

Is Ethnic Diversity Bad for Any Dimension of Social Capital? Trust, Networks and Voluntarism in Norwegian Communities

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Ethnic diversity has been posed as a threat to social capital, but results from existing research are inconclusive. This study takes as its starting point that different aspects of social capital may be influenced differently by ethnic diversity and uses one specific welfare state context – Norway – to explore such variations. Analysing an original dataset, nine different measures are used to explore three dimensions of social capital in 61 communities in Norway, amongst the majority population and residents with immigrant background. The results suggest, first, a differentiated impact of ethnic heterogeneity on trust. Ethnic diversity is negatively associated with spatially bounded forms of trust, but not with generalized trust. Second, a negative association with traditional forms of voluntarism is found – albeit this latter relationship is much weaker than the former. Third, the results suggest that these relationships are fairly similar across different (immigrant) groups. Although residents with immigrant background typically express lower levels of generalized trust than the majority population, the relative differences between residents living in diverse or homogeneous communities are limited. Given its strong institutions Norway could be seen as a least likely case for studying the impact of ethnic diversity on social capital. On the one hand, effects are more limited than what has been found in studies from the United States. On the other hand, the fact that effects are found on community trust and volunteering indicates that this type of societal model can indeed be affected by ethnic diversification.

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Introduction

This article examines the relationship between ethnic diversity and social capital in Norwegian local communities, asking whether ethnic diversity on the community level is related to lower levels of trust, social networks and voluntarism at the individual level. Recent contributions have indicated that social trust and cohesion are likely to be negatively related to ethnic diversity (Dinesen & Sønderskov 2012; 2015; Lundåsen & Wollebæk 2013; Laurence & Bentley 2016). Given that trust is assumed to be linked to a number of positive societal outcomes (Newton 2007), and that high levels of both social and institutional trust are built into the Nordic societal model (Rothstein & Stolle 2003), such a decrease may pose severe societal and political challenges for these countries.

The article is based on a study of citizens in 61 strategically sampled municipalities and urban districts in Norway. The design, which includes urban/rural, big/small and ethnically diverse/homogeneous communities, allows us to look at the importance of ethnic diversity as a factor separate from economic factors and factors relating to community size. An additional feature of the survey design was that residents with immigrant background were over-sampled, enabling us to distinguish between non-immigrants and different segments of the immigrant population.

This study adds to the emerging literature on potential attitude changes in local contexts faced with an increasingly ethnically diverse population in at least two ways. First, using a varied set of social capital measures, including trust, networks and volunteer participation in a single study enables us to discuss the more complex relationships between diversity and social capital. 'Social capital' is a broad concept, and the implication of increased ethnic diversity need not be straightforward. Relatedly, we believe that including different measures reduce a potential tendency of 'publication bias' in the literature; that mainly significant relationships are published (Hedges 1992). Second, the survey design enables us to examine differences in social capital between citizens of immigrant origin and natives (non-immigrants). Past research in the Nordic countries has typically explored the impact of increasing diversity on natives, controlling for immigrant status (e.g., Håkansson & Sjöholm 2007; Dinesen & Sønderskov 2012; Ivarsflaten & Strømsnes 2013; Lundåsen & Wollebæk 2013) and the literature is inconclusive on differential effects between natives and groups of immigrants (Dinesen & Sønderskov 2017).

We begin by outlining a set of theoretical perspectives on the relationship between ethnic diversity and social cohesion, with an emphasis on social capital. We then present the rationale for studying the relationship between ethnic diversity and social capital in a Nordic context, emphasizing Norway

as a 'least likely case', and present existing knowledge on social capital and ethnic diversity with an emphasis on the Nordic countries. This is followed by a description of the data and methods used in the study. In the analysis we first present a set of models showing which community- and individual-level factors are related to three dimensions of social capital – trust, social networks and voluntarism – and then examine eventual differences between the majority population and residents with immigrant background. We close the article with a theoretical discussion of our findings.

Ethnic Diversity and Social Cohesion

In his 2006 Johan Skytte Prize Lecture, Robert Putnam argued that ethnic diversity, in the short to medium run, will lead to reduced levels of social capital (Putnam 2007). The evidence for this hypothesis in subsequent research has been mixed (Meer & Tolsma 2014; Schaeffer 2014; Dinesen & Sønderskov 2017). Whilst some studies have supported Putnam's hypothesis (e.g., Alesina & La Ferrara 2002; Hero 2003; Stolle et al. 2008; Lipford & Yandle 2009; Dincer 2011), other studies, especially from Europe, have revealed more mixed findings (e.g., Gesthuizen et al. 2009; Lolle & Torpe 2011; Lundåsen & Wollebæk 2013; Gundelach 2014).

Theoretically, a negative relationship between ethnic diversity and social cohesion has been understood in a set of different ways (Meer & Tolsma 2014; Laurence & Bentley 2016). Conflict theory posits that dominant groups in society can perceive new ethnic or social groups as a threat to their position and privilege, which may create hostility and distrust (Blumer 1958; Huijts et al. 2014; Meer & Tolsma 2014, 463). Anxiety and anomie faced with a potential disorganization of the social environment has been pointed out as another mechanism leading to reduced social cohesion (Meer & Tolsma 2014). This approach emphasizes the anxiety created by a perceived erosion of established values and social norms, and how such anxiety is fostered by a lack of contact and information. Another theoretical argument underlying many approaches is the 'homophily principle' – that is, that *any form* of heterogeneity is bad for trust. Trust is most likely to appear between people who can identify with each other, and identification is easier in homogeneous than in heterogeneous societies (e.g., Kymlicka & Banting 2006). However, as pointed out in a recent review, the homophily argument may be better at describing the selection processes taking place when people befriend each other, choose area of residence and so on, rather than explaining effects of diversity (Dinesen & Sønderskov 2017). Instead, an alternative understanding of the mechanisms at play is that ethnic *segregation* is the key factor, at least when it comes to social trust: segregation inhibits inter-ethnic contact, thereby reducing the radius of what is conceived as a generalized 'we' (Uslaner 2011; Dinesen & Sønderskov 2017, 5).

Putnam's constrict hypothesis is presented as an empirical possibility that is only to a limited degree explicitly theoretically motivated (Meer & Tolsma 2014; Dinesen & Sønderskov 2017). The concept of social capital as it is described elsewhere (Putnam 1993, 2000) still gives some lead into how ethnic diversity and changes in levels of social capital may be conceived. 'Social capital' is a broad concept with several dimensions. Following Putnam's (2000, 19) definition of it as 'social networks and the norms of reciprocity and trustworthiness that arise from them', different studies have placed emphasis on various dimensions of the concept, such as trust, networks and civic participation (e.g., Meer & Tolsma 2014). In Putnam's own work the weakening of social capital as a whole depends on a mutually reinforcing negative process where decreased trust, a withdrawal into in-group networks, a weakening of bridging mechanisms and a decrease in civic participation interact (Putnam 2007). For Putnam, civic associations, as a structure for face-to-face interaction, form a major local component in establishing and maintaining social capital across different groups.

