et al., 2006; van Uden and Crebolder, 2004). Although important, we argue, this literature tends to ignore some important aspects that limit our understanding of the complex and dynamic nature of this type of cooperation and how it can be improved. First, it does not account for the *additional costs* that are likely to result from providing OOH services through cooperation rather than individually, such as the increased time and resources needed to reach joint decisions and coordinate joint activities (Pettigrew et al., 2019). Second, by focusing solely on end products and outcomes, it leaves the relational *process of cooperation* a "black box", thus neglecting to consider how benefits and costs may depend on the quality of cooperation processes (trust and consensus) and how they are structured (governance form, complexity and stability) (Provan and Sydow, 2008).

From a practical perspective, we argue that just as important as assessing "what" outcomes are achieved from cooperation is asking *"how"* they are achieved. The purpose of this study was to provide health managers, practitioners and policymakers with a better understanding of the complex nature of IMC in OOH services, asking *how the structure and quality of cooperation processes interact to influence the perceived benefits and costs of being involved in IMC in OOH services.*

2. Theoretical framework and hypotheses

Theory and research on inter-organizational relations (IOR) provides a valuable starting point from which to analyze the above research question, and has formed the basis for two frameworks

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Fig. 1. Conceptual model of the association between the structure, process and outcomes of IMC in OOH services.

specifically developed for studying cooperation among health-care organizations (D'Amour et al., 2008; Lasker et al., 2001). IOR specifically turns the focus towards the factors that enable and constrain "relations between and among organizations that are pursuing a mutual interest while also remaining independent and autonomous, thus retaining separate interests" (Cropper et al., 2009, p. 8). Several such factors have been identified over the years, and Provan and Sydow (2008) suggest categorizing these according to three interactive dimensions that are sequential in time: structures, processes and outcomes. Drawing from parts of this literature, we developed a conceptual model for analyzing the complex and dynamic nature of IMC in OOH services with the quality of cooperation processes (trust and consensus) included as a mediator between the structure and outcomes of IMC (Fig. 1).

2.1. Outcomes of cooperation

When evaluating beneficial outcomes of IOR involvement, Provan and Sydow (2008) suggest considering three types of outcomes that also reflect the expected benefits from providing OOH services through cooperation (Grol et al., 2006; Huibers et al., 2009, 2014; Leibowitz et al., 2003; Leutgeb et al., 2014; Philips et al., 2010; Smits et al., 2012). The first type, *financial performance*, refers to the potential for reducing service costs resulting from economies of scale and efficiency gains. The second type, *non-financial performance*, includes increased service quality and a stronger workforce, as cooperation is expected to facilitate joint investment and resource exchanges, reduce workloads and ease recruitment of GPs, allow GPs to work in larger teams, etc. Finally, *innovation and learning* may also be obtained from cooperation because cooperation allows for spreading best practices, shared training programs, peer-support, etc.

However, even though cooperation may result in a wide range of beneficial outcomes, bringing together several legally autonomous organizations with potentially different interests and preferences usually comes with a cost (Cropper et al., 2009; D'Amour et al., 2008; Hulst and Montfort, 2007). In their review study, Pettigrew et al. (2019) identified several potential costs that may result from providing health-care services through cooperation rather than individually, including increased *time and resources* spent on collaborative decision-making processes and coordinating joint activities. Thus, we believe, as do Provan and Sydow (2008, p. 707), that the "costs of establishing and maintaining an IOR must be considered in any evaluation effort and balanced carefully against more positive evaluation criteria", and moreover, that minimizing these costs may be just as effective as providing additional benefits (Lasker et al., 2001).

2.2. The quality and outcomes of cooperation

The term cooperation processes refers to those actions and activities that are likely to result in effective outcomes, and the idea that the quality of these processes may be compromised due to lack of trust and consensus is central to IOR (Benson, 1975; D'Amour et al., 2008; Head, 2008; Lasker et al., 2001; Levine and White, 1961; Popp et al., 2014; Provan and Sydow, 2008; Tavares and Feiock, 2014). This is also a key concern in two frameworks developed for analyzing cooperation between health-care organizations, although these frameworks emphasize somewhat different aspects of the two concepts. D'Amour et al. (2008) point to lack of *competence trust*, or trust in the other participants' competence to assume their responsibilities and absence of *shared goals* as important obstacles to success. Lasker et al. (2001), on their side, emphasize lack of *contractual trust*, or trust in the other participants to follow through on their contractual obligations and responsibilities and an overall high level of *conflict*, as important barriers to success. In addition, there is a need to consider disagreement about the distribution of costs *(fairness)* as a potential obstacle to effective cooperation (D'Amour et al., 2008; Tavares and Feiock, 2014).

What all of these different aspects of trust and consensus have in common is that they are likely to increase the perceived risk and uncertainty among the participants about whether the relational process of cooperation will be satisfactory (relational risk) and ultimately whether the cooperation will perform as expected (performance risk) (Das and Teng, 2001). These risks are expected to increase the time and resources needed to make decisions and coordinate and monitor activities, as well as making the participants less willing to make the necessary investments and resource exchanges to produce beneficial outcomes (Edelenbos and Klijn, 2007; Head, 2008; Korthagen and Klijn, 2014; Sako, 2006). Based on these assumptions, we propose the following hypothesis:

H1. Trust will be positively related to benefits and negatively to costs.

H2. Consensus will be positively related to benefits and negatively to costs.

2.3. The structure, quality and outcomes of cooperation

The term "structure" has been used to describe a variety of properties of IOR, and Provan and Sydow (2008, p. 697) note that "structural indicators of IORs are those that focus on the connections between organizations", including the governance, complexity and stability of these connections. What they all have in common, however, is that they are expected to have the potential to influence the quality of cooperation processes and ultimately the outcomes of cooperation (Cropper et al., 2009; Provan and Sydow, 2008). Our basic assumption will therefore be that the relationship between these structural factors and the final outcomes of IMC will be indirect and mediated by trust and consensus between the participants.

Complexity refers to the number of organizations involved in the cooperation process (Van de Ven, Delbecq and Koenig Jr, 1976). As the number of participants increases, so does heterogeneity and the number of potential relationships that must be coordinated and integrated into joint action, thus making it harder to reach consensus and maintaining the dense interaction needed to build trusting relationships (Milward and Provan, 2003; Provan and Kenis, 2007; Van de Ven et al., 1976). By virtue of undermining the quality of the cooperation processes in this way, we expect complexity to increase the costs of cooperation and making the achievement beneficial outcome more difficult. *Stability* refers in this study to the overall maturity of the cooperation (Jacobsen, 2014; Milward and Provan, 2000) and is an important condition for generating the predictability and familiarity needed to develop trust and consensus among participants (Mandell and Keast, 2008), thus having the potential to reduce the costs and increase the benefits of cooperation. The more complex concept of *governance* "involves the use of institutions and structures of authority and collaboration to allocate resources and to coordinate and control joint actions" (Provan and Kenis, 2007, p. 231). Governance constitutes an important part of the analytical frameworks of D'Amour et al. (2008) and Lasker et al. (2001). Both argue for the importance of having some central authorities to provide a clear direction, clarify expectations and responsibilities and

play a strategic role in coordinating collaborative processes in health care. From a purely managerial perspective, the use of more centralized governance mechanisms may thus contribute to improving the co-operation processes and subsequent outcomes. Findings to support this view are found in several studies of inter-organizational collaboration within the context of health care (Pettigrew et al., 2019; Provan and Milward, 2010; Sheaff et al., 2015; Sheaff et al., 2014).

Given the great variation in Norwegian IMC in OOH services with regard to the number of participants involved, their stability and their governance form (Morken et al., 2016), we hypothesize that:

H3. Complexity will be negatively related to benefits and positively to costs through trust and consensus.

H4. Stability will be positively related to benefits and negatively to costs through trust and consensus.

H5. Centralized forms of governance will be positively related to benefits and negatively to costs through trust and consensus.

3. Methods and materials

3.1. Study design and data collection

This is a cross-sectional study based on survey data obtained from 266 Norwegian municipalities involved in IMC in OOH services, conducted between October 2015 and January 2016 and approved by the Norwegian Centre for Research Data (project number 43163).

The 28th of October 2015, we invited the top health manager in all 428 Norwegian municipalities to participate in an extensive net-based survey concerning their municipality's involvement in and experiences with IMC in five different types of health services. The data used in this study were obtained from part two of this survey that dealt specifically with IMC involvement in OOH services. After three reminders, we received responses from 288 Norwegian municipalities participating in IMC in OOH services in 2016 (Morken et al., 2016). Twenty cases were deleted from the dataset due to a large amount of missing data and two additional cases due to duplication, thus leaving us with a total sample of 266 municipalities, representing 77% of all Norwegian municipalities taking part in IMC in OOH services in 2016 (Morken et al., 2016) (Fig. 2)

3.2. Questionnaire

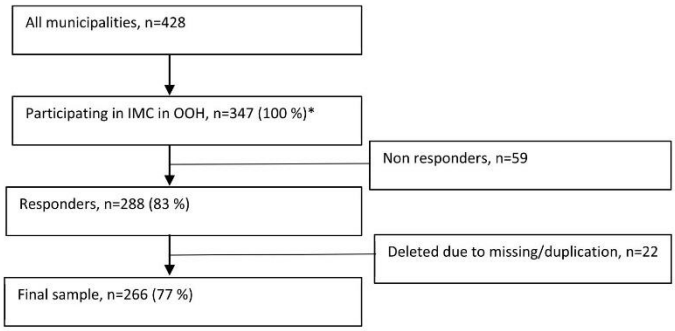
The content of the questionnaire was based on core concepts and questions derived from earlier studies on IMC and frameworks specifically developed for analyzing inter-organizational and inter-professional cooperation within the context of health care (Cropper et al., 2009; D'Amour et al., 2008; Jacobsen, 2014; Provan and Sydow, 2008). The questionnaire consisted of three main sections reflecting the dimensions in our conceptual model. Three items concerned the structure of the IMC (number of participants, governance form and stability), six items concerned the process of the IMC (trust and consensus), and six concerned the outcomes (benefits and costs). The questionnaire was pre-tested on a small sample of representatives for the target group of the study, and only minor adjustments were done.

3.3. Study setting

This study was conducted within a Norwegian health-care context, reflecting a decentralized and publicly funded Scandinavian welfare model based on core values of universalism and equality where all municipalities are assigned the same set of legislation, statutory tasks, and financing system (Leknes et al., 2013). Health-care arrangements in Norway represent a division of responsibility between two political-administrative levels where the state is responsible for providing specialist health-care services, and the local municipalities are responsible for providing primary health-care services, including OOH services.

The setting was Norwegian municipalities voluntarily taking part in formalized IMC set up between two or more municipalities to provide statutory OOH services to their inhabitants when the GP's office is closed (usually from 3 p.m. to 8 a.m. on weekdays and 24 h during the weekend). More specifically, this responsibility includes (1) treating acute medical conditions where the patient does not need hospital treatment, (2) diagnosing medical conditions requiring referral or hospitalization and channelling these patients to the appropriate level of treatment, and (3) diagnosing, providing primary treatment for, and stabilizing medical conditions that are acutely life-threatening and that require rapid hospitalization (Norwegian Ministry of Health and Care Services, 1997). These IMCs are staffed with GPs working in the participating municipalities on a rota basis, who are obliged to take part in OOH duties (Norwegian Ministry of Health and Care Services, 2012), sometimes together with additional auxiliary professionals. (Norwegian Ministry of Health and Care Services, 2015).

According to Morken et al. (2016), there were 101 unique co-operative arrangements providing OOH services in 2016, which varied in terms of their size and organizational form. Apart from simple *contractual agreements* without any governance arrangement established to coordinate joint actions, the Norwegian legal framework allows for various ways of organizing and governing these types of IMC arrangements. The most common way of organizing IMC in OOH services in



* *Morken et.al. (2016)*

Fig. 2. Participant flow chart.

Table 1
Descriptive statistics and correlations.

Variables	Mean (SD)	Min	Max	1	2	3	4	5	6	7	8
1. Benefits	3.85 (0.76)	1	5	1							
2. Costs	2.59 (1.12)	1	5	-.23**	1						
3. Trust	4.06 (0.57)	2.3	5	.26**	-.44**	1					
4. Consensus	4.44 (0.83)	1	5	.30**	-.35**	.41**	1				
5. Complexity of the IMC	5.04 (2.69)	2	15	-.14*	.12	-.14*	-.11	1			
6. Stability of the IMC	11.37 (4.98)	2	23	.06	-.11	.14*	.02	-.07	1		
7. Governed by a host	0.56 (0.49)	0	1	.11	-.00	.04	.07	.13*	-.07	1	
8. Governed by a company	0.11 (0.31)	0	1	-.06	.04	.01	.06	.23**	-.06	-.39**	1
9. Governed by a board or a simple contract	0.33 (0.47)	0	1	-.08	-.03	-.05	-.11	-.29**	.11	-.80**	-.24**

Note: **p < .01; *p < .05, N = 266.

Norway is to centralize the operational and administrative governance responsibility to one of the participating municipalities, which acts as a *host municipality* (based on the Law on Local Government Act §28b), or to an external and legally independent *inter-municipal company* with unlimited liability and its own administration (based on the Law on Inter-Municipal Companies). There are, however, also more decentralized and less formalized forms of IMC in OOH services in use such as *joint boards* (based on the Local Government Act §27) in which all the participating municipalities share the responsibility for governing the IMC.