Norway – A Least Likely Case?

Recent studies have highlighted the important role of institutions and policies in creating and maintaining social capital (Charron & Rothstein 2014; Gundelach & Manatschal 2017). The Nordic context and Norway in particular have a set of institutional characteristics that may reduce the negative impact of ethnic diversity, making Norway a 'least likely' case for a disruption of social capital. First, the country has comparatively low levels of economic inequality, which theoretically should produce less variation in social capital (Alesina & La Ferrara 2002; Wuthnow 2002; Knack & Zak 2003; Rothstein & Uslaner 2005; Putnam 2007). Second, Nordic citizens typically express high levels of trust in politics and fair institutions (e.g., Bjørnskov 2007; Crepaz 2008; Ervasti et al. 2008), which are cultural factors that may reduce the potential negative impact of ethnic diversity on social capital (You 2012; Charron & Rothstein 2014). Third, the Nordic countries have comprehensive welfare states and strong institutions that are set up with active multicultural policies in order to promote integration (Valenta & Bunar 2010). Gundelach and Manatschal (2017), utilizing data from Swiss cantons, have showed how integration policies may moderate the relationship between ethnic diversity and trust. Finally, and in line with Putnam's original argument, Norway has a strong and vibrant civil society, with a high density of voluntary organizations at the local level and high levels of participation (Folkestad et al. 2015; Arnesen et al. 2016). These institutional factors could promote a situation where potentially negative impacts of ethnic diversity on social capital are cushioned, and where immigrants are influenced more by the institutions in their country of arrival

than by social capital levels in their country of origin (Dinesen 2012, 2013; Nannestad et al. 2014).

On the other hand, the flip-side of strong institutions may be that they are exclusive and also less adaptable to change. In relation to civic participation in particular, research shows that immigrants tend to participate less than non-immigrants (Eimhjellen & Seggaard 2010; With 2017). Moreover, the Nordic welfare model, with its emphasis on solidarity and mutuality, might be more vulnerable to heterogeneity than other models (Kumlin & Stadelmann-Steffen 2014). Accordingly, recent research suggests that support for the welfare state is weaker amongst those with a lower trust in immigrants (Kumlin et al. 2017). If it is true that Norwegian institutions are not very adaptable to change, and yet vulnerable, we should see pronounced negative relationships between ethnic diversity and social capital in Norwegian communities, particularly for the more formal measures related to volunteer participation and membership.

Existing Studies

Previous research in the Nordic context has emphasized the trust dimension of social capital. Analysing cross-sectional longitudinal data, a few studies from Denmark have found a negative relationship between ethnic diversity and generalized trust (Dinesen & Sønderskov 2012; 2015), whilst a cross-sectional study from Norway found no such relationship when controlling for economic inequality (Ivarsflaten & Strømsnes 2013). In Sweden, results have been more mixed; one study found a negative relationship (Gustavsson & Jordahl 2008), whilst another rejected it (Lundåsen & Wollebæk 2013).

When it comes to more geographically restricted measures of trust, one Swedish study found a negative effect of ethnic diversity on trust in neighbours, trust in people living in one's local area and trust in people living in one's municipality. Lundåsen and Wollebæk (2013, 304) argue that it makes sense that 'demographic change within a local community should affect trust within the same spatial boundaries rather than generalized trust'. Possible mechanisms might be the co-existence of dissimilar and asymmetric norm systems, perceptions of unfairness and information asymmetry (Lundåsen & Wollebæk 2013, 305). Thus it might be the case that in a Nordic context generalized trust is connected to perceptions of institutional fairness, whilst community trust is more strongly related to the (ethnic) composition of the local community.

Concerning the *network dimension* of social capital, Putnam (2007, 150) found in a study from the United States that people living in diverse communities had fewer close friends and confidants. Research on this network dimension from Europe has been more mixed. A cross-national study found *positive* effects of ethnic diversity on informal social meeting and helping

(Savelkoul et al. 2011). A German national study found no effects across neighbourhoods on number of close friends or visits with friends or neighbours (Drever 2007). Research from the Netherlands suggests a negative relationship between ethnic diversity and personal contacts with native neighbours, colleagues and classmates, but a positive one related with people from other ethnic groups (Huijts et al. 2014). Nordic studies on ethnic diversity and networks are scarce, but a qualitative study from four ethnically diverse communities in Norway found a lack of bridging social networks in these communities, but also variation in the strength and openness of social networks depending on the role of local government (Ødegård et al. 2014).

Finally, in relation to *voluntarism*, some studies have found a negative relationship to ethnic diversity. Putnam (2007) concluded that people living in diverse areas were less likely to work on community projects, give to charity and volunteer. His findings have been supported by studies from Australia (Healy 2007) and New Zealand (Clark & Kim 2012). When it comes to more formal organizational activities, Alesina and La Ferrara (2000, 885) have found lower membership rates in ethnically diverse communities in the United States. Other studies are, however, less clear. One on volunteering in 248 American cities found that race heterogeneity is negatively related only to secular volunteering (Rotolo & Wilson 2014). Again Nordic research is scarce, but the aforementioned Norwegian study did show a tendency to an ethnic clustering in terms of organizational activity in diverse communities, in the sense that immigrants tended to volunteer more for separate organizations based on their ethnic or religious identity (Ødegård et al. 2014). In other words, one might expect residents living in diverse communities to participate on fewer common arenas compared to those living in more homogeneous communities.

Norway can be characterized as having strong institutional structures for volunteering. The share of the population volunteering is stable at a high level (Folkestad et al. 2015), and there is a high density of volunteer organizations (Arnesen et al. 2016). Such strong institutional structures could, on the one hand, indicate that Norwegian civil society may be apt to maintain high levels of volunteering also with increasing ethnic diversity. On the other hand, traditional volunteer structures may be characterized more by 'bonding' than 'bridging' social capital and thus less apt to include new groups (Putnam 2000; Ødegård et al. 2014).

Ethnic Diversity, Social Capital and Immigrant Background

A shortcoming of many studies is that they focus on the 'average citizen', thereby neglecting potential differences between the majority population

and immigrants. A range of studies have tried to disentangle differential effects, but these have revealed inconclusive findings (Dinesen & Sønderskov 2017). It is likely that, in a high-trust society, immigrants coming from low-trust contexts bring with them lower levels of social capital compared to the ethnic majority. In the literature, there has been some debate as to whether social trust is a cultural or contextual trait (e.g., Crepaz 2008; Nannestad et al. 2014). This discussion also relates to a more fundamental theoretical discussion about the foundations for social trust, separating those who regard trust as culture, which changes only gradually (Uslaner 2011) and those who emphasize the transforming role of institutions (Dinesen 2012; Charron & Rothstein 2014). If the former is true, social capital levels in a high-trust society will be consistently lower amongst immigrants; if the latter is the case, immigrants will adapt with time. Recent evidence supports both perspectives: immigrants in high-trust countries have lower social capital levels than the majority population, but they also gradually adapt and come closer to the majority level (Dinesen 2013). Nevertheless, an ethnically diverse community may score lower on social capital indicators simply because it has a large immigrant population.

Putnam's original study found that ethnic diversity had stronger effects on the majority population (white residents) as compared to minorities (non-white residents) (Putnam 2007, 154). Another study found a similar effect in Canada (Stolle et al. 2008). Even though some studies have focused on trust amongst immigrants and descendants specifically (Dinesen 2012, 2013; Nannestad et al. 2014), none of the previous studies from Nordic countries have analysed such differential effects systematically *within the same local context* (Gustavsson & Jordahl 2008; Dinesen & Sønderskov 2012; Ivarsflaten & Strømsnes 2013; Lundåsen & Wollebæk 2013). Hence, we do not know whether variations in social capital in Nordic communities are explained by the ethnic composition of communities, or by the ethnic composition of respondents participating in the surveys. One of the aims of this study is to detangle these two types of relationships.

Data and Method

We rely on a web survey on trust and welfare attitudes, carried out in selected communities in Norway in two waves in 2014 and 2015 as part of the project 'Support for the Affluent Welfare State'. A subsample participated in both waves. In the dataset analysed here we included all unique respondents participating in 2014 or 2015. Potential time effects are controlled in the models. Most respondents were recruited from TNS Gallup's access panel, which consists of people who are randomly sampled from the Norwegian population. As immigrants are typically under-represented in national surveys, additional respondents with immigrant background were

recruited from the National Register. In accordance with the 'conventional' definition in Norway, we included both people born abroad of two foreign-born parents (~12.8 per cent of the population) and people born in Norway of two foreign-born parents (~2.6 per cent of the population) (Statistics Norway 2015).

Not surprisingly, highly educated people are somewhat over-represented both in the immigrant and non-immigrant samples. Thus our total sample probably constitutes many highly integrated immigrants. While some of this is handled in the models through controlling for level of education, differences in social capital levels between immigrants and non-immigrants may be lower in the sample compared to the real population. At least, our results probably do not inflate differences between different groups.

The contextual unit – *communities* – constitutes municipalities and city districts. The sampling procedure was to strategically select communities according to population size and proportion of immigrants. Municipalities were divided into eight categories: very large, large, medium and small in terms of overall population, with either a large or a small proportion of immigrants.¹ Within these categories a total of 27 municipalities were selected, with populations varying from 4,000 to 115,000. Moreover, all 34 urban districts within the four biggest cities (Oslo, Bergen, Stavanger and Trondheim) were included. These districts have populations ranging from less than 10,000 to more than 40,000, and vary significantly according to ethnic diversity and economic affluence. In total, the selected communities constitute about a third of the total Norwegian population (~1.9 million people). It is important to note that residents in city districts may also be affected by the ethnic composition of the larger municipality of which the city district is nested. This is controlled for in the analyses (see the description of variables below).

Size was chosen as a core sampling criteria based on the assumption that smaller and larger communities represent different settings for network and interaction between different groups of the population. Ethnic diversity might be experienced differently in small, tightly knit communities as compared to larger and more complex settings. Moreover, the roles and capacities of local institutions may also be different. The selection of both ethnically diverse and homogenous communities within each size category ensures necessary variation. We cannot, however, rule out that other unobserved characteristics of the communities affect the results.

A shortcoming of the contextual unit in this study is that it does not locate a respondent's place of residence within a community. With relatively large units there is a risk that contextual effects remain unidentifiable, and that the results underestimate the relationship between community characteristics and individual-level social capital (Dinesen & Sønderskov 2017). Arguably, studies of ethnic diversity and social capital would benefit from

smaller geographical areas, such as neighbourhoods. For instance, in a highly innovative study, Dinesen and Sønderskov (2015) were able to utilize contextual information down to a radius of 80 metres surrounding their respondents' residence. Unfortunately, we have not been able to gather data on such a low level. Still, we believe that municipalities and city districts are relevant contextual units in Norway, as these are the lowest political units with key responsibilities for facilitating residents' welfare and social integration.

The total net sample analysed consisted of 5,239 respondents in 61 different communities. The number of responses within each community ranged from 17 to 183 (mean $n = 98.8$, standard deviation = 31.6). We employed hierarchical models in order to estimate variation on both the individual and community levels. Sampling weights were included in the analyses to correct for the non-random sampling strategy and the oversampling of people with immigrant background. The weights were calculated on the basis of official statistics on gender, age, education and proportion of immigrants residing in each community. Still, the data is not representative for the Norwegian population as a whole, but rather of residents in the selected communities. But by including the four major cities in addition to 27 small and large communities, the data includes a varied sample of Norwegian communities.

Dependent Variables

We constructed a total of nine dependent variables measuring trust, social networks and voluntarism. Trust was estimated with two variables of community trust and two variables of generalized trust. Community trust 1 is an index consisting of mean score on three items (Alpha = 0.810): 'How much do you trust (...) (1) Your closest neighbors; (2) Those who live in your area; (3) Those who live in your municipality'. There were four response options, ranging from '1 (Do not trust at all)' to '4 (Trust entirely)'. This index is similar to the one used in a Swedish study on ethnic diversity and community trust (Lundåsen & Wollebæk 2013). Community trust 2 is a more event-specific question people can relate to: 'Say you lost your wallet in your local neighborhood, and it contained NOK1,000. Do you believe you would get it back with all of the money if it was found by someone you did not know?' Responses were given on a scale from '1 (No, absolutely not)' to '4 (Yes, definitely)'.

Generalized trust 1 is a dummy operationalized using the standard question 'Generally speaking, would you say that most people can be trusted or would you say that you can't be too careful in dealing with people?'. Respondents could choose between '1 (Most people can be trusted)' and '0 (Can't be careful enough)'. Given some criticism posed against this question (Nannestad 2008; Delhey et al. 2011), we also constructed an additional index (Generalized trust 2) where we combined (saved factor scores) the

original question with another general trust question: 'How much do you trust (...) People you meet for the first time?' Possible responses ranged from '1 No trust at all' to '4 Complete trust'.

We constructed two variables measuring social networks. Close friends was based on the question 'About how many close friends do you have these days? These are people you feel at ease with, can talk to about private matters, or call on for help'. Responses were given on a scale from '1 (No close friends)' to '5 (More than 10 close friends)'. Neighbourhood socialization was operationalized with the question 'How often do you talk to or socialize with people in your neighborhood?'. Responses were given on a scale from '1 (Seldom or never)' to '5 (Several times a week)'.