3.4. Statistical methods

Structural equation modeling (SEM) in AMOS (SPSS) was used to analyze the data. SEM is particularly well suited to analyzing complex and multifaceted constructs and concepts like many of thoseincluded in our analysis (trust, consensus, outcomes and costs). Furthermore, SEM also lets us analyze complex "systems" of relationships as it allows several dependent and intermediate variables in the analysis simultaneously, accounting for both direct and indirect effects. It also allows us to estimate *model fit*, which indicates the extent to which our model fits the data used in the analysis rather than just how well the predictors explain the dependent or endogenous variables (Tabachnick and Fidell, 2007). Prior to the SEM, the validity of the constructs and fit of the measurement model were examined by principal component analysis (PCA), confirmatory factor analysis (CFA), and internal consistency (Cronbach's alpha). Little's MCAR test was used for missing value analysis, and a bootstrapping analysis was performed to account for non-normal data. Harman's single-factor test was conducted to account for common method bias.

3.5. Variables and measures

3.5.1. Dependent and intermediate variables

As mentioned, there are likely to be several types of outcomes involved in IMC in OOH services, some of which are difficult to assess through single and objective performance measures. We therefore apply composite outcome-measures based on multiple indicators as perceived by local health managers representing the organizations involved in the cooperation (Kenis and Provan, 2009; Mandell and Keast, 2008; Provan and Sydow, 2008). Our dependent outcome variables (benefits and costs) and intermediate process variables (trust and consensus) were based on a total of 12 items asking respondents to indicate on a five-point Likert scale the extent of or agreement on different aspects of their IMC involvement (ranging from 1, "to a very little extent"/"totally disagree," to 5, "to a very large extent"/"totally agree").

Our measure of *benefits* was based on four items in which respondents were asked to indicate the extent to which their involvement in IMC in OOH services had contributed to (1) increased service quality, (2) increased professional "robustness", (3) increased learning and innovation, and (4) reduced service costs and more efficient use of resources. The *costs* of IMC were based on two items asking respondents to what extent they agreed that their involvement in IMC in OOH services had resulted in (1) more time-consuming and demanding decision-making processes, and (2) more time-consuming activities (writing reports, attending meetings, traveling, etc.). *Trust* was measured based on three items asking the respondents to what extent they trusted the other participants to (1) have the necessary competence and resources to follow through on their tasks and commitments, (2) loyally follow through on their contractual obligations, and (3) not withdraw from the cooperation if any conflicts should occur. *Consensus* was measured based on three items asking respondents to what extent they agreed to the following (1) that the participants share the same goals, (2) that the participants agree on the distribution of costs, and (3) that the level of conflict is low.

3.5.2. Independent variables

Our independent variables (complexity, stability and governance form) were measured at the cooperation level. *Complexity* was measured by the number of participants in each unique IMC. *Stability* was measured by calculating the average number of years that the municipalities had been part of each unique IMC. *Governance form* was measured by asking respondents to tick from a list the organizational form and legal superstructure that were used for the specific IMC. Centralized forms of governance were defined as IMC arrangements where the administrative governance responsibility was delegated to either a host municipality or an inter-municipal company. These two forms were compared to the more decentralized forms of IMC governed by a joint board or based on a simple written agreement without any legally defined administrative governance entity (reference category).

In Table 1, below, we present the descriptive statistics of the dependent, intermediate and independent variables included in the analysis and the correlations between these variables.

3.5.3. Reliability and validity

To test the structural validity of the dependent and intermediate variables, i.e. to make sure that the 12 items included in our analysis tapped into different dimensions, we conducted a principal component analysis (PCA) using direct oblimin rotation. Prior to the PCA, we assessed the suitability of data for analysis, finding correlation coefficients above 0.3 among the 12 items, a Kaiser-Meyer-Olkin value of 0.79 and a p-value < .05 in a Bartlett's test of sphericity. We extracted four components and found all items loading as theoretically expected (Table 2), explaining 68% of the total variance. Furthermore, the results showed high factor loadings above 0.50, demonstrating convergent validity, and no high cross-loadings, indicating divergent validity. These four dimensions were also checked for internal consistency through calculation of Cronbach's alpha coefficients, and all showed values above the widely accepted cut-off value of 0.7, except "trust" (0.695) (Table 2). We also performed a confirmatory factor analysis (CFA) in AMOS (SPSS) to test the fit of the measurement model of latent factors with our data. The results of the CFA showed that the overall fit

Table 2
Principal component analysis and internal consistency of items measuring perceived benefits, costs, trust and consensus in IMC in OOH services.

Items (abbreviations)	Benefits	Costs	Trust	Consensus
Increased service quality (QUA)	**.851**	-.078	.006	.004
Increased professional "robustness" (PRO)	**.844**	-.021	-.126	.087
Increased learning and innovation (LEA)	**.804**	.199	.136	-.067
Reduced service costs and more effective use of resources (EFF)	**.605**	-.141	-.001	.025
More time-consuming activities (TIM)	.017	**.903**	-.057	.080
More demanding decision-making processes (DEC)	-.069	**.784**	-.047	-.082
Have sufficient resources (RES)	.038	-.155	**.714**	.153
Will follow through with contractual obligations (CON)	-.040	-.058	**.756**	.205
Will not withdraw if conflict (WIT)	.022	.028	**.774**	-.121
Consensus on goals (GOA)	.042	.078	.018	**.845**
Consensus on the distribution of costs (DIS)	.021	-.129	-.030	**.801**
Low level of conflict (CON)	-.018	.041	.057	**.759**
Cronbach's Alpha	**.778**	**.711**	**.695**	**.739**

of our measurement model was good (GFI = 0.969, CFI = 0.992, RMSEA = 0.026, PCLOSE = .947).

3.5.4. Missing values and common method bias

After making sure that the *missing values* in the dataset were missing at random (Little's MCAR test $p > .05$), we replaced these with the series mean, except in the case of our independent variables. Our independent variables were measured on a cooperation level, where missing values were replaced with the group mean (in the case of stability and complexity) or the same value (in the case of governance form) as the municipalities belonging to the same unique IMC (Tabachnick and Fidell, 2007). To account for non-normal data, we performed a *bootstrapping* analysis to estimate the potential effect of the sample size and thus how stable or good our sample statistics are as an estimate of the population parameter. The results from the bootstrapping analysis showed that the results were consistent across 500, 1000, and 5000 bootstrap samples, with a non-significant Bollen-Stine p-value ($p > .05$), indicating that our sample's values were not significantly different from those of a larger sample (Bollen and Stine, 1992). One limitation is, however, that our data are self-reported and based on the same source, namely a single application of a questionnaire with health care managers as respondents. To account for *common method bias*, or variance that is due to the measurement method rather than the constructs themselves (Podsakoff et al., 2003), we performed a Harman's single-factor test, in which all study indicators were inserted in a principal component analysis (unrotated). The result showed that no one factor accounted for the majority of the explained variance (i.e. not more than 32%), indicating that common method bias does not appear to be a concern in this study.

4. Results

After testing several different structural SEM models, we ended up with the best fitting model as displayed in Fig. 3, below, showing excellent model fit (GFI = 0.952, CFI = 0.986, PCLOSE = .991, and RMSEA = 0.026). The results of our SEM analysis are displayed in Fig. 3, which shows standardized regression coefficients (beta values) on the arrows; the bracketed values in the boxes indicate the explained variance (R^2) Fig. 3.

SEM also allowed us to test the indirect effects of our exogenous variables (stability, complexity, governance form) on the perceived benefits and costs by performing a bias-corrected bootstrap method in AMOS, requesting 2000 bootstrap samples with a bias-corrected confidence interval of 0.95. These indirect effects are shown in Table 3.

Turning to our hypotheses, it appears that most are supported by the data. Looking first at the relationship between the quality of the cooperation processes and the perceived outcomes, the overall results from our analysis suggest that the level of trust and consensus among the participants seems to be crucial in determining the perceived outcomes of IMC in OOH services. *Trust* showed a positive relationship to perceived benefits and a strong negative relationship to costs (supporting H1). Although *consensus* was found to be positively related to benefits, no direct relationship was found to costs (partly supporting H2). Rather, consensus seems to have a strong negative indirect effect on costs through trust as indicated in Table 3. Not surprisingly, we found consensus to have a strong positive relationship to trust.

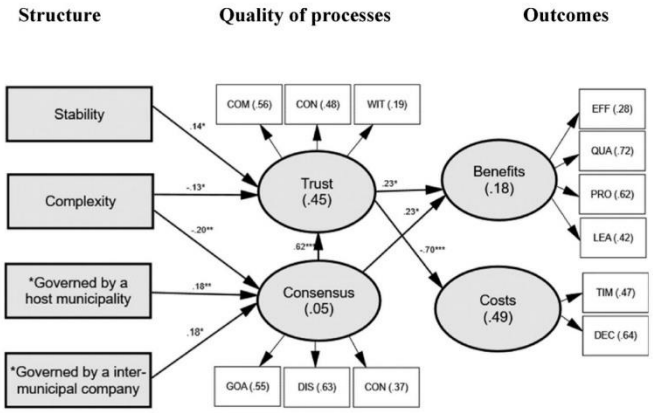
Focusing now on the relationship between the structure and outcomes of cooperation, the results from this study suggests that this relationship seems to be fully mediated by trust and consensus. As indicated in Table 3, we found *structural complexity* to be negatively related to benefits and positively to costs through trust and consensus (supporting H3). Although we found a negative and indirect relationship between *stability* and costs through trust as expected, we found no relationship to benefits (partly supporting H4). Compared to more decentralized *forms of governance* (reference), the two centralized forms (host municipality or company) showed a moderate, but still significant, positive relationship to benefits and negative to costs through trust and consensus (supporting H5).

5. Discussion

Based on what we believe to be some of the limitations in the literature on inter-organizational cooperation in OOH services, this study aimed to investigate *how the structure and quality of cooperation processes interact to influence the perceived benefits and costs associated with IMC in OOH services*. The results indicated that the quality of cooperation processes seem to play a key role in improving the outcomes of IMC in OOH services and acting as a full mediator of the relationship between the structure and outcomes of IMC. More specifically we find cooperation structures characterized by centralized governance, reduced complexity and increased stability over time to be indirectly related to enhanced benefits and/or reduced costs through trust and consensus.

The important role played by the quality of cooperation processes found in this study lends strong support to the idea that trust and consensus are likely to reduce the time and resources needed to make decisions and coordinate joint activities, as well as increasing participants' willingness to make the necessary investments to produce beneficial outcomes (Edelenbos and Klijn, 2007; Head, 2008; Korthagen and Klijn, 2014; Sako, 2006). The practical implication of these findings suggests that active efforts to build trust and consensus in IMC in OOH services may pay off in terms of reduced costs and enhanced benefits. This is also one of the key messages of Pettigrew et al. (2019) in their recommendations for improving outcomes from scaling up GP services through cooperation.

Trust and consensus seems to be particularly important for reducing the perceived costs associated with IMC in OOH services. To understand why, we believe that we must consider the risk and uncertainty inherent in IMC in OOH services (Tjerbo and Skinner, 2016), due to the consequences of unsatisfactory cooperation (relational risk) and unmet objectives (performance risk) (Das and Teng, 2001). There may be several reasons for this. First, OOH services could be described as a type of collective public service in which there is a need for *fail-safe service delivery* (Warner, 2011) because the consequences of a potential breakdown or failure could be particularly harmful as it would affect many people in need of acute medical treatment. A second and related argument is that IMC in OOH services requires participants to make *asset-specific investments* (medical technology, equipment, infrastructure, personnel, etc.) that may not be easy to deploy for alternative uses or to attain separately if the cooperation were to fail or breakdown (Tjerbo and Skinner, 2016). Finally, it could also be argued that OOH



Note: Standardized beta values (p<.05; ** p<.01; *** p<.001), and only statistically significant relationships (p<.05) are shown. * Governance forms based on a joint board or a simple written contract without any legally defined administrative governance entity are chosen as the reference category.*

Fig. 3. Results of SEM analysis showing the associations between structures, processes, and outcomes of IMC in OOH services (N = 266).

Table 3
Indirect effects.

	Trust	Benefits	Costs
Stability		.032	-.094*
Complexity	-.125**	-.107**	.181**
Governed by a host municipality	.115*	.069*	-.080*
Governed by a company	.112*	.068*	-.078*
Consensus		.151	-.434**

*Note: Standardized beta values (*p < .05; **p < .01).*

services represent a type of service in which the *measurement* of outcomes may be difficult (Tjerbo and Skinner, 2016), something that is likely to increase the risk and uncertainty associated with cooperation.

Given that the quality of cooperation processes appears to play such a critical role in enhancing the benefits and reducing the costs of IMC in OOH services, it is important to ask what structures may help to improve these processes and the subsequent outcomes. The results from this study provide some suggestions.