Voluntarism was measured with three variables. Organizational activity took the value '1' if the respondent had participated during the past year in member activities in a voluntary organization, and the value '0' if not. The variable Voluntary work (arenas) was based on the question 'During the past year, have you participated in volunteer work in any of the following arenas?'. Respondents could choose between 0 and 13 specified arenas (including 'other'). Voluntary work (frequency) relied on the question 'If you consider the past year, about how often have you participated in volunteer work?', with answer options ranging from '1 (Several times a week)' to '6 (Once)'. Responses were reversed in the present analyses.²

Generalized trust 1 and Organizational activity are binominal variables (0–1), whilst all other variables are ordinal, but with different answer scales. For the ease of interpretation these later variables were standardized on a 0–100 scale. Binominal variables were estimated with logistic models, whilst ordinal variables were estimated with linear models. Descriptive statistics for all dependent variables are summarized in Table 1.

Independent Variables

The main explanatory variable is contextual ethnic diversity at the community level. In accordance with the majority of similar studies we constructed the Herfindahl index, which is a measure of the probability that any two randomly selected individuals in a community have the same ethnic background (Meer & Tolsma 2014). The index was constructed for each community distinguishing between immigrants and their children from Western Europe (including North America, Australia and New Zealand), Eastern Europe, Africa, Asia and Latin America. To ease interpretation we rescaled the index from the original 0–1 scale into a 0–100 scale, where a high value indicates ethnic heterogeneity and a low value indicates ethnic homogeneity. In the sample, the most homogeneous communities are the municipalities Skaun (Herfindahl index = 4.8), Hemne (6.8) and Fauske (7.5), located in the middle and northern parts of Norway, whereas the most

Table 1. Dependent Variables

Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum
Community trust 1	5,239	54.8	55.6	19.3	0	100
Community trust 2	5,239	48.2	33.3	21.7	0	100
Generalized trust 1*	5,239	0.785	–	–	0	1
Generalized trust 2	5,239	54.2	56.1	23.5	0	100
Close friends	5,239	54.8	50.0	24.7	0	100
Neighborhood socialization	5,239	77.3	75.0	27.4	0	100
Organizational activity*	5,239	0.554	–	–	0	1
Voluntary work (arenas)	5,239	15.6	10.0	14.8	0	100
Voluntary work (frequency)	5,239	35.7	33.3	31.4	0	100

Notes: Descriptive statistics (unweighted). *Variable is dichotomous

diverse communities are the city districts Søndre Nordstrand (Herfindahl index = 63.7), Alna (62.1) and Grorud (60.3), located in the capitol, Oslo (see Figure A1 in the Online Appendix).

Constructing the Herfindahl index on the basis of five continents may be problematic if a (hypothetical) community consists of only immigrants from vastly different countries within one continent. Although not completely ruling out this problem, as a robustness check we also estimated all models with Share of non-Western immigrants as a measure of ethnic diversity (see Table A2 in the Online Appendix).

At the community level we also controlled for economic inequality (Gini), economic affluence (Median income), community size (log community size) and whether the contextual unit was municipality or city district (City district). Gini was standardized on a 0–100 scale, where a high score indicates a high level of inequality. As a robustness check, we also estimated models with income dispersion between top and bottom ten percentiles (see Table A2 in the Online Appendix). Data used in constructing level 2 variables were retrieved from Statistics Norway.

The main explanatory variable on the individual level is immigrant background. We distinguished between immigrants from 'Western Europe, North America Australia and New Zealand', 'Eastern Europe', 'Africa', 'Asia' and 'Latin America'. Since the definition of immigrants also includes people born in Norway of two immigrant parents, as a robustness check we ran additional analyses separating between first and second generation of immigrants. These analyses suggest that the first generation express less generalized trust compared to the second generation, but that differences on the other dependent variables were negligible (see Table A3 in the Online Appendix).

We also controlled for respondents' level of education (1–4), household income (in NOK100,000), residence time (years lived in current community), age and gender. Finally, since the survey was carried out in 2014 and 2015, we included a dummy controlling for potential time effects (2015 = 1). Table 2 summarizes descriptive statistics for all independent variables.

A Note on Causality

Cross-sectional data does not allow strict causal inferences. Whilst this is a general shortcoming, introducing context characteristics complicate the matter further. People are not randomly distributed to contexts, they 'self-select' where they live, and they move non-randomly between communities. Thus, different characteristics both at the individual and contextual levels may correlate simultaneously with the dependent variable. For instance, it might be that wealthy high-trusting citizens move to ethnic homogeneous areas, whilst poor low-trusting people end up in ethnic heterogeneous areas.

Table 2. Independent Variables

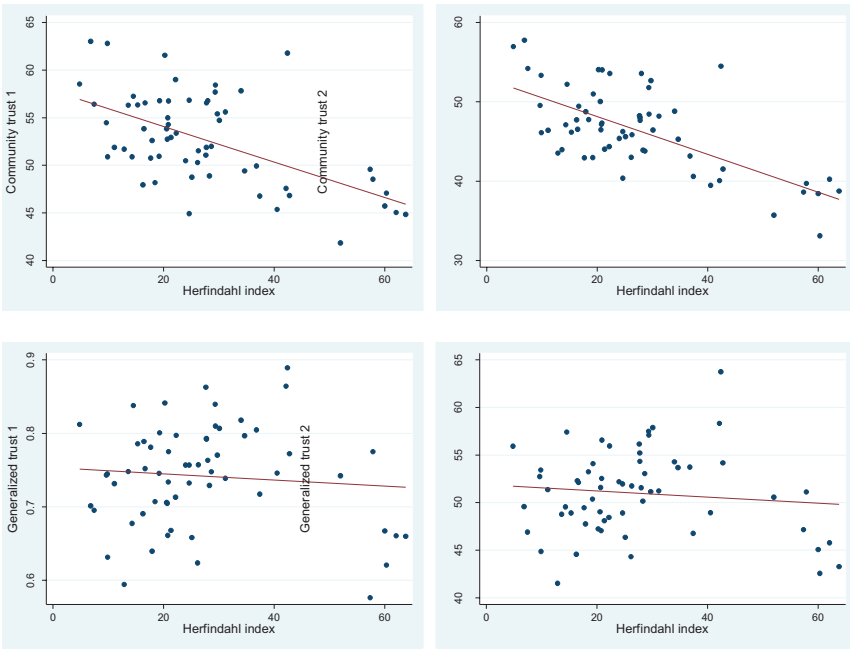
Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum
<i>Community level</i> ¹						
Ethnic diversity (Herfindahl index, 0–100)	61	27.12	24.63	14.62	4.81	63.74
Gini-coefficient (0–100)	61	27.64	26.67	3.49	22.54	36.22
Median income (in NOK1,000)	61	301.14	296.56	20.2	266.46	358.71
Community size (log)	61	10.22	10.39	0.728	8.35	11.68
City district	61	0.557	–	–	0	1
<i>Individual level</i>						
Gender (female = 1) ²	5,239	0.515	–	–	0	1
Age	5,239	48.74	50	15.71	15	92
Education	5,239	2.7969	3	0.84	1	4
Household income (in NOK100,000) ^c	5,239	7.904	7	3.4188	1	15
Residence time in community (dummy) ²						
<1 year	245				0	1
1–2 years	372				0	1
3–4 years	471				0	1
5–14 years	1,266				0	1
15+ years (reference category)	2,885				0	1