First, our findings indicate that reducing *complexity* by limiting the number of municipalities involved in IMC in OOH services may help to improve the quality of cooperation processes and their outcomes. These findings support the assumption that reaching the trust and consensus needed to increase benefits and reducing the costs of cooperation will be easier when there are fewer organizations to coordinate and integrate into joint action. (Milward and Provan, 2003; Provan and Sydow, 2008; Van de Ven et al., 1976). This explanation also seems reasonable given the great variation in the number of participants in IMC in OOH services, ranging from dyads of municipalities to more complex networks consisting of a large number of participants (Morken et al., 2016). Second, the negative relationship found between the *stability* of the cooperative arrangements and costs flowing through trust found in this study suggests that building the trust necessary to reduce costs is something that develops over time. This finding may reflect the fact that as IMC in OOH services is sustained over time, participants will be better able to consider other participants' track record of carrying out tasks and duties in the past, thus making their behaviour and actions more predictable in the future (McAllister, 1995). In an early phase of cooperation, this type of track record may be absent, leading to more uncertainty and less trust, something that ultimately will increase the time and effort needed to take decisions and coordinate the cooperation The lack of relationship between stability and consensus, may be due to the fact that most of the IMC arrangements investigated in the study had already gone through the critical initial phase of negotiating an agreement and dealing with conflicts (Mandell and Keast, 2008).

Turning to the last structural variable, *governance*, our findings suggest that centralizing the governance responsibility to a host municipality or an inter-municipal company helps the participants build the consensus and trust needed to enhance the benefits and reduce the costs of cooperation. Given the relational and performance risks involved in IMC in OOH services, we believe that these results support the assertion that "governance structures which attenuate opportunism and otherwise infuse confidence are evidently needed" (Williamson, 1979, p. 242). Similar concerns have also been raised by the Norwegian Ministry of Health and Care Services, 2015, which recommends that IMC in OOH services be set up with a centralized and strong professional and administrative body that defines the division of responsibilities and makes sure that participants are following up on agreements (e.g., the distribution of resources, internal control routines, conflict management, etc.). Moreover, in a recent evaluation of the legal framework regulating IMC in Norway, one of the recommendations was that the least regulated and centralized forms of IMC (i.e., based on §27 with a common board or based on a simple written contract) be replaced by new forms of IMC embedded within a more regulated legal framework to reduce uncertainty and disagreement between participants (Norwegian Ministry of Local Government and Modernization, 2016). An important notion in this regard, however, is that this largely

reflects a managerial perspective on IMC, a perspective that typically values centralization as a tool for enhanced control and efficiency. The recommendation of using more centralized governance forms would not necessarily hold if we were to focus on other types of values and outcomes such as involvement, interaction and flexibility.

The results from this study also suggest that efforts to build consensus on central issues related to the goals of the cooperation, as well as the distribution of costs, will have a major impact on the level of trust between the participants.

5.1. Limitations

This study has some important limitations. First of all, in spite of the qualitative and subjective nature of some of the concepts and factors included in this study, the results is purely based on quantification of survey data obtained from local health managers on items derived from previous theory and research. Although valuable, this approach may leave us with a somewhat narrow and unnuanced picture of the complex phenomenon of IMC in OOH services. To gain a more in-depth and nuanced understanding of IMC, future studies of may therefore benefit greatly from triangulation of different methods and sources of data (qualitative and quantitative) and obtained from different levels of analysis (individual, organizational, network). A mixed method approach, using in-depth interviews or focus group discussions prior to the development of the survey, would be particularly valuable as it may help to "ensure construct and item applicability for respondents and provide insights for interpreting survey results" (Human and Provan, 1997, p. 373). Finally, this study is based on cross-sectional data collected at a single point in time focusing on IMC (Arntsen et al., 2018) within a specific service area in the Norwegian context, and we must therefore be careful about generalizing as the results cannot automatically be assumed to hold for IMC in other types of services or geographical contexts, or at other points in time. Future studies on IMC should consider using longitudinal data collected at multiple points in time, allowing for a more thorough analysis of how structures, processes and outcomes develop over time.

6. Conclusion

In an effort to address what we believe to be some of the limitations in the literature on inter-organizational cooperation in health services, this study set out to investigate how the structure and quality of cooperation processes interact to influence the perceived benefits and costs of being involved in IMC in OOH services. Based on the results from this study, we conclude that the structure and quality of cooperation processes indeed seem to interact to influence the perceived benefits and costs of involvement in IMC in OOH services. More specifically, we found that increased levels of trust and consensus between participants were likely to enhance the perceived benefits and reduce the costs of IMC involvement. Moreover, we found that adopting more centralized forms of governance, limiting the number of participants, and sustaining the cooperation over time helped the participants building the trust and consensus needed to enhance benefits and reduce costs of IMC involvement. These results help shed light on the relational process, the "black box", of IMC in OOH services and demonstrates the need to go beyond simple assessments of end outcomes to consider the internal structure and process through which benefits and costs are likely to result. We believe that our findings provide local health managers, practitioners and policymakers with some important insights about the complex and dynamic nature of this type of cooperation, as well as ideas for how to improve the processes and subsequent outcomes of IMC in OOH services.

Abbreviations

GP: General practitioner; IMC: Inter-municipal cooperation; OOH services: out-of-hours services; SEM: Structural equation modeling; IOR: Inter organizational relations.

Authors' contributions

BA was responsible for designing the study, data collection, analysis and interpretation of data, and writing the manuscript. TIK participated in designing the study, analysis and interpretation of data, and writing the manuscript. DOT participated in interpretation of data and writing of the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

The data set generated and analysed during the current study are not publicly available, as further papers will be written based on the data sets, but are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

The study was approved by the Norwegian Centre for Research Data (project number 43163) and was exempted from ethical approval by the Regional Ethical Committee because no health information was collected. The Declaration of Helsinki formed the basis for ethical considerations in the recruitment process. The participants gave written informed consent to participate, and the data was kept confidential.

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Credit author statement

BA, DOT, and TIK conceived the study and elaborated the questionnaire in collaboration. BA and TIK handled data collection. BA did all statistical analyses in collaboration with TIK. BA drafted the manuscript and revisions. All authors gave input to the manuscript and accepted the final version.

Declaration of competing interest

The authors declare they have no competing interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.socscimed.2020.113067.

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Paper 3

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Asymmetry in inter-municipal cooperation in health services – How does it affect service quality and autonomy?

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ABSTRACT

Throughout Europe, local health services are increasingly being provided through various forms of inter-municipal cooperation (IMC). One of the most common forms of IMC is when small municipalities delegate the operational responsibility for providing health services to a larger host municipality. However, despite the size asymmetry usually inherent in this type of IMC, this aspect has largely been neglected in the existing literature, which mainly focuses on the size of individual municipalities. Based on data from 97 partner municipalities and 25 host municipalities in Norway, this study examines how varying degrees of size asymmetry between them affect the perceived service quality and loss of autonomy resulting from IMC in health services. From the perspective of the relatively smaller partner municipalities, the results suggest that these are likely to benefit greatly from size asymmetry in terms of improved service quality, although this would appear to be at the expense of losing decision-making autonomy to their host. However, from the perspective of the relatively larger hosts municipalities, this type of asymmetry is likely to affect service quality negatively while having no effect on decision-making autonomy.

1. Introduction

In recent decades, the increasing demands and requirements of local health care have challenged municipalities across Europe in terms of both efficiency and service quality (Hulst & Montfort, 2007, 2012; Hulst et al., 2009; Teles and Swianiewicz, 2018). In order to address issues of scale and "the eternal problem of scarcity and resource dependence" (Lundqvist, 1998, p. 95), many municipalities have responded to these challenges by establishing various types of inter-municipal cooperation (IMC), defined as "contracts or joint production with other local governments as a means to gain economies of scale, improve service quality, and promote regional service coordination across fragmented local government regions" (Bel and Warner, 2016, p. 91).

Two main types of IMCs appear to have prevailed in Europe (Hulst & Montfort, 2007, 2012; Hulst et al., 2009). The first type, service delivery organisations, are standing organisations comprising a joint ownership structure with all participants taking part in the coordination of the IMC, usually through a joint board. The second type and the focus of this study, service delivery agreements, lacks such a joint ownership structure and is often based on more asymmetrical relationships (Blåka, 2017a; Holum, 2019), usually with the largest municipality being delegated the operational responsibility for coordinating and providing services for the inhabitants of another municipality through a written agreement (Hulst & Montfort, 2007, 2012; Hulst et al., 2009). The main purpose of such agreements is not so much to reduce costs as to give municipalities access to scarce resources and improve service quality (Aldag and Warner, 2018; Hulst and van Montfort, 2007). Although most frequently used in the US (Bel and Warner, 2016), these types of agreements have become increasingly popular in the provision of "softer" health and human services in many European countries (Eythórsson et al., 2018; Hulst et al., 2009; Hulst and van Montfort, 2007). Norway is no exception to these developments. Since the legal establishment of the host municipality model in 2007 (Ministry of Local Government and Regional Development, 1992), these types of agreements have frequently been used in the provision of local health services in acute and emergency care (Arntsen et al., 2020; Blåka et al., 2012; Monkerud et al., 2019; Zeiner and Tjerbo, 2014) and disease prevention and health promotion (Ekornrud and Thonstad, 2016).

Despite their differences, however, IMCs are most often lumped together under the same term "inter municipal cooperation" in the

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research literature (Blåka, 2017a). To the extent that specific types of IMC's outcomes and services have been investigated, the European literature tends to focus on service delivery organisations and their potential for reducing costs through economies of scale in "hard" and technical services such as waste management, water supply, fire brigades, etc. (Bel & Warner, 2015, 2016; Blåka, 2017a; Dollery et al., 2020; Jacobsen, 2017). Although important, we argue that the existing research literature on IMC offers little relevant insight into the many service delivery agreements that have become such an important part of local health services throughout Europe. There are several reasons for this: First, by empirically lumping together different types of IMC and services, the literature runs the risk of comparing "apples and oranges" and leaves us with an undifferentiated picture of IMC that neglects considering the implications of the size asymmetry inherent in most service delivery agreements. Second, it tends to ignore the non-economic benefits that usually motivate municipalities to establish these types of agreements in "softer" health and human services, of which improved service quality (not cost savings) appears to be the primary goal (Aldag et al., 2020; Arntsen et al., 2020; Bel and Warner, 2015; Høverstad, 2019; Tjerbo, 2010; Warner, 2006; Zeiner and Tjerbo, 2014). Finally, the current literature usually disregards the autonomy costs that are likely to result from IMC, including the potential loss of decision-making autonomy (Tavares and Feiock, 2014).

This study aims to address some of the above limitations and hopefully provide local managers, practitioners and policy makers with a better understanding of some of the implications of the size asymmetry inherent in service delivery agreements set up to provide local healthcare services. More specifically, this study addresses the following research question:

To what extent and in what way does size asymmetry between host municipalities and their partners affect the perceived service quality and autonomy costs resulting from IMC?

2. Theory and hypotheses

Theoretical arguments about the effects of organizational size can be divided into two types, of which relative size effects will depend on the size of other partner organisations whereas an absolute size effect will not (Belgraver and Verwaal, 2018; Dobrev and Carroll, 2003; Hannan et al., 1998). Arguments about absolute size effects have formed the basis of most of our thinking on IMC, emphasising that due to small individual size, municipalities need to cooperate in order to address issues of scale and internal resource constraints (Hulst and Montfort, 2007; Teles and Swianiewicz, 2018). Arguments about relative size effects of IMC, emphasising the implications of being small or large relative to other municipalities taking part in the IMC, has received little attention in the research literature.

Arguments about the effects of the relative size of organisations forms the very basis of resource dependence theory (Pfeffer and Salancik, 1978, p. 39), arguing that "organizational activities and outcomes are accounted for by the context in which the organization is embedded" because scarce resources create a need for developing relationships with other organisations in its environment that have access to such resources. As a consequence, these types of relationships are often characterized by asymmetry in terms of size and resources, an asymmetry that may provide both resource opportunities and power constraints for the organisations involved (Das et al., 1998; Gulati, 1998; Pfeffer and Salancik, 1978). On the opportunity side, asymmetry in size may give small and less resourceful organisations the ability to acquire scarce and critical resources from relatively larger and more resourceful organisations in their external environment (Guo and Acar, 2005; Kwon and Feiock, 2010; Teng, 2007). On the constraint side, this very same type of asymmetry may also result in power imbalances that makes the relatively smaller organisations "vulnerable to influence and lack of autonomy" (Pfeffer and Salancik, 1978, p. 126). Similarly, our point of departure is that the varying degrees of size asymmetry inherent in IMC organised according to a host municipality model will have the potential to affect the opportunity to gain access to the resources needed to improve service quality, while also creating autonomy costs for the municipalities involved.

2.1. Size asymmetry and service quality

Improved service quality would appear to be the single most important goal for providing public services through IMC both in Norway (Frisvoll et al., 2017; Høverstad, 2019; Leknes et al., 2013; Tjerbo, 2010) and elsewhere (Aldag and Warner, 2018; Bel and Warner, 2015; Warner, 2006). Small municipalities with limited capacity and access to internal resources have traditionally been expected to benefit greatly from the resource opportunities offered by IMC. There are several reasons for this. IMC may help small municipalities make large and specialised investments needed to provide high-quality services (i.e. equipment, technology, personnel, infrastructure, etc.); it may ease the process of recruiting qualified and specialised personnel in full-time positions, as well as building a sufficiently large and stabile professional environment (Graddy, 2008; Hulst and Montfort, 2007; Jacobsen, 2014, 2015; Leknes et al., 2013).

However, building on resource dependence theory (Pfeffer and Salancik, 1978) we argue that the resource opportunities of a given municipality not only depend on its own internal resource needs, but also its ability to acquire these necessary resources from the other external municipalities involved in the IMC. Put differently, we believe there has to be a good "fit between one organization's resource needs and another's resource provision" (Seabright et al., 1992, p. 124). From the perspective of the relatively smaller partner municipalities, we expect size asymmetry in favour of their host to represent a good fit simply because a substantially larger host will be more capable of "fill in" for their resource deficiencies compared to a host of similar size that would be more likely to encounter some of the same resource deficiencies as its partners (Andersen, 2011; Andersen and Pierre, 2010; Jacobsen, 2014; Teng, 2007). From the perspective of the relatively larger host, on the other hand, we expect the same type of asymmetry to have the opposite effect on service quality as this would entail the host being increasingly larger and more self-sufficient and its relatively smaller partners being less capable of "filling in". Based on the above assumptions, we hypothesise that:

H1. Increased size asymmetry in favour of the host will be positively related to service quality as perceived by the relatively smaller partner municipalities.

H2. Increased size asymmetry in favour of the host will be negatively related to service quality as perceived by the relatively larger host municipalities.

2.2. Size asymmetry and autonomy costs

Although there may be resource opportunities associated with IMC, we also argue for the need to consider the potential costs of establishing this type of cooperation. One of the most significant costs that theorists have attributed to involvement in interorganizational relationships are autonomy costs, or the potential loss of organizational decision-making autonomy (Oliver, 1990; Pfeffer and Salancik, 1978; Provan, 1984; Provan and Gassenheimer, 1994; Tavares and Feiock, 2014).

Central to resource dependence theory (Pfeffer and Salancik, 1978, p. 53) is that power will accrue to those organisations that control scarce resources and that "the potential for one organization's influencing another derives from its discretionary control over resources needed by that other and the other's dependence on the resource". In this respect, we believe that the varying degrees of size asymmetry inherent in most host municipality cooperation is also likely to result in varying degrees of power constraints and autonomy costs of the participants involved. From the perspective of the relatively smaller partner municipalities, we

believe that increased size asymmetry in favour of the host may entail a loss of decision-making autonomy because this enables their larger hosts to directly or indirectly use their power to impose their will on decision-making processes at the expense of their relatively smaller partners. This potential loss of influence over decision-making by the relatively smaller partners has also been highlighted as one of the main disadvantages of the host municipality model (Brandtzæg et al., 2019; Frisvoll et al., 2017; Langseth, 2012; Monkerud et al., 2019; Nilsen, 2013; Vinsand, 2010) and is probably the reason why the model is frequently referred to as "asymmetrical" (Frisvoll et al., 2017; Holum, 2019; Vinsand, 2010) and "imbalanced" (Langseth, 2012; Nilsen, 2013). From the perspective of the relatively larger host, on the other hand, this type of asymmetry is likely to result in less autonomy costs due to the relatively smaller partners having less power to influence the decision-making of the host.

However, the dyadic perspective of resource dependence theory (Casciaro and Piskorski, 2005) tends to ignore the complexity that may characterize some of these IMCs. As noted by Bel and Sebö (2021, p. 159), "by looking at IMC through the more structural lens provided by principal-agent theory, the main problem to emerge is that of multiple principals relating with one agent". According to Voorn et al. (2019, p. 682), having multiple principals with potential diverging interest may create collective action problems resulting in "large inefficiencies and powerful agents if not properly dealt with." These collective action problems can be found in IMC in Norway (Blåka, 2017a; Sørensen, 2007) and in other cooperative settings elsewhere (see Voorn et al., 2019 for an overview). Voorn et al. (2018) suggest several governance mechanisms that may help mitigate such problems, including contracting out the governance responsibility to one of the principals (usually the largest). Although this solution may help deal with problems of multiple principals, it involves delegating power to one of the principals that may dictate terms not included in the contract (Bel and Sebő, 2021; Voorn et al., 2019). Taking into account the variation in the number of participants in the IMC, this leads us to the following hypothesis:

H3. Increased size asymmetry in favour of the host will be positively related to autonomy costs as perceived by the relatively smaller partner municipalities.

H4. Increased size asymmetry in favour of the host will be negatively related to autonomy costs as perceived by the relatively larger host municipalities.

3. Methods and materials

3.1. Study design and data collection

This cross-sectional study is based on survey data obtained from a questionnaire sent to all 428 Norwegian municipalities and registry data derived from Statistics Norway. The survey was approved by the Norwegian Centre for Research Data (project number 43163). The contents of the questionnaire were based on core concepts and questions frequently used in previous studies on IMC and other types of inter-organizational cooperation. The questionnaire was pre-tested on a small sample of representatives of the study's target group before being sent out, and only a few minor adjustments were made.

On October 28, 2015 we invited the top health manager in all Norwegian municipalities to participate in an extensive online survey about their municipality's involvement in and experiences of IMC in health services. After three reminders, we received responses from a total of 337 (79%) health managers, of which 53 were removed due to missing data and two more cases were removed due to duplication of questionnaires. Of the remaining 282 municipalities, we extracted 122 municipalities (25 hosts and 97 partners) that reported that they were participating in IMC organised according to a host municipality model in one or more of the focal health service areas. The respondents from each of these 122 municipalities provided us with information about different aspects of their IMC, including the duration of the IMC, the number of participants in the IMC and the extent to which their involvement in IMC had contributed to better service quality and loss of decision-making autonomy. These survey data were merged with registry data obtained from Statistics Norway on municipal economy, municipal size, and size asymmetry (based on differences in municipal size).

3.2. Study setting

This study was conducted within a Norwegian healthcare context, reflecting a decentralized and publicly funded Scandinavian welfare model (Saunes et al., 2020). This model is based on the core values of universalism and equality in which all municipalities are assigned the same set of statutory tasks, financing system and legislation, aiming at ensuring equal access to services for all inhabitants (Arntsen et al., 2018; Arntsen et al., 2020; Leknes et al., 2013; Romøren et al., 2011; Saunes et al., 2020). Healthcare arrangements in Norway comprise a division of responsibility between the state level responsible for hospitals and specialist healthcare services, and the local municipal level responsible for primary healthcare services. Apart from long-term care (care for the elderly and disabled) and general practice, primary health care includes the responsibility for providing acute and emergency services and services related to disease prevention and health promotion (Ministry of Health and Care Services, 2011; Saunes et al., 2020).

However, the increasing requirements in terms of service quality, efficiency and complexity have resulted in such services being increasingly provided through various forms of IMC. The empirical setting specifically selected for the study was formalised and voluntary IMC organised according to an administrative host municipality model based on the Local Government Act § 28-1 b (Ministry of Local Government and Regional Development, 1992), stating that "A municipality (collaborating municipality) may agree with another municipality (host municipality) that the host municipality shall carry out tasks and make decisions pursuant to the authority delegated by the collaborating municipality". However, legal responsibility for service provision to their inhabitants is still retained by the partner municipalities, and they may instruct the host municipality regarding execution of the delegated authority in cases that exclusively concern the affected inhabitants in its municipality. These host agreements should primarily be regarded as bilateral agreements established between the host municipality and each of its partner municipalities and, as a minimum, shall contain information about the identity of the partners and host, the specific tasks and decision-making authority delegated to the host, the financial settlement between the partners and host, and the rules for withdrawal and dissolution (Norwegian Association of Local and Regional Authorities, 2013).

This type of IMC resembles interlocal contracting "in which one local government contracts with another for a service or provides the service to another" (LeRoux et al., 2010, p. 268). Interlocal contracting is most commonly used and studied within the context of local governments in the US, characterized by greater heterogeneity due to a higher level of fiscal autonomy and service responsibility, compared to those in Europe (Bel and Warner, 2015). This may also explain why US studies of IMC tend to give more attention to how different conditions of transaction costs may affect cooperation compared to European studies that seems to be more concerned with issues of scale and costs savings (Bel and Sebő, 2021; Bel and Warner, 2015).

The host municipality model was primarily established to help the many small Norwegian municipalities cope with the steadily increasing demands in local service delivery and it is frequently used to provide statutory local health services related to acute and emergency care (Arntsen et al., 2020; Blåka et al., 2012; Monkerud et al., 2019; Zeiner and Tjerbo, 2014), as well as disease prevention and health promotion (Ekornrud and Thonstad, 2016). This study includes four different types of health arrangements specifically set up to provide these types of services through a host municipality model:

1) Casualty clinics providing out-of-hours (OOH) services, or statutory acute and emergency services provided by the municipalities for their inhabitants when GP's office is closed (usually from 15.00 to 20.00 on weekdays and 24 h at weekends).
2) Municipal acute bed units (MAUs), which are statutory 24-h emergency services intended to reduce acute hospital admissions by requiring municipalities to provide short-term stays for patients diagnosed with acute conditions that are manageable by primary health care, or chronic conditions requiring re-evaluation of treatment (Norwegian Directorate of Health, 2014).
3) Child health clinics (CHCs) are statutory and involve health-promoting and preventive work aimed at pregnant women, children and young people, including diet, infant nutrition and breast-feeding (Ministry of Health and Care Services, 2007).
4) Healthy Life Centres (HLCs) are primary healthcare service offering effective, knowledge-based measures for people with, or at high risk of disease, who need support in changing their health behaviour and in coping with health problems and chronic disease (Norwegian Directorate of Health, 2017). Although such HLCs as such are not statutory, the Norwegian Directorate of Health encourages all municipalities to establish HLCs to improve and better manage statutory services related to disease prevention and health promotion.

3.3. Methods

In order to analyse how variation in size asymmetry affected service quality and autonomy costs of IMC in host municipalities and their partners, we performed Ordinary Least Squares Regression (OLS) on two separate datasets using standardised coefficients (β). The first dataset contained registry and survey data obtained from 97 smaller partner municipalities involved in IMC in one or more of the four focal service areas (n = 147). The second dataset contained registry and survey data obtained from 25 host municipalities involved in IMC in one or more of the four focal service areas (n = 37). As the data used in this study are nested (municipalities in IMC arrangements), we initially considered using multilevel analysis (MLA) when analysing the effect of size asymmetry. However, because we extracted the hosts and their partners into two separate datasets, we ended up with many singletons (i.e. involving only one unit) as a result of many dyadic forms of IMC established between two municipalities, thereby making MLA inappropriate.

Prior to the regression analysis, we performed tests for linearity, heteroscedasticity and potential issues of collinearity between the independent variables included in our analysis, showing acceptable levels of variance of inflation (VIF) and bivariate correlations (Tables 1 and 2). Because of positive skewness, we performed a log transformation (log) of several of our variables. Missing values were replaced by series means.

3.4. Variables and measures

A total of eight variables were included in the analysis of our two datasets, of which two were included as dependent variables (service quality and autonomy costs) and one as an independent variable (size asymmetry). The final five variables served as control variables to adjust for any potential effect of variances on the cooperative arrangement itself (IMC size and IMC duration), the characteristics of the focal municipality (municipal size and municipal economy) and the type of service in question (service type). Descriptive statistics and correlations for these variables in both datasets are shown in Table 1 below.

3.4.1. Dependent variables

Our two dependent variables, service quality and autonomy costs, were based on survey data obtained from the top health-managers in 25 host municipalities and 97 partner municipalities, responding to one or more of the questionnaires regarding their involvement in IMC in the four focal service areas (OOH, MAU, CHL, HLC). In each of the questionnaires, we asked the respondents to indicate on a five-point Likert scale the extent to which:

1) IMC had contributed to improved service quality in the focal service area (service quality)
2) They agree that IMC had contributed to loss of influence over decision-making in the focal service area (autonomy costs)

3.4.2. Independent variable

Only one independent variable, size asymmetry, was included in our analysis. Size asymmetry was measured as the population size of a focal municipality relative to the population size of other participant(s) involved in the same IMC, based on registry data obtained from Statistics Norway. Given that this study analyses two separate datasets (hosts and partners), size asymmetry had to be calculated somewhat differently. In the dataset that only contained partner municipalities, size asymmetry was measured by taking the ratio of the population size of the host municipality to the population size of each individual partner (Emerson, 1962; Gulati and Olivia Wang, 2003). In the dataset that only contained host municipalities, size asymmetry was measured by taking the ratio of the population size of the host municipality to the size of its partner (if only one partner), or the average size of all partners in the IMC (if more than one partner) (Steinacker, 2004). Size asymmetry in both datasets was log transformed (log) due to skewness.

3.4.3. Control variables

Five additional control variables were included in both datasets that may have the potential to affect both the service quality and autonomy costs of IMC. The first two control variables relate to the characteristics of the focal host or partner municipality (municipal size and economy); the next two control variables relate to the characteristics of the cooperative arrangement itself (IMC size and duration); and the final control variable reflects the type of health service in focus (type of service). More specifically, these five control variables were measured as follows:

1) Municipal size was measured by using the number of inhabitants living in each municipality (log).

Table 1
Descriptive statistics and correlations, dataset containing partner municipalities (n = 147).