Table 2. (Continued)

Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum
Immigrant background (dummy) ²	648				0	1
Western Europe, North America, Australia, New Zealand	124				0	1
Africa	44				0	1
Asia and Middle East	204				0	1
Latin America	33					

Notes: Descriptive statistics (unweighted). ¹Source: Statistics Norway. ²Variable is dichotomous. ³Missing values set to mean according to age, gender and education.

a. Trust



b. Social networks and interaction

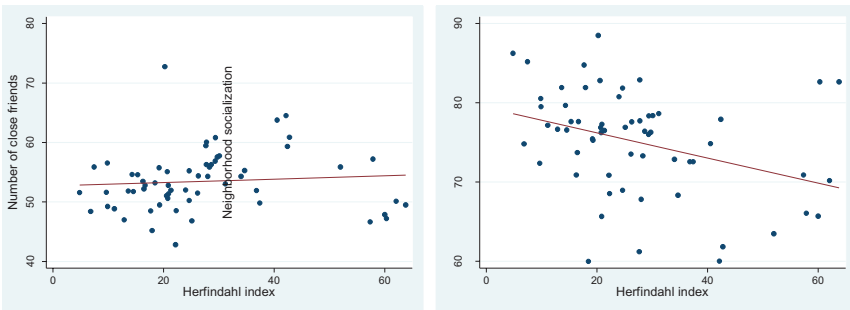


Figure 1. Ethnic Diversity and Social Capital in Norwegian Communities (Weighted). (a) Trust (b) Social Networks and Interaction (c) Voluntarism.

Although not ruling out self-selection, the sampling strategy in the survey may help. By strategically selecting communities that vary both with regards to economic and ethnic diversity, the correlation between these two variables is suppressed in the dataset (the Herfindahl index correlates $r = 0.188$ with Gini and $r = -0.002$ with median income; see Table A5 in the

c. Voluntarism

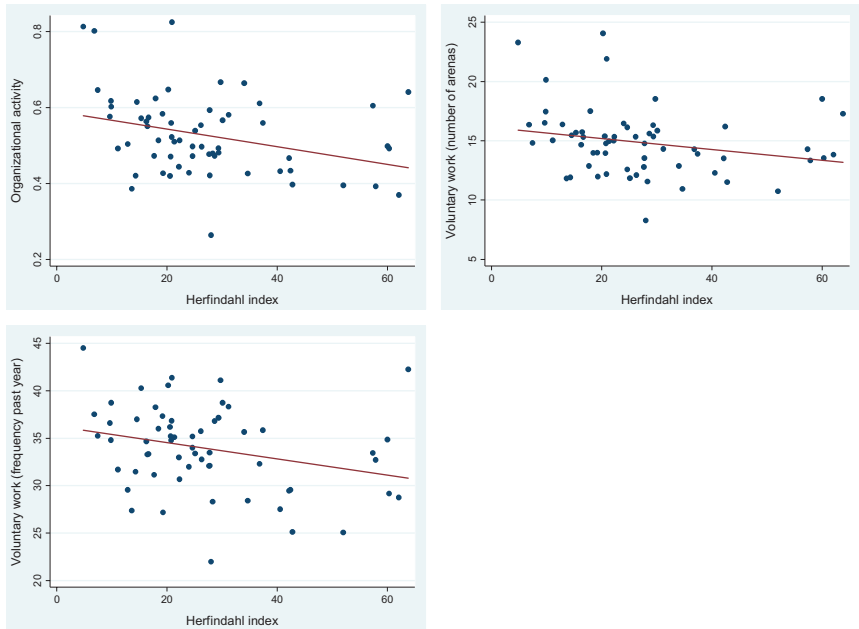


Figure 1. (Continue)

Online Appendix). In other words, the sample does *not* consist solely of affluent and homogeneous communities and poor and diverse communities. For instance, the most affluent community in the sample (Ullern city district in Oslo) has a Herfindahl index score of 29.3, which is above the average score (27.1) in the selected communities (see Table 2 and Figure A1 in the Online Appendix). Indeed, omitting Gini and median income from the multivariate models does not change the results much (see Table A6 in the Online Appendix).

Social Capital in Norwegian Communities

We look at our results in three steps. First, we gauge the bivariate relationship between aggregated levels of social capital and ethnic diversity. Second, we show estimations of the relative relationship between community-level ethnic diversity and individual-level social capital. Third, we explore whether this relationship is different across different immigrant groups.

Table 3. Ethnic Diversity and Trust

	Community trust 1	Community trust 2	Generalized trust 1	Generalized trust 2
<i>Level 2</i>				
Herfindahl index	-0.092*** (0.025)	-0.205*** (0.030)	0.999 (0.003)	-0.019 (0.036)
Gini	0.092 (0.178)	0.091 (0.189)	1.023 (0.021)	0.139 (0.223)
Median	0.032 (0.028)	0.026 (0.031)	0.997 (0.004)	0.005 (0.038)
ln (community size)	-1.061 [†] (0.632)	-1.778*** (0.540)	1.071 (0.073)	0.814 (0.634)
City district	-2.718** (1.048)	-1.658 [†] (0.878)	1.125 (0.104)	0.362 (1.177)
<i>Level 1</i>				
Women (dummy)	1.590* (0.700)	-0.275 (0.878)	1.084 (0.113)	1.171 (0.957)
Age	0.288*** (0.026)	0.177*** (0.025)	1.019*** (0.003)	0.219*** (0.029)
Education	1.698*** (0.403)	2.879*** (0.440)	1.546*** (0.089)	3.942*** (0.530)
Household income	0.644*** (0.120)	0.379*** (0.108)	1.079*** (0.016)	0.786*** (0.144)
Residence time in community (ref: 15+ years)				
<1 year	-2.072 (1.857)	1.014 (2.055)	1.129 (0.242)	1.744 (2.376)
1–2 years	-2.046 (1.270)	3.068* (1.320)	1.013 (0.215)	0.730 (1.834)
3–4 years	-1.193 (1.500)	2.605 [†] (1.480)	1.011 (0.195)	1.979 (1.893)
5–14 years	-2.144* (1.031)	-0.887 (1.293)	0.988 (0.121)	-0.617 (1.239)
Immigrant background (ref: Non-immigrants)				
Western Europe, United States, Australia, New Zealand	0.237 (1.067)	-1.397 (1.546)	0.812 (0.116)	-2.434 [†] (1.343)

(Continues)

Table 3. (Continued)

	Community trust 1	Community trust 2	Generalized trust 1	Generalized trust 2
Eastern Europe	-5.885* (2.146)	1.428 (2.604)	0.323*** (0.081)	-11.83*** (3.188)
Africa	-2.016 (2.824)	1.647 (4.884)	0.266*** (0.095)	-18.04*** (3.709)
Asia and Middle East	0.246 (1.610)	7.335* (2.960)	0.387*** (0.074)	-7.962** (2.510)
Latin America	-13.514** (5.108)	-3.505 (5.097)	0.358* (0.174)	-13.91** (5.339)
Response year (2014 = 0, 2015 = 1)	-2.187† (1.119)	-0.106 (0.878)	0.800 (0.133)	-1.748 (1.580)
Constant	34.301 (7.852)	42.460 (8.529)	0.197 (0.182)	13.272 (9.602)
Var (level 2)	2.151 (0.877)	0.133 (0.823)	0.011 (0.013)	3.336 (1.624)
Var (level 1)	326.050 (9.539)	461.795 (12.708)		537.798 (14.918)
LL change (from 0-model)	328.1	137.0		234.3
n (level 1)	5,239	5,239	216.4	5,239
n (level 2)	61	61	61	61

Notes. Coefficients with robust standard errors in parentheses. Weighted data. *** p < 0.001; ** p < 0.01; * p < 0.05; † p < 0.1.