Variables	Mean (SD)	1.	2.	3.	4.	5.	6.	7.	8.
1. Size asymmetry	7.4 (8.4)	1							
2. IMC size	5.2 (2.3)	.15	1						
3. IMC duration	7.9 (6.0)	-.10	.03	1					
4. Municipal size	4870 (411)	.31**	.19*	.11	1				
5. Municipal economy	108.9 (22.9)	.07	.21*	.07	.53**	1			
6. Type of service*	0.48 (0.50)	.08	.36**	.07	.08	.21**	1		
7. Service quality	4.1 (0.88)	.17*	-.06	.04	.08	-.05	.02	1	
8. Autonomy costs	2.96 (1.09)	.14	.03	.06	.07	.02	.01	.17*	1

Note: $p < .05$; *$p < .01$; **.
* Disease prevention and health promotion services (HLC and CHL) were coded 1 and acute and emergency services (OOH and MAU) were coded 0.

Table 2
Descriptive statistics and correlations, dataset containing host municipalities (n = 37).

Variables	Mean (SD)	1.	2.	3.	4.	5.	6.	7.	8.
1. Size asymmetry	4.3 (5.2)	1							
2. IMC size	4.2 (1.8)	-.19	1						
3. IMC duration	7.6 (5.4)	.25	-.20	1					
4. Municipal size	21649 (40900)	.67**	.09	.24	1				
5. Municipal economy	99.5 (3.2)	-.12	-.31*	-.23	-.46**	1			
6. Type of service*	0.2 (0.4)	.122	-.48**	.13	.05	.14	1		
7. Service quality	4.3 (1.1)	-.59**	.44**	-.30	-.43**	.09	-.37*	1	
8. Autonomy costs	1.8 (1.4)	-.32	.38*	-.38*	-.12	-.09	-.19	.36*	1

Note: p < .05; *p < .01; **.
* Disease prevention and health promotion services (HLC and CHL) were coded 1 and acute and emergency services (OOH and MAU) were coded 0.

2) Municipal economy was measured as the percentage of free income per capita relative to the national average (log). Free income represents a municipality's residual income after its mandated tasks have been fulfilled and constitutes approximately 72% of the available income of Norwegian municipalities.
3) IMC duration refers to the number of years that the municipality had been part of an IMC.
4) IMC size refers to the number of municipalities participating in the specific IMC.
5) Type of service was also included as a control variable, constructing a dummy variable of which services related to disease prevention and health promotion were coded 1 (HLC and CHL) and which acute and emergency services were coded 0 (OOH and MAU).

4. Results and discussion

We started by asking to what extent and in what way size asymmetry between host municipalities and their partners affected the perceived service quality and autonomy costs resulting from their involvement in IMC. The results of this study suggest that the varying degree of size asymmetry inherent in these types of IMC has the potential to affect both service quality and autonomy costs, but that this depends on what perspective we take (Table 3).

First, from the perspective of the relatively smaller partner municipalities, we found size asymmetry in favour of the host to be positively related to service quality (supporting H1) and autonomy costs (supporting H3). These findings indicate that the smaller the size of the partner relative to its host, the more likely it is that these partners will improve health service quality through IMC while also experiencing more autonomy costs. However, from the perspective of the host municipalities, we found size asymmetry in favour of the host to be negatively related to service quality (supporting H2), but not to autonomy costs (not supporting H4). These findings indicate that the larger the size of the hosts relative to their partner(s), the more likely it is that these hosts will benefit less from service quality, while having no significant impact on their perceived autonomy costs. However, it should be noted that the dataset that only contained hosts shows a positive and quite strong correlation (0.67) between municipal size and size asymmetry (Table 2), which may indicate that much of the effect of size asymmetry may be attributable to variations in the size of the host itself rather than size asymmetry. We therefore performed an additional regression analysis in which size asymmetry was omitted from the analysis, resulting in a 51.3 to 43.1% reduction of explained variance and indicating that size asymmetry adds unique variance above and beyond what was explained by the variation in the host size alone.

Table 3
Multiple regression analysis (OLS).

	PARTNERS (n = 147)		HOSTS (n = 37)	
	Service quality	Autonomy costs	Service quality	Autonomy costs
Size asymmetry (log)	.258**	.225*	.425*	.258
IMC size	-.149	-.108	.300	.239
IMC duration	.054	.074	.062	.302
Municipal size (log)	.191	.184	-.094	.075
Municipal economy (log)	.021	.062	.104	.079
Type of service*	-.048	-.068	-.171	.004
R2	6.8	5.2	51.3	28.5

Note: Standardized beta values (p < .05; *p < .01; **).
* Disease prevention and health promotion services (HLC and CHL) were coded 1 and acute and emergency services (OOH and MAU) were coded 0.

Taken together, our findings suggest that increased size asymmetry in favour of the host is likely to benefit the relatively smaller partners but not the larger hosts in terms of improving the quality of health services through IMC. However, achieving these quality benefits among the partners appears to be at the expense of losing decision-making autonomy.

4.1. Size asymmetry and service quality

Although traditional considerations of small absolute size may help us understand why municipalities need to cooperate to provide health services in the first place (Arntsen et al., 2018), the results of this study suggest that this is not sufficient if we want to achieve a better understanding of why some municipalities benefit more than others in terms of service quality. More important than the absolute size of municipalities appears to be their size relative to other municipalities involved in the same IMC, giving rise to various levels of size asymmetry between the host and its partner(s). More specifically, we found that increased size asymmetry in favour of the host is likely to enhance the service quality as perceived by the smaller partners while undermining the service quality among their relatively larger hosts. These findings indicates the presence of relative size effects in IMC in health services (Dobrev and Carroll, 2003) and lend strong support to resource dependence theory (Pfeffer and Salancik, 1978), emphasising the importance of not only considering the internal resource needs of a given organisation, but also its ability to acquire such resources from other external organisations.

From the perspective of the partner municipalities, the results of this study indicate that they would be better off establishing cooperation with a relatively larger host that could help them gain access to the resources and capacities needed to provide quality health services to their inhabitants. This may include expensive medical equipment and technology, infrastructure and housing, highly specialised health personnel, a sufficiently large and professional environment, etc. (Graddy, 2008; Hulst and Montfort, 2007; Leknes et al., 2013). Thus, greater size asymmetry in favour of the host appears to represent a better resource fit for these partners simply because this may entail both a greater need for resources and the ability to acquire them from their host. Put differently, a substantially larger host will be more capable of "filling in" for the resource deficiencies of a partner compared to a host

of similar size that is more likely to encounter some of the same types of resource deficiencies (Andersen, 2011; Andersen and Pierre, 2010; Jacobsen, 2014; Teng, 2007). However, from the perspective of the relatively larger and more self-sufficient host municipalities, this very same type of asymmetry is likely to represent a worse resource fit because this entails both a reduced need for and ability to acquire resources from its partners.

Taken together, the results indicate that whereas increased size asymmetry in favour of the host appears to represent a good fit for the smaller partners in terms of service quality, the opposite appears to be the case for their relatively larger hosts. Although this may potentially create a tension regarding who should serve as the host in the early stage of the cooperation process, it would still appear that the largest municipality in the group is almost exclusively chosen as the host. However, this raises an interesting question: If service quality does not appear to improve among significantly larger hosts, why bother to assume the demanding role of a host or even join an IMC in the first place? We believe that one potential answer to this question could be that there may also be additional types of considerations that motivate such larger municipalities to assume a host role, which are not part of this analysis, and which include increased legitimacy, influence and reputation (Chen and Graddy, 2010). Moreover, given the large and specialised requirements necessary to providing many of the health services included in this study, the largest municipality may be the only municipality capable of taking on this role and may also feel obliged to assume the responsibility as a "big brother" within a group of significantly smaller neighbouring municipalities.

4.2. Size asymmetry and autonomy costs

Although it may seem obvious that partner municipalities lose a degree of decision-making autonomy by delegating tasks and authority to a host municipality through a written agreement (Langseth, 2012; Nilsen, 2013; Vinsand, 2010), the results of this study suggest that this is likely to depend on the degree of size asymmetry between the host and its partners. More specifically, the results show that increased size asymmetry in favour of the host appears to increase the perceived loss of decision-making autonomy among the relatively smaller partner municipalities, indicating that power may be an issue in this type of cooperation. These findings are in accordance with the resource dependence perspective (Pfeffer and Salancik, 1978, p. 53), arguing that "the potential for one organization's influencing another derives from its discretionary control over resources needed by that other", and may indicate that greater size asymmetry enables the host to impose its will on decision-making processes at the expense of its relatively smaller partners. Thus, it may seem that the potential challenges of power imbalance associated with this type of cooperation (Brandtzæg et al., 2019; Frisvoll et al., 2017; Langseth, 2012; Nilsen, 2013; Vinsand, 2010), appear to be dependent on the level of size asymmetry between the host and its partners. It should also be noted that although local health managers and others taking part in IMC in Norway are not politically appointed, they represent different municipalities with potentially different political preferences. Previous Norwegian studies have found host-municipalities to be significantly more liberal compared to their partners (Monkerud et al., 2019), something that may affect the level of conflict and perceived loss of autonomy (Tavares and Feiock, 2014).

However, from the perspective of the host, asymmetry in size relative to its partner(s) did not appear to make any difference with regard to their loss of autonomy. Put differently, a host cooperating with partners of similar size did not result in greater loss of autonomy compared to cooperating with relatively smaller and less powerful partners. One possible explanation for this is that the size asymmetry and subsequent power imbalance inherent in this type of IMC are almost exclusively one sided, with the host being the largest and most powerful. Moreover, our measurement of size asymmetry in the dataset that only contained hosts is based on the ratio of the host size to the sum of the population size of its partners, showing significantly less asymmetry (the host being an average of 2.7 times larger), compared to the dataset that only included the partners (the host being an average of 7.4 times larger) (Tables 1 and 2).

Taken together, the results of this study supports the notion of Broom et al. (1997, p. 90) that "scarcity of resources prompts organisations to form asymmetric relationships, even if the formation of relationships necessitates the loss of autonomy". We believe this is because very small municipalities may have little choice but to cooperate in order to fulfil their commitments (Andersen and Pierre, 2010). This argument is also supported by Norwegian studies reporting that some municipalities see IMC as a necessity for delivering services that require a certain scale of production and level of specialised skills (Leknes et al., 2013; Zeiner and Tjerbo, 2014). The individual establishment of acute and emergency services such as OOH or MAU would be difficult, if not impossible, for some small Norwegian municipalities that have limited resources and capacity.

It is also worth noting that an increased number of participants involved in these types of cooperation's (IMC size) does not seem to yield any significant effect on outcomes. This is contrary to what has been found in other cooperative settings both in Norway (Blåka, 2017a; Sørensen, 2007) and elsewhere (see Voorn et al., 2019 for an overview). This may of course be due to differences in the nature of "softer" health services compared to the more "hard" and technical services focussed on in the other studies. However, the results may also indicate that multiple principal problems may be effectively dealt with through contracting out the governance responsibility to a host municipality.

5. Conclusion

The host municipality model has been pointed to as one of the most beneficial ways of organising IMC in terms of achieving better service quality for small municipalities, while also acknowledging the potential loss of autonomy associated with this type of IMC (Langseth, 2012; Nilsen, 2013; Vinsand, 2010). The results of this study shows that the service quality and autonomy costs resulting from involvement in this type of IMC is not a given, but rather depends on whether we consider the perspective of the partner or the host and the degree of size asymmetry between them. From the perspective of the relatively smaller partners, the results suggested that they are likely to benefit greatly from size asymmetry in terms of improved service quality, although this would appear to be at the expense of losing decision-making autonomy. However, from the perspective of the relatively larger hosts, this type of asymmetry is likely to negatively affect service quality while having no significant effect on decision-making autonomy.

We argue that the results of this study may have some important practical and theoretical implications. From a practical perspective the results may help practitioners and local managers make better decisions about which municipality to choose as a host or partner, as well as shedding light on some of the potential consequences and trade-off effects of choosing one over another. Theoretically, the study supplements the current literature on IMC and other forms of inter-organisational cooperation by suggesting that traditional considerations of an organisation's absolute size is not necessarily sufficient to gain a better understanding of why some municipalities benefit more than others in terms of service quality, as well as why some municipalities are more likely to lose their autonomy. Rather, the results suggest that the quality benefits and autonomy costs resulting from IMC will ultimately depend on the relative size of a focal municipality situated within a broader cooperative context, giving rise to various levels of size asymmetry and power imbalance.

The study also has some limitations. First, it is based on cross-sectional data collected at a single point in time focusing on one specific type of IMC used to provide health services within a Norwegian healthcare context. We must therefore be cautious about making

generalisations as the results cannot automatically be assumed to apply other types of IMC in other types of services or geographical contexts, or at other points in time. Second, this study solely focuses on asymmetry in size, thereby leaving out other potential sources of asymmetry such as financial capacity, demographical composition, political preferences, etc. Third, the focus of this study is limited to the organisational (i.e. municipal) level of analysis. We believe that future studies of IMC may benefit greatly from also including additional sources of asymmetry (e.g. financial capacity, demographical composition, political preferences, etc.), and other levels of analysis (i.e. individual and network). Finally, our two outcome variables (service quality and autonomy costs), based on subjective and self-reported data measured on a Likert scale, are subject to potential response biases (social desirability, common method, etc.). Although objective indicators of service quality have been used in previous research on IMC in more "hard" and technical service areas (see e.g. Blåka, 2017b), the diverse and complex nature of service quality within the context of health care makes it difficult to capture through objective measures (Blåka, 2017b; Brown and Potoski, 2005). As noted by Brown and Potoski (2005) "it is easier to measure the quality of trash collection than of mental health care services", something that also may explain the scarcity of literature in the topic area (Bel and Sebő, 2021). Where available, however, objective measures of service quality and autonomy costs and how these relates to asymmetry should be considered in future research.