Table 4. Ethnic Diversity and Social Networks

	Close friends	Neighborhood socialization
<i>Level 2</i>		
Herfindahl index	0.036 (0.033)	-0.051 (0.062)
Gini	0.627*** (0.173)	-0.397 (0.267)
Median	-0.035 (0.025)	0.086 [†] (0.047)
ln (community size)	1.175 (0.888)	-0.740 (1.111)
City district	0.430 (0.942)	-0.968 (1.474)
<i>Level 1</i>		
Women (dummy)	5.751*** (0.931)	-1.777 (1.140)
Age	-0.032 (0.034)	0.500*** (0.038)
Education	2.128*** (0.515)	-0.562 (0.638)
Household income	0.695*** (0.154)	1.048*** (0.181)
Residence time in community (ref: 15+ years)		
<1 year	4.220 [†] (2.160)	-2.128 (2.693)
1–2 years	-1.266 (1.765)	-4.217* (2.114)
3–4 years	1.248 (1.536)	-2.458 (2.218)
5–14 years	-3.241** (1.074)	0.188 (1.399)
Immigrant background (ref: Non-immigrants)		
Western Europe, United States, Australia, New Zealand	-1.474 (1.368)	-0.578 (1.579)
Eastern Europe	-7.036* (2.815)	-6.231 (4.026)
Africa	-14.287*** (3.349)	2.509 (5.641)
Asia and Middle East	-5.889** (2.240)	2.107 (3.116)
Latin America	-14.857*** (4.378)	-3.924 (7.786)
Response year (2014 = 0, 2015 = 1)	-1.345 (1.186)	-0.331 (1.607)
Constant	23.136 (10.752)	42.997 (12.769)
Var (level 2)	1.865 (1.465)	11.419 (4.491)
Var (level 1)	555.487 (12.279)	706.767 (22.271)
LL change (from 0-model)	132.9	324.1
n (level 1)	5,239	5,239
n (level 2)	61	61

Notes.: Coefficients with robust standard errors in parentheses. Weighted data.

***p < 0.001; **p < 0.01; *p < 0.05; [†]p < 0.1.

Table 5. Ethnic Diversity and Voluntarism

	Organizational activity	Voluntary work (arenas)	Voluntary work (frequency)
<i>Level 2</i>			
Herfindahl index	0.992* (0.004)	-0.053* (0.022)	-0.053 (0.058)
Gini	0.984 (0.017)	-0.234** (0.078)	-0.294 (0.193)
Median	1.001 (0.003)	0.010 (0.016)	0.033 (0.032)
ln (community size)	0.875 [†] (0.068)	-0.880 (0.506)	-0.306 (0.840)
City district	0.962 (0.111)	-1.448* (0.738)	-1.045 (1.337)
<i>Level 1</i>			
Women (dummy)	0.864* (0.059)	-0.286 (0.494)	-2.250* (0.920)
Age	1.011*** (0.003)	0.020 (0.019)	0.204*** (0.039)
Education	1.238*** (0.062)	1.953*** (0.263)	3.473*** (0.596)
Household income	1.000 (0.013)	0.254** (0.082)	0.026 (0.222)
Residence time in community (ref: 15+ years)			
<1 year	0.920 (0.178)	-1.000 (1.237)	2.651 (3.458)
1–2 years	1.037 (0.204)	-0.834 (1.017)	0.741 (2.492)
3–4 years	0.921 (0.129)	0.423 (0.983)	2.730 (2.065)
5–14 years	0.916 (0.077)	1.371 [†] (0.707)	1.291 (1.262)
Immigrant background (ref: Non-immigrants)			
Western Europe, United States, Australia, New Zealand	1.404* (0.209)	2.736** (0.873)	1.422 (1.344)
Eastern Europe	1.478 [†] (0.328)	2.732 (2.249)	0.788 (3.377)
Africa	1.171 (0.533)	6.762 [†] (3.909)	-0.280 (7.618)
Asia and Middle East	1.705 [†] (0.392)	7.195*** (1.936)	1.172 (2.378)
Latin America	0.781 (0.325)	-5.288** (1.993)	-13.259* (5.576)
Response year (2014 = 0, 2015 = 1)	1.147 (0.155)	-0.385 (0.766)	1.457 (1.477)
Constant	2.569 (2.432)	21.364 (6.223)	20.203 (9.183)
Var (level 2)	0.051 (0.019)	1.108 (0.693)	5.855 (4.691)
Var (level 1)		206.160 (6.522)	945.668 (23.097)
LL change (from 0-model)	68.3	117.6	63.0
n (level 1)	5,239	5,239	5,239
n (level 2)	61	61	61

Notes: Coefficients with robust standard errors in parentheses. Weighted data.
 *** p < 0.001; ** p < 0.01; * p < 0.05; [†]p < 0.1.

Bivariate Relationship between Ethnic Diversity and Social Capital

The plots in Figures 1a–1c constitute weighted aggregate community scores on social capital (y-axis) and ethnic composition (x-axis). The farther to the right, the more ethnically diverse a community. Figure 1a shows a stronger linear relationship between ethnic diversity and community trust than between ethnic diversity and generalized trust. For social networks (Figure 1b), we see a mixed picture. People living in ethnically diverse communities report having more close friends than people living in ethnically homogeneous communities. However, social interaction amongst neighbours (right panel) appears to be more frequent in homogeneous than in diverse communities. Finally, Table 1c displays weak linear relationships in the predicted direction between ethnic diversity and organizational activity and voluntary work.

The overall tendencies are clear. First, with the exception of number of close friends, ethnic diversity appears to be negatively associated with all three dimensions of social capital in the selected communities. Second, the association between ethnic diversity and social capital appears to be strongest with regard to the two measures of community trust. The next step is to estimate whether the observed differences are related to the ethnic composition of communities when controlling for other factors.

Multilevel Models

To begin with, it is important to note that empty models ('0-models') suggest that individual characteristics are much more important than community characteristics in explaining individual variations in social capital in the selected communities (see Table A1 in the Online Appendix). Although statistically significant, intra-class correlation (ICC) statistics show that community characteristics explain between 0.9 per cent (Generalized trust 1, Organizational activity, Voluntary work (arenas) and Voluntary work (frequency)) and 4 per cent (Community trust 1 and Neighbourhood socialization) of the total variation. Thus, the most local-oriented measures appear to be most strongly associated with community characteristics.

Trust

Table 3 summarizes results from multilevel regression models of trust with all independent variables included. The results confirm what we saw in Figure 1a above: ethnic diversity is more strongly related to community trust than generalized trust. For both measures of community trust the Herfindahl index is statistically significant and points in the expected direction. People living in the most diverse communities express less trust than others. This finding corresponds with a similar study from Sweden

Table 6. Interaction between Ethnic Diversity and Immigrant Background (Ref: Non-immigrants)

	Herfindahl index*Immigrant background from:				
	West Europe, United States, Canada, Australia, New Zealand	East Europe	Africa	Asia	Latin America
Community trust 1	0.135* (0.067)	0.075 (0.135)	0.053 (0.185)	0.084 (0.099)	0.233 (0.214)
Community trust 2	-0.093 (0.084)	-0.235 (0.156)	-0.354 (0.270)	0.077 (0.175)	-0.548** (0.212)
Generalized trust 1 (OR)	1.003 (0.011)	0.994 (0.014)	0.995 (0.021)	0.998 (0.012)	0.996 (0.028)
Generalized trust 2	0.089 (0.105)	0.108 (0.180)	-0.008 (0.224)	-0.032 (0.164)	0.201 (0.231)
Close friends	0.000 (0.076)	-0.010 (0.214)	-0.206 (0.205)	-0.078 (0.116)	-0.684** (0.234)
Neighbourhood socialization	0.077 (0.112)	-0.009 (0.196)	0.026 (0.373)	0.080 (0.181)	0.165 (0.388)
Organizational activity (OR)	0.998 (0.009)	1.007 (0.016)	1.007 (0.029)	1.013 (0.012)	1.015 (0.028)
Voluntary work (arenas)	0.026 (0.054)	0.068 (0.104)	-0.097 (0.238)	-0.190* (0.097)	0.010 (0.119)
Voluntary work (freq)	0.014 (0.076)	-0.148 (0.231)	-0.197 (0.518)	-0.140 (0.124)	-0.152 (0.339)

Notes. Entries are unstandardized beta-coefficients/odds (OR), with robust standard errors in parentheses. Weighted data. Control variables not shown: (level 1) age, gender, education, household income, residence time, immigrant background; (level 2) Gini, median income, Herfindahl index, population size. ** p < 0.01; * p < 0.05; † p < 0.1.

(Lundåsen & Wollebæk 2013), but results suggest that this is also the case with the more real-life wallet question (Community trust 2).

The Herfindahl index fails to meet significance on both operationalizations of generalized trust. None of the other contextual variables are significant – a finding that contradicts previous research from Norway that concluded that economic predictors are important (Ivarsflaten & Strømsnes 2013). However, if we remove controls for individual-level immigrant background generalized trust is related to median income, ethnic diversity and population size also in our data (results not shown). Immigrant respondents, and especially first-generation immigrants (see Table A3 in the Online Appendix), tend to express lower levels of generalized trust compared to the average non-immigrant and, hence, lower levels of generalized trust in ethnic diverse communities may simply be the result of larger shares of immigrants in these communities.

Social Networks and Interaction

Table 4 summarizes results from analyses of social networks. Ethnic diversity is not related to social networks in the selected communities. People living in an ethnically diverse community have at least as many close friends as those living in a homogeneous community, and also socialize with neighbours as frequently as someone living in a homogeneous community. These results are more in line with previous studies from Germany and the Netherlands (Drever 2007; Huijts et al. 2014) than with studies from the United States (Putnam 2007).

Voluntarism

Finally, Table 5 displays results from models for the more formal and behavioural aspects of social capital, measured by participation in membership activities in voluntary organizations and voluntary work. As suggested in the graphics (Figure 1c), there is a higher probability of performing membership activities in voluntary organizations and engaging in voluntary work in a larger number of arenas in homogeneous than in diverse communities. The coefficients are, however, small, and in alternative estimations share of non-Western immigrants is unrelated to these aspects of social capital (see Table A2 in the Online Appendix). Interestingly *frequency* of voluntary work is unrelated to ethnic diversity, suggesting that this variable taps into a different dimension of voluntarism. This will be discussed more thoroughly in the final section.

To summarize, of the three dimensions of social capital analysed in this article, ethnic diversity is most negatively associated with geographically restricted measures of trust (community trust), and also to some extent with voluntarism. The predicted differences on a 0–100 scale in the least and

most ethnically diverse communities are 5.4 (trust in neighbours, etc.), 12.1 (return of a lost wallet), 12.3 (membership activities in a voluntary organization) and 3.1 (voluntary work/number of arenas) (see Table A7 in the Online Appendix). For the latter variable, this means that non-immigrants living in the least ethnically diverse community participates on approximately 0.4 more arenas than non-immigrants living in the most ethnically diverse community ($13 \text{ arenas}/100 \times 3.1$).

Differences between the Majority Population and Different Immigrant Groups

The regression models suggested that there were some variations between non-immigrants and people with immigrant background. For instance, immigrants report lower levels of trust and fewer close friends. It is unknown whether immigrants and non-immigrants living in the same community respond similarly to ethnic diversity – that is, whether the relative relationship between community-level ethnic diversity and individual-level social capital is equal for the majority population and different immigrant groups. In order to explore such possible differences we repeated the models (Tables 3–5) with cross-level interaction terms between ethnic diversity (Herfindahl index) and immigrant background (non-immigrants as reference category). Interaction terms from these analyses are summarized in Table 6.

The analysis of differential effects suggests that people with Latin American background deviate from non-immigrants. Latin Americans living in ethnic diverse communities are less likely to believe they will receive a lost wallet (Community trust 2) and report having fewer close friends. This means that, on these two dimensions, a negative relationship between ethnic diversity and social capital is stronger amongst Latin-Americans compared to the majority population and also compared to immigrants of Western and Asian origin. There is a tendency in the material that people of Eastern European and African origin also deviate in a similar direction; however, these differences are not statistically significant. This may be the result of small sample sizes in some of the groups, most notably amongst people of Latin American and African origin. For instance, on the measure of Community trust 1, the interaction term for people of Latin American origin is higher (but insignificant) compared to the interaction term for immigrants of Western descent (which is significant).