Credit author statement

BA, DOT, and TIK conceived the study and elaborated the questionnaire in collaboration. BA and TIK handled data collection. BA did all statistical analyses in collaboration with TIK. BA drafted the manuscript and revisions. All authors gave input to the manuscript and accepted the final version. This work was supported by the University of Agder [98454]; Aust-Agder Development and Knowledge Fund [2013/3148-51].

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Appendix 1: information letter

UNIVERSITETET I AGDER

INFORMASJONSSKRIV
Spørreundersøkelse om interkommunalt samarbeid om helsetjenester

Universitetet i Agder er i gang med en doktorgradsstudie som omhandler interkommunalt samarbeid om helsetjenester i Norge. Formålet med prosjektet er å øke kunnskapsgrunnlaget om hvordan interkommunalt samarbeid om helsetjenester ser ut og hvilke erfaringer ansatte i kommunene har med denne type samarbeid.

Som en del av denne studien så ønsker vi å gjennomføre en nettbasert spørreundersøkelse rettet mot ansatte som deltar i eller har erfaringer med interkommunalt samarbeid om helsetjenester der disse vil inviteres til å gi synspunkter og vurderinger av interkommunalt samarbeid slik de kjenner det. I den forbindelse henvender vi oss til ledere av den kommunale helse- og omsorgstjenesten med forespørsel om å bidra til nødvendig kontaktinformasjon for å gjennomføre denne undersøkelsen.

Undersøkelsen tar omkring 15-20 minutter å gjennomføre. Prosjektet er et samarbeid mellom Universitetet i Agder og Aust-Agder kompetansefond og henvender seg til samtlige norske kommuner.

Noen av spørsmålene som studien tar sikte på å undersøke vil være:

- Hva er omfanget, innholdet og organiseringen av interkommunalt samarbeid om helsetjenester?
- Hvordan erfares interkommunalt samarbeid om helsetjenester som strategi for løsning på sentrale utfordringer innenfor den kommunale helsetjenesten?
- Hvilken betydning har kommunestørrelse- og økonomi for erfaringer med interkommunalt samarbeid?
- Hvilken rolle spiller mangfold og heterogenitet blant deltakerne innenfor interkommunalt samarbeid om helsetjenester?

Studien er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS og opplysninger som fremkommer i undersøkelsen vil være anonyme og behandles konfidensielt. Personnavn vil ikke bli registrert og informasjon om enkeltkommuner vil bare være tilgjengelige for forskerne tilknyttet prosjektet og vil ikke synliggjøres. Det er frivillig å delta, og vil når som helst kunne trekke deg.

For spørsmål eller mer informasjon om prosjektet, ta kontakt med doktorgradsstipendiat Bjørnulf Arntsen på e-post: bjornulf.arntsen@uia.no eller telefon 37 23 37 60 / 47 30 46 84.

Hilsen

Bjørnulf Arntsen	**Dag Olaf Torjesen**
Stipendiat	Førsteamanuensis, hovedveileder
Fakultet for helse- og idrettsvitenskap	Institutt for statsvitenskap og ledelsesfag
Universitetet i Agder	Universitetet i Agder

Appendix 2: questionnaire

SPØRREUNDERSØKELSE OM INTERKOMMUNALT SAMARBEID BLANT LEDERE AV KOMMUNALE HELSETJENESTER

Universitetet i Agder er i gang med et doktorgradsprosjekt om interkommunalt samarbeid innenfor helseområdet i Norge. Formålet er å øke kunnskapsgrunnlaget om hvordan dette samarbeidet ser ut og hvilke erfaringer ledere av kommunale helsetjenester har med denne type samarbeid. Prosjektet er støttet av KS og henvender seg til samtlige kommuner i Norge.

Du inviteres med dette til å gi dine vurderinger av de formelle interkommunale samarbeidene som din kommune er involvert i innenfor helseområdet (gjelder ikke sosial- og barneverntjenester). Med formelle samarbeid menes at aktivitetene i samarbeidet er nedfelt i en skriftlig avtale, kontrakt e.l. mellom samarbeidskommunene. Undersøkelsen tar omkring 15 minutter å gjennomføre.

Prosjektet er meldt til Norsk Samfunnsvitenskapelig Datatjeneste og opplysninger som fremkommer i undersøkelsen vil behandles konfidensielt og anonymiseres i publikasjon. Dato for prosjektslutt er 1. mai 2017 og senest innen denne datoen skal råmaterialet anonymiseres. Det er frivillig å delta, og du kan når som helst trekke deg.

For spørsmål eller mer informasjon om prosjektet, ta kontakt med doktorgradsstipendiat Bjørnulf Arntsen på e-post: bjornulf.arntsen@uia.no eller telefon 37 23 37 60 / 47 30 46 84.

Ved å trykke på "Neste" nedenfor samtykker jeg til å delta i spørreundersøkelsen.

Kjønn

(1) ❑ Mann

(2) ❑ Kvinne

Alder

_____

Utdanningsnivå

(1) ❑ Grunnskole

(2) ❑ Videregående skole

(3) ❑ Universitet eller høgskole (t.o.m. 4 år)

(4) ❑ Universitet eller høgskole (over 4 år)

Antall år i nåværende stilling

_____

Navn på kommunen du arbeider i

_____

Hvilken stilling har du i kommunen?

(1) ❑ Kommunalsjef

(2) ❑ Kommunaldirektør

(3) ❑ Helsesjef

(4) ❑ Helse- og omsorgssjef (eller tilsvarende)

(5) ❑ Annet (spesifiser) _____

Hvor mange formelle interkommunale samarbeid er din kommune involvert i innenfor helseområdet (gjelder ikke sosial- og barneverntjenester)?

(0) ❑ 0

(1) ❑ 1

(2) ❑ 2

(3) ❑ 3

(4) ❑ 4

(5) ❑ 5

(6) ❑ 6

(7) ❑ 7

(8) ❑ 8

(9) ❑ 9

(10) ❑ 10

(11) ❑ 11

(12) ❑ 12

(13) ❑ 13

(14) ❑ 14

(15) ❑ 15

(16) ❑ 16

(17) ❑ 17

(18) ❑ 18

(19) ❑ 19

(20) ❑ 20

(21) ❑ Mer enn 20

(22) ❑ Vet ikke

Kryss av dersom din kommune er involvert i noen av samarbeidsordningene nedenfor.

(1) ❑ Samarbeid om legevakt

(2) ❑ Samarbeid om øyeblikkelig hjelp/kommunal akutt døgnenhet (KAD)

(3) ❑ Samarbeid om distriktsmedisinsk senter/lokalmedisinsk senter, sykestue, intermediær avdeling e.l

(4) ❑ Samarbeid om frisklivssentral

(5) ❑ Samarbeid om helsestasjon

(6) ❑ Min kommune deltar ikke i noen av disse samarbeidsordningene

(7) ❑ Vet ikke

Dersom du har krysset av på at din kommune deltar i ett eller flere av disse samarbeidene, så ønsker vi i neste del av spørreundersøkelsen å stille deg noen få spørsmål knyttet til hvert enkelt av disse samarbeidene. NB! Dersom din kommune deltar i et integrert samarbeid der f.eks. både legevakt og øyeblikkelig hjelp/KAD (evt. intermediær enhet) er samlet under samme samarbeid, så ber vi deg likevel om å gi separate og enkeltvise besvarelser knyttet til vurderinger av hvert enkelt samarbeid.

KOMMUNENS DELTAKELSE I LEGEVAKTSAMARBEID

Du har krysset av for at din kommune deltar i samarbeid om legevakt og i denne delen så vil vi at du svarer på noen spørsmål knyttet til dette konkrete samarbeidet.

Hvor mange kommuner deltar i dette samarbeidet (angi antall)?

_____

Hvilke kommuner er dette (angi om mulig hvilken kommune som var initiativtaker)?

_____

Hvordan er dette konkrete samarbeidet organisert (velg fra nedtrekksmeny)?

(1) ❑ Uformelt samarbeid (uten skriftlig avtale)

(2) ❑ Avtalebasert samarbeid (skriftlig avtale) uten noen organisatorisk overbygning (samarbeid uten noe styre)

(3) ❑ Samarbeid etter kommunelovens § 27 (samarbeid med eget styre der alle deltakerkommunene er representert og der private og statlige aktører ikke kan delta)

(4) ❑ Samarbeid organisert som aksjeselskap - AS (samarbeid med representantskap som velger styre der private også kan delta)

(5) ❑ Samarbeid organisert gjennom interkommunalt selskap - IKS (samarbeid med representantskap som velger styre der ikke private aktører kan delta)

(6) ❑ Vertskommunesamarbeid uten politisk nemd (oppgaver overføres til en annen kommune og styres av rådmannen i denne kommunen)

(7) ❑ Vertskommune med politisk nemd (oppgaver overføres til en annen kommune og styres av en interkommunal nemd)

(8) ❑ Samkommune (oppgaver overføres til et politisk organ som utgår fra deltakernes kommunestyrer. Er eget rettssubjekt med egen administrasjon og beslutningsmyndighet. Private aktører kan ikke delta)

(9) ❑ Vet ikke

Hvordan ledes dette samarbeidet?

(1) ❑ Samarbeidet ledes av alle samarbeidskommunene i fellesskap (delt ledelse)

(2) ❑ Samarbeidet ledes av èn av samarbeidskommunene. Spesifiser hvilken _____

(3) ❑ Samarbeidet ledes av en egen separat administrativ enhet (eventuelt med et styre bestående av representanter fra samarbeidskommunene)

(4) ❑ Annet (spesifiser) _____

(5) ❑ Vet ikke

Hvor lenge har dette samarbeidet eksistert (antall år)?

(1) ❑ Ikke startet opp/underplanlegging

(2) ❑ Under 1 år

(3) ❑ 1

(4) ❑ 2

(5) ❑ 3

(6) ❑ 4

(7) ❑ 5

(8) ❑ 6

(9) ❑ 7

(10) ❑ 8

(11) ❑ 9

(12) ❑ 10

(13) ❑ 11

(14) ❑ 12

(15) ❑ 13

(16) ❑ 14

(17) ❑ 15

(18) ❑ 16

(19) ❑ 17

(20) ❑ 18

(21) ❑ 19

(22) ❑ 20

(23) ❑ Mer enn 20 år

(24) ❑ Vet ikke

Hvilken rolle/tilknytning har du til dette samarbeidet?

(1) ❑ Ingen direkte tilknytning, kun leder innenfor dette samarbeidsområdet i min kommune

(2) ❑ Deltaker i samarbeidet

(3) ❑ Leder av samarbeidet

(4) ❑ Annet (spesifiser) _____

Sett kryss for den eller de påstandene som passer for å beskrive dette samarbeidet

(1) ❑ Dette samarbeidet innebærer utveksling av informasjon

(2) ❑ Dette samarbeidet innebærer utveksling av ressurser (økonomiske eller personellmessige)

(3) ❑ Dette samarbeidet innebærer utveksling av ressurser basert på en kontraktsfestet avtale om å yte eller motta bestemte tjenester

(4) ❑ Dette samarbeidet innebærer etablering av et formalisert og felles senter/enhet/organ med både felles planlegging og tilbud av tjenester

Sett i forhold til det å stå alene, i hvor stor grad har dette samarbeidet bidratt til følgende innenfor samarbeidsområdet for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Hvor enig eller uenig er du i følgende påstander:

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til at min kommune har fått mindre innflytelse på beslutninger innenfor samarbeidsområdet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Dette samarbeidet har ført til mer krevende beslutningsprosesser innenfor samarbeidsområdet for min kommune	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet er tidkrevende for min kommune (forberedelser, møtevirksomhet, reising, rapportering, etc)	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Det er lite konflikt mellom kommunene som deltar i dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene er enige om kostnadsfordeling knyttet til dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene har en felles forståelse av målsettingen med dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

I hvor stor grad stoler du på at de kommunene som deltar i dette samarbeidet:

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
Lojalt følger opp oppgaver og forpliktelser knyttet til samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Har nødvendig ressurser og kompetanse til å utføre	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
oppgaver og forpliktelser i samarbeidet						
Ikke vil trekke seg ut av samarbeidet hvis det skulle oppstå uenighet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Alt i alt - hvor vellykket eller mislykket er dette samarbeidet sett i forhold til kommunens intensjoner med å delta?

(1) ❑ Svært mislykket

(2) ❑ Ganske mislykket

(3) ❑ Hverken/eller

(4) ❑ Ganske vellykket

(5) ❑ Svært vellykket

(6) ❑ Vet ikke

Andre kommentarer til dette samarbeidet

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_____

KOMMUNENS DELTAKELSE I SAMARBEID OM ØYEBLIKKELIG HJELP/KOMMUNAL AKUTT DØGNENHET (KAD)

Du har krysset av for at din kommune deltar i samarbeid om øyeblikkelig hjelp/kommunal akutt døgnenhet (KAD) og i den neste delen så vil vi at du svarer på noen spørsmål knyttet til dette konkrete samarbeidet.

Hvor mange kommuner deltar i dette samarbeidet?

_____

Hvilke kommuner er dette (angi om mulig hvilken kommune som var initiativtaker)?

_____

Hvordan er dette konkrete samarbeidet organisert (velg fra nedtrekksmeny)?

(1) ❑ Uformelt samarbeid (uten skriftlig avtale)

(2) ❑ Avtalebasert samarbeid (skriftlig avtale) uten noen organisatorisk overbygning (samarbeid uten noe styre)

(3) ❑ Samarbeid etter kommunelovens § 27 (samarbeid med eget styre der alle deltakerkommunene er representert og der private og statlige aktører ikke kan delta)

(4) ❑ Samarbeid organisert som aksjeselskap - AS (samarbeid med representantskap som velger styre der private også kan delta)

(5) ❑ Samarbeid organisert gjennom interkommunalt selskap - IKS (samarbeid med representantskap som velger styre der ikke private aktører kan delta)

(6) ❑ Vertskommunesamarbeid uten politisk nemd (oppgaver overføres til en annen kommune og styres av rådmannen i denne kommunen)

(7) ❑ Vertskommune med politisk nemd (oppgaver overføres til en annen kommune og styres av en interkommunal nemd)

(8) ❑ Samkommune (oppgaver overføres til et politisk organ som utgår fra deltakernes kommunestyrer. Er eget rettssubjekt med egen administrasjon og beslutningsmyndighet. Private aktører kan ikke delta)

(9) ❑ Vet ikke

Hvordan ledes dette samarbeidet?

(1) ❑ Samarbeidet ledes av alle samarbeidskommunene i fellesskap (delt ledelse)

(2) ❑ Samarbeidet ledes av én av samarbeidskommunene. Spesifiser hvilken _____

(3) ❑ Samarbeidet ledes av en egen separat administrativ enhet (eventuelt med et styre bestående av representanter fra samarbeidskommunene)

(4) ❑ Annet (spesifiser) _____

(5) ❑ Vet ikke

Hvor lenge har dette samarbeidet eksistert (antall år)?

(1) ❑ Ikke startet opp/under planlegging

(2) ❑ Under 1 år

(3) ❑ 1

(4) ❑ 2

(5) ❑ 3

(6) ❑ 4

(7) ❑ 5

(8) ❑ 6

(9) ❑ 7

(10) ❑ 8

(11) ❑ 9

(12) ❑ 10

(13) ❑ 11

(14) ❑ 12

(15) ❑ 13

(16) ❑ 14

(17) ❑ 15

(18) ❑ 16

(19) ❑ 17

(20) ❑ 18

(21) ❑ 19

(22) ❑ 20 år eller mer

(23) ❑ Vet ikke

Hvilken rolle/tilknytning har du til dette samarbeidet?

(1) ❑ Ingen direkte tilknytning, kun leder innenfor dette samarbeidsområdet i min kommune

(2) ❑ Deltaker i samarbeidet

(3) ❑ Leder av samarbeidet

(4) ❑ Annet (spesifiser) _____

Sett kryss for den eller de påstandene som passer for å beskrive dette samarbeidet

(1) ❑ Dette samarbeidet innebærer utveksling av informasjon

(2) ❑ Dette samarbeidet innebærer utveksling av ressurser (økonomiske eller personellmessige)

(3) ❑ Dette samarbeidet innebærer utveksling av ressurser basert på en kontraktsfestet avtale om å yte eller motta bestemte tjenester

(4) ❑ Dette samarbeidet innebærer etablering av et formalisert og felles senter/enhet/organ med både felles planlegging og tilbud av tjenester

Sett i forhold til det å stå alene, i hvor stor grad har dette samarbeidet bidratt til følgende innenfor samarbeidsområdet for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Hvor enig eller uenig er du i følgende påstander:

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til at min kommune har fått mindre innflytelse på beslutninger innenfor samarbeidsområdet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Dette samarbeidet har ført til mer krevende beslutningsprosesser innenfor samarbeidsområdet for min kommune	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet er tidkrevende for min kommune (forberedelser, møtevirksomhet, reising, rapportering, etc)	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Det er lite konflikt mellom kommunene som deltar i dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene er enige om kostnadsfordeling knyttet til dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene har en felles forståelse av målsettingen med dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

I hvor stor grad stoler du på at de kommunene som deltar i dette samarbeidet:

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
Lojalt følger opp oppgaver og forpliktelser knyttet til samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Har nødvendig ressurser og kompetanse til å utføre	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
oppgaver og forpliktelser i samarbeidet						
Ikke vil trekke seg ut av samarbeidet hvis det skulle oppstå uenighet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Alt i alt - hvor vellykket eller mislykket er dette samarbeidet sett i forhold til kommunens intensjoner med å delta?

(1) ❑ Svært mislykket

(2) ❑ Ganske mislykket

(3) ❑ Hverken/eller

(4) ❑ Ganske vellykket

(5) ❑ Svært vellykket

(6) ❑ Vet ikke

Andre kommentarer til dette samarbeidet

_____

_____

_____

_____

_____

_____

KOMMUNENS DELTAKELSE I SAMARBEID OM INTERMEDIÆR ENHET / DISTRIKTSMEDISINSK SENTER e.l.
Du har krysset av for at din kommune deltar i samarbeid om intermediær enhet/distriktsmedisinsk senter og i den neste delen så vil vi at du svarer på noen spørsmål knyttet til dette konkrete samarbeidet.

Hvor mange kommuner deltar i dette samarbeidet?

_____

Hvilke kommuner er dette (angi om mulig hvilken kommune som var initiativtaker)?

_____

Hvordan er dette konkrete samarbeidet organisert (velg fra nedtrekksmeny)?

(1) ❑ Uformelt samarbeid (uten skriftlig avtale)

(2) ❑ Avtalebasert samarbeid (skriftlig avtale) uten noen organisatorisk overbygning (samarbeid uten noe styre)

(3) ❑ Samarbeid etter kommunelovens § 27 (samarbeid med eget styre der alle deltakerkommunene er representert og der private og statlige aktører ikke kan delta)

(4) ❑ Samarbeid organisert som aksjeselskap - AS (samarbeid med representantskap som velger styre der private også kan delta)

(5) ❑ Samarbeid organisert gjennom interkommunalt selskap - IKS (samarbeid med representantskap som velger styre der ikke private aktører kan delta)

(6) ❑ Vertskommunesamarbeid uten politisk nemd (oppgaver overføres til en annen kommune og styres av rådmannen i denne kommunen)

(7) ❑ Vertskommune med politisk nemd (oppgaver overføres til en annen kommune og styres av en interkommunal nemd)

(8) ❑ Samkommune (oppgaver overføres til et politisk organ som utgår fra deltakernes kommunestyrer. Er eget rettssubjekt med egen administrasjon og beslutningsmyndighet. Private aktører kan ikke delta)

(9) ❑ Vet ikke

Hvordan ledes dette samarbeidet?

(1) ❑ Samarbeidet ledes av alle samarbeidskommunene i fellesskap (delt ledelse)

(2) ❑ Samarbeidet ledes av èn av samarbeidskommunene. Spesifiser hvilken _____

(3) ❑ Samarbeidet ledes av en egen separat administrativ enhet (eventuelt med et styre bestående av representanter fra samarbeidskommunene)

(4) ❑ Annet (spesifiser) _____

(5) ❑ Vet ikke

Hvor lenge har kommunen vært med i dette samarbeidet (antall år)?

(1) ❑ Ikke startet opp/under planlegging

(2) ❑ Under 1 år

(3) ❑ 1

(4) ❑ 2

(5) ❑ 3

(6) ❑ 4

(7) ❑ 5

(8) ❑ 6

(9) ❑ 7

(10) ❑ 8

(11) ❑ 9

(12) ❑ 10

(13) ❑ 11

(14) ❑ 12

(15) ❑ 13

(16) ❑ 14

(17) ❑ 15

(18) ❑ 16

(19) ❑ 17

(20) ❑ 18

(21) ❑ 19

(22) ❑ 20

(23) ❑ Mer enn 20 år

(24) ❑ Vet ikke

Hvilken rolle/tilknytning har du til dette samarbeidet?

(1) ❑ Ingen direkte tilknytning, kun leder innenfor dette samarbeidsområdet i min kommune

(2) ❑ Deltaker i samarbeidet

(3) ❑ Leder av samarbeidet

(4) ❑ Annet (spesifiser) _____

Sett kryss for den eller de påstandene som passer for å beskrive dette samarbeidet

(1) ❑ Dette samarbeidet innebærer utveksling av informasjon

(2) ❑ Dette samarbeidet innebærer utveksling av ressurser (økonomiske eller personellmessige)

(3) ❑ Dette samarbeidet innebærer utveksling av ressurser basert på en kontraktsfestet avtale om å yte eller motta bestemte tjenester

(4) ❑ Dette samarbeidet innebærer etablering av et formalisert og felles senter/enhet/organ med både felles planlegging og tilbud av tjenester

Sett i forhold til det å stå alene, i hvor stor grad har dette samarbeidet bidratt til følgende innenfor samarbeidsområdet for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Hvor enig eller uenig er du i følgende påstander:

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til at min kommune har fått mindre innflytelse på beslutninger innenfor samarbeidsområdet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til mer krevende beslutningsprosesser innenfor samarbeidsområdet for min kommune	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Dette samarbeidet er tidkrevende for min kommune (forberedelser, møtevirksomhet, reising, rapportering, etc)	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Det er lite konflikt mellom kommunene som deltar i dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene er enige om kostnadsfordeling knyttet til dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene har en felles forståelse av målsettingen med dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

I hvor stor grad stoler du på at de kommunene som deltar i dette samarbeidet:

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
Lojalt følger opp oppgaver og forpliktelser knyttet til samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Har nødvendig ressurser og kompetanse til å utføre oppgaver og forpliktelser i samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Ikke vil trekke seg ut av samarbeidet hvis det skulle oppstå uenighet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Alt i alt - hvor vellykket eller mislykket er dette samarbeidet sett i forhold til kommunens intensjoner med å delta?

(1) ❑ Svært mislykket
(2) ❑ Ganske mislykket
(3) ❑ Hverken/eller
(4) ❑ Ganske vellykket
(5) ❑ Svært vellykket
(6) ❑ Vet ikke

Andre kommentarer til dette samarbeidet

_____

_____

_____

_____

_____

_____

KOMMUNENS DELTAKELSE I SAMARBEID OM FRISKLIVSSENTRAL
Du har krysset av for at din kommune deltar i samarbeid om frisklivssentral og i den neste delen så vil vi at du svarer på noen spørsmål knyttet til dette konkrete samarbeidet.

Hvor mange kommuner deltar i dette samarbeidet?

_____

Hvilke kommuner er dette (angi om mulig hvilken kommune som var initiativtaker)?

_____

Hvordan er dette konkrete samarbeidet organisert (velg fra nedtrekksmeny)?

(1) ❑ Uformelt samarbeid (uten skriftlig avtale)

(2) ❑ Avtalebasert samarbeid (skriftlig avtale) uten noen organisatorisk overbygning (samarbeid uten noe styre)

(3) ❑ Samarbeid etter kommunelovens § 27 (samarbeid med eget styre der alle deltakerkommunene er representert og der private og statlige aktører ikke kan delta)

(4) ❑ Samarbeid organisert som aksjeselskap - AS (samarbeid med representantskap som velger styre der private også kan delta)

(5) ❑ Samarbeid organisert gjennom interkommunalt selskap - IKS (samarbeid med representantskap som velger styre der ikke private aktører kan delta)

(6) ❑ Vertskommunesamarbeid uten politisk nemd (oppgaver overføres til en annen kommune og styres av rådmannen i denne kommunen)

(7) ❑ Vertskommune med politisk nemd (oppgaver overføres til en annen kommune og styres av en interkommunal nemd)

(8) ❑ Samkommune (oppgaver overføres til et politisk organ som utgår fra deltakernes kommunestyrer. Er eget rettssubjekt med egen administrasjon og beslutningsmyndighet. Private aktører kan ikke delta)

(9) ❑ Vet ikke

Hvordan ledes dette samarbeidet?

(1) ❑ Samarbeidet ledes av alle samarbeidskommunene i fellesskap (delt ledelse)

(2) ❑ Samarbeidet ledes av èn av samarbeidskommunene. Spesifiser hvilken _____

(3) ❑ Samarbeidet ledes av en egen separat administrativ enhet (eventuelt med et styre bestående av representanter fra samarbeidskommunene)

(4) ❑ Annet (spesifiser) _____

(5) ❑ Vet ikke

Hvor lenge har kommunen vært med i dette samarbeidet (antall år)?

(1) ❑ Ikke startet opp/under planlegging

(2) ❑ Under 1 år

(3) ❑ 1

(4) ❑ 2

(5) ❑ 3

(6) ❑ 4

(7) ❑ 5

(8) ❑ 6

(9) ❑ 7

(10) ❑ 8

(11) ❑ 9

(12) ❑ 10

(13) ❑ 11

(14) ❑ 12

(15) ❑ 13

(16) ❑ 14

(17) ❑ 15

(18) ❑ 16

(19) ❑ 17

(20) ❑ 18

(21) ❑ 19

(22) ❑ 20

(23) ❑ Mer enn 20 år

(24) ❑ Vet ikke

Hvilken rolle/tilknytning har du til dette samarbeidet?

(1) ❑ Ingen direkte tilknytning, kun leder innenfor dette samarbeidsområdet i min kommune

(2) ❑ Deltaker i samarbeidet

(3) ❑ Leder av samarbeidet

(4) ❑ Annet (spesifiser) _____

Sett kryss for den eller de påstandene som passer for å beskrive dette samarbeidet

(1) ❑ Dette samarbeidet innebærer utveksling av informasjon

(2) ❑ Dette samarbeidet innebærer utveksling av ressurser (økonomiske eller personellmessige)

(3) ❑ Dette samarbeidet innebærer utveksling av ressurser basert på en kontraktsfestet avtale om å yte eller motta bestemte tjenester

(4) ❑ Dette samarbeidet innebærer etablering av et formalisert og felles senter/enhet/organ med både felles planlegging og tilbud av tjenester

Sett i forhold til det å stå alene, i hvor stor grad har dette samarbeidet bidratt til følgende innenfor samarbeidsområdet for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Hvor enig eller uenig er du i følgende påstander:

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til at min kommune har fått mindre innflytelse på beslutninger innenfor samarbeidsområdet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til mer krevende beslutningsprosesser innenfor samarbeidsområdet for min kommune	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Dette samarbeidet er tidkrevende for min kommune (forberedelser, møtevirksomhet, reising, rapportering, etc)	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Det er lite konflikt mellom kommunene som deltar i dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene er enige om kostnadsfordeling knyttet til dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene har en felles forståelse av målsettingen med dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

I hvor stor grad stoler du på at de kommunene som deltar i dette samarbeidet:

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
Lojalt følger opp oppgaver og forpliktelser knyttet til samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Har nødvendig ressurser og kompetanse til å utføre oppgaver og forpliktelser i samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Ikke vil trekke seg ut av samarbeidet hvis det skulle oppstå uenighet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Alt i alt - hvor vellykket eller mislykket er dette samarbeidet sett i forhold til kommunens intensjoner med å delta?

(1) ❑ Svært mislykket

(2) ❑ Ganske mislykket

(3) ❑ Hverken/eller

(4) ❑ Ganske vellykket

(5) ❑ Svært vellykket

(6) ❑ Vet ikke

Andre kommentarer til dette samarbeidet

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KOMMUNENS DELTAKELSE I SAMARBEID OM HELSESTASJON
Du har krysset av for at din kommune deltar i samarbeid om helsestasjon og i de neste spørsmålene så vil vi at du svarer på noen spørsmål knyttet til dette konkrete samarbeidet.

Hvor mange kommuner deltar i dette samarbeidet

_____

Hvilke kommuner er dette (angi om mulig hvilken kommune som var initiativtaker)?

_____

Hvordan er dette konkrete samarbeidet organisert (velg fra nedtrekksmeny)?

(1) ❑ Uformelt samarbeid (uten skriftlig avtale)

(2) ❑ Avtalebasert samarbeid (skriftlig avtale) uten noen organisatorisk overbygning (samarbeid uten noe styre)

(3) ❑ Samarbeid etter kommunelovens § 27 (samarbeid med eget styre der alle deltakerkommunene er representert og der private og statlige aktører ikke kan delta)

(4) ❑ Samarbeid organisert som aksjeselskap - AS (samarbeid med representantskap som velger styre der private også kan delta)

(5) ❑ Samarbeid organisert gjennom interkommunalt selskap - IKS (samarbeid med representantskap som velger styre der ikke private aktører kan delta)

(6) ❑ Vertskommunesamarbeid uten politisk nemd (oppgaver overføres til en annen kommune og styres av rådmannen i denne kommunen)

(7) ❑ Vertskommune med politisk nemd (oppgaver overføres til en annen kommune og styres av en interkommunal nemd)

(8) ❑ Samkommune (oppgaver overføres til et politisk organ som utgår fra deltakernes kommunestyrer. Er eget rettssubjekt med egen administrasjon og beslutningsmyndighet. Private aktører kan ikke delta)

(9) ❑ Vet ikke

Hvordan ledes dette samarbeidet?

(1) ❑ Samarbeidet ledes av alle samarbeidskommunene i fellesskap (delt ledelse)

(2) ❑ Samarbeidet ledes av èn av samarbeidskommunene. Spesifiser hvilken _____

(3) ❑ Samarbeidet ledes av en egen separat administrativ enhet (eventuelt med et styre bestående av representanter fra samarbeidskommunene)

(4) ❑ Annet (spesifiser) _____

(5) ❑ Vet ikke

Hvor lenge har kommunen vært med i dette samarbeidet (antall år)?

(1) ❑ Ikke startet opp/under planlegging

(2) ❑ Under 1 år

(3) ❑ 1

(4) ❑ 2

(5) ❑ 3

(6) ❑ 4

(7) ❑ 5

(8) ❑ 6

(9) ❑ 7

(10) ❑ 8

(11) ❑ 9

(12) ❑ 10

(13) ❑ 11

(14) ❑ 12

(15) ❑ 13

(16) ❑ 14

(17) ❑ 15

(18) ❑ 16

(19) ❑ 17

(20) ❑ 18

(21) ❑ 19

(22) ❑ 20

(23) ❑ Mer enn 20 år

(24) ❑ Vet ikke

Hvilken rolle/tilknytning har du til dette samarbeidet?

(1) ❑ Ingen direkte tilknytning, kun leder innenfor dette samarbeidsområdet i min kommune

(2) ❑ Deltaker i samarbeidet

(3) ❑ Leder av samarbeidet

(4) ❑ Annet (spesifiser) _____

Sett kryss for den eller de påstandene som passer for å beskrive dette samarbeidet

(1) ❑ Dette samarbeidet innebærer utveksling av informasjon

(2) ❑ Dette samarbeidet innebærer utveksling av ressurser (økonomiske eller personellmessige)

(3) ❑ Dette samarbeidet innebærer utveksling av ressurser basert på en kontraktsfestet avtale om å yte eller motta bestemte tjenester

(4) ❑ Dette samarbeidet innebærer etablering av et formalisert og felles senter/enhet/organ med både felles planlegging og tilbud av tjenester

Sett i forhold til det å stå alene, i hvor stor grad har dette samarbeidet bidratt til følgende innenfor samarbeidsområdet for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Hvor enig eller uenig er du i følgende påstander:

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til at min kommune har fått mindre innflytelse på beslutninger innenfor samarbeidsområdet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

	Helt uenig	Delvis uenig	Hverken/eller	Delvis enig	Helt enig	Vet ikke/ikke aktuelt
Dette samarbeidet har ført til mer krevende beslutningsprosesser innenfor samarbeidsområdet for min kommune	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Dette samarbeidet er tidkrevende for min kommune (forberedelser, møtevirksomhet, reising, rapportering, etc)	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Det er lite konflikt mellom kommunene som deltar i dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene er enige om kostnadsfordeling knyttet til dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Samarbeidskommunene har en felles forståelse av målsettingen med dette samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

I hvor stor grad stoler du på at de kommunene som deltar i dette samarbeidet:

	I svært liten grad	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke
Lojalt følger opp oppgaver og forpliktelser knyttet til samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Har nødvendig ressurser og kompetanse til å utføre oppgaver og forpliktelser i samarbeidet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Ikke vil trekke seg ut av samarbeidet hvis det skulle oppstå uenighet	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Alt i alt - hvor vellykket eller mislykket er dette samarbeidet sett i forhold til kommunens intensjoner med å delta?

(1) ❑ Svært mislykket

(2) ❑ Ganske mislykket

(3) ❑ Hverken/eller

(4) ❑ Ganske vellykket

(5) ❑ Svært vellykket

(6) ❑ Vet ikke

Andre kommentarer til dette samarbeidet

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SAMLET VURDERING AV KOMMUNENS DELTAKELSE I INTERKOMMUNALT SAMARBEID INNEN HELSEOMRÅDET

Helt til slutt vil vi stille deg noen spørsmål om hvordan du vurdererer kommunens samlede deltakelse i interkommunalt samarbeid innen helseområdet sett under ett (altså ikke kun de som du har rapportert på i de forrige spørsmålene).

Deltakelse i interkommunalt samarbeid begrunnes gjerne med bakgrunn i en eller flere av målsettingene som vist nedenfor. Hva vil du si er de viktigste målsettingene å delta i interkommunalt samarbeid innenfor helseområdet for din kommune? (ranger målsettingene nedenfor ved å sette viktigst øverst (1), nest viktigst nest øverst (2), etc. (marker og flytt)

	1	2	3	4	5
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑

Samlet sett, i hvor stor grad har kommunens deltakelse i interkommunalt samarbeidet innen helseområdet bidratt til følgende for din kommune?

	Ikke i det hele tatt	I liten grad	I noen grad	I stor grad	I svært stor grad	Vet ikke/ikke aktuelt
Rimeligere og mer kostnadseffektive tjenester	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Bedre kvalitet på tjenestene	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Mer robust fagmiljø	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt læring og innovasjon	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑
Økt innflytelse og gjennomslagskraft	(1) ❑	(2) ❑	(3) ❑	(4) ❑	(5) ❑	(6) ❑

Andre kommentarer

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Takk for at du tok deg tid til å svare på denne spørreundersøkelsen.

For eventuelle spørsmål ta kontakt med stipendiat Bjørnulf Arntsen på telefon 47304684/37233760 eller e-post: bjornulf.arntsen@uia.no

Appendix 3: approval, the Norwegian Centre for Research Data (NSD)

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES

Harald Hårfagres gate 2
N-5007 Bergen
Norway
Tel. +47-55 58 21 17
Fax. +47-55 58 96 50
nsd@nsd.uib.no
www.nsd.uib.no
Org.nr. 985 321 884

Bjørnulf Arntsen
Fakultet for helse- og idrettsvitenskap
Universitetet i Agder
Postboks 422
4604 KRISTIANSAND S

Vår dato: 06.08.2015 Vår ref:43163 / 3 / AH Deres dato: Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 17.04.2015. Meldingen gjelder prosjektet:

43163	*Interkommunalt samarbeid om helsetjenester - mellom selvstyre og samstyre*
Behandlingsansvarlig	*Universitetet i Agder, ved institusjonens øverste leder*
Daglig ansvarlig	*Bjørnulf Arntsen*

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema http://www.nsd.uib.no/personvern/meldeplikt/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://pvo.nsd.no/prosjekt.

Personvernombudet vil ved prosjektets avslutning, 01.05.2017, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Bjørn Henrichsen

Åsne Halskau

Åsne Halskau tlf: 55 58 21 88
Vedlegg: Prosjektvurdering

Avdelingskontorer / *District Offices*
OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no
TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. kyrre.svarva@svt.ntnu.no
TROMSØ: NSD, SVF, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. nsdmaa@sv.uit.no

Appendix 4: support letter from The Norwegian Association of Local and Regional Authorities (KS) in Agder

Kristiansand 19.10.2015

STØTTESKRIV TIL PROSJEKTET
«INTERKOMMUNALT SAMARBEID OM HELSE- OG OMSORGSTJENESTER I NORGE – LOKALE TILPASNINGER MELLOM SELVSTYRE OG SAMSTYRE»

Selv om interkommunalt samarbeid innen helse- og omsorgsområdet ikke er noe nytt fenomen i Norge, så har omfanget av denne typen samarbeidsløsninger økt betydelig de senere årene. En viktig årsak til dette er økt press på kommunene, blant annet gjennom implementeringen av samhandlingsreformen i 2012, kombinert med en kommunestruktur preget av mange og små kommuner. På tross av den økte betydningen som denne typen samarbeid har fått, både på Agder og i Norge for øvrig, så finnes det fortsatt lite kunnskap om hvordan denne typen samarbeidsløsninger faktisk erfares og virker ute i kommunene.

Denne problematikken danner utgangspunktet for denne studien der man spør helse- og omsorgsledere i samtlige norske kommuner hvordan interkommunalt samarbeid innenfor helse- og omsorgsområdet ser ut i deres kommune, hvilken nytteverdi de har av denne typen samarbeid og under hvilke betingelser dette synes å være en god og effektiv organisasjonsform? Et viktig underliggende spørsmål vil derfor være hva det betyr for en kommune å samarbeide fremfor å stå alene i en sektor preget av økt kompleksitet og med stadig økende krav og forventninger både fra befolkningen og myndigheter, og videre om dette påvirkes av faktorer som kommunestørrelse, kommuneøkonomi, befolkningstetthet, heterogenitet og tillit blant samarbeidskommunene, etc.

Prosjektet er finansiert av Universitetet i Agder og Aust-Agder utviklings- og kompetansefond og den primære målgruppen for studien vil være ledere i kommunal helse- og omsorgssektor sammen med sentrale myndigheter innenfor området. Gjennom etablering av dette prosjektet har Aust-Agder utviklings og kompetansefond sammen med Universitetet i Agder tatt initiativet til kunnskapsoppbygging innenfor et område som vil kunne ha stor betydning for utvikling og gode og effektive helse- og omsorgstjenester og som samtidig vil være viktig i den videre drøftingen av ny kommunestruktur i årene som kommer.