Nevertheless, with a few exceptions, the analysis shows that few of the interaction terms are statistically significant. Hence, we cannot conclude based on this data that there are major differential effects between immigrants and non-immigrants living in the same community. Even though the absolute levels of social capital often differ between them, the separate

effect of ethnic diversity on social capital is relatively similar across (immigrant) groups. As such, these results suggest that many of the findings from previous Nordic studies might be valid across different groups. This runs contrary to some North American studies finding that the ethnic majority is the group most strongly affected by ethnic diversity (Putnam 2007; Stolle et al. 2008). As discussed above, it is important to note that the sample of immigrants may not be fully representative of the immigrant population. A more cautious interpretation is that the effect of ethnic diversity on social capital is fairly similar between non-immigrants and well integrated immigrants.

Discussion

The results demonstrate that the relationship between ethnic diversity and social capital in Norwegian communities is complex and far from straight-forward, and that a broad study of different dimensions of social capital is justified. In the following we discuss our findings and propose some theoretical interpretations. First, with regards to trust, the results suggested that geographical proximity is indeed relevant: community trust is negatively associated with ethnic diversity, but generalized trust is not. These findings reflect results from previous studies from Norway (Ivardsflaten & Strømsnes 2013) and Sweden (Lundåsen & Wollebæk 2013), and therefore appear robust. Theoretical arguments for a negative relationship between ethnic diversity and social cohesion have pointed to experienced threat and anomie as factors (Blumer 1958; Meer & Tolsma 2014) and, moreover, that people prefer others similar to themselves when building any type of network (McPherson et al. 2001). It seems likely that community trust comes closer to these arguments than generalized trust. As formulated by Lundåsen and Wollebæk (2013, 304) it is reasonable to expect that ‘demographic change within a local community should affect trust within the same spatial boundaries rather than generalized trust’ since it is on this level that individuals experience dissimilar norms and potential system unfairness. The more institutional-oriented literature supports this argument, by suggesting that perceptions of fair institutions, limited corruption and so on are more important than ethnic diversity in explaining *generalized* trust (You 2012; Charron & Rothstein 2014), which implies that the latter is a more stable, system-related trait.

Second, the analyses did not reveal a significant relationship between ethnic diversity and social networks. Even though this is in line with some studies from Germany and the Netherlands (Drever 2007; Huijts et al. 2014), it is interesting that the neighbourhood socialization item is unaffected. In their meta-study, Meer and Tolsma (2014) found that ‘informal

forms' of social capital are the ones most strongly affected by ethnic diversity. Moreover, segregation has been conceived as restricting contact opportunities, thereby increasing feelings of threat and anomie (Uslaner 2011). Still, both with regards to the lack of effects of ethnic diversity on generalized trust and social networks, the results should be treated with caution as our contextual units are fairly large. It is not unreasonable to think that informal forms of social capital are sensitive to the size of the community, and we cannot rule out the possibility that ethnic diversity is related to generalized trust and social networks in smaller neighbourhoods. The fact that we find no relationship on all dimensions of social capital is nevertheless promising for future integration of diverse communities, given the emphasis that several scholars have placed on social networks as key to trust and intergroup contact (Putnam 2000; Uslaner 2011).

Third, the results suggested that ethnic diversity is negatively associated with membership activities in voluntary organizations (weakly) and with the number of arenas for volunteering. Frequency of volunteering was non-related to ethnic diversity. One possible explanation may be the level of *formality* of these different variables. Membership activities in voluntary organizations represent the most formal form of voluntarism. Frequency of voluntary work is a less precise measure, and includes all forms of volunteering. Number of arenas is somewhere in-between: the listed arenas point to formal activities, but not necessarily organized by a formal organization. One possible interpretation of why ethnic diversity is negatively associated with more formal forms of voluntarism is that multi-ethnic communities have less interconnected arenas for volunteering; a lack of 'bridging' between different ethnic groups (cf. Putnam 2000). This explanation is in line with qualitative work from four multi-ethnic local communities in Norway, which showed that despite of the existence of a number of highly active small associations and networks, many of these existed in isolation from other groups and were unknown to each other (Ødegård et al. 2014). In sum, ethnic diversity does not seem to be related to a general withdrawal from volunteering, but may be indicative of a more segregated civil society where people living in diverse communities concentrate their civil engagement on fewer arenas.

Fourth, the results suggested that, contrary to some North American studies (Putnam 2007; Stolle et al. 2008), the effect of ethnic diversity on social capital is fairly equal amongst all residents, independent of immigrant background. Well-integrated immigrants seem to respond more or less similarly to ethnic diversity as the majority population and community differences in social capital cannot be explained by the share of immigrant residents alone. These findings are in line with previous research on the immigrant group in Denmark (Dinesen 2012; 2013) and indicate the relevance of institutional explanations to levels of social capital (Charron & Rothstein 2014).

Amongst these are assumedly welfare state institutions developed with the explicit aim to boost integration and limit inequality, as well as civil society institutions that contribute to local civil life.

Conclusion

In this article we have analysed the relationship between ethnic diversity and three dimensions of social capital in 61 Norwegian communities: trust, networks and volunteer participation. We took as our point of departure that Norway is a country with high levels of trust, and with strong institutions that might be assumed to preserve and instigate trust through fair and just institutions and arrangements for reducing social economic inequalities. In this light, we expected a weak relationship between ethnic diversity and social capital, both amongst immigrants and non-immigrants. On the other hand, we also opened up the question of whether Norwegian welfare and civil society institutions may foster barriers between different groups in the population and also be particularly vulnerable to increasing heterogeneity, given their basis in mutual and solidaristic arrangements. This would lead to the assumption that high ethnic diversity in Norwegian local communities would be accompanied by lower levels of social capital, in both groups, than what would be found in homogeneous communities.

The findings are mixed. First, ethnic diversity is most negatively associated with spatially bounded forms of trust, whilst generalized trust seems robust to variations in demographic composition. Second, there is a negative relationship between diversity and formal forms of voluntarism – albeit this latter relationship is weaker than the former. The results suggest that the main issues of ethnic diversity are related to social integration at the local level and integration into traditional forms of voluntarism. This relationship does not differ significantly between non-immigrants and well integrated immigrants. According to the main theoretical approaches to the issue of how immigrants respond to attitudes in their country of arrival, this indicates the importance of institutions as agents of socialization into a given context (Dinesen 2013; Nannestad et al. 2014). Whilst the Norwegian institutional setting may reduce large variations in generalized trust, this study still raises some questions when it comes to local civil society institutions. Following Putnam's (2000) emphasis on the functioning of civic life and the idea of trust, networks and norms as mutually reinforcing, a weakening of volunteer membership and a fragmentation of volunteer participation may pose an important challenge to the long-term maintenance of trust. In particular, the possible lack of 'bridging social capital', meaning cross-cutting networks between different ethnic, social and religious groups, could be conceived as a problem.

Still, some important limitations of the study that may have underestimated the effect of ethnic diversity on social capital are worth stressing. First, the contextual units (municipalities/city districts) employed in the analyses are fairly large and may hide important socioeconomic variation between different neighbourhoods within each community. Smaller communities may have produced more variation in social capital levels. Second, the number of respondents with an immigrant background was limited and there is also good reason to believe that the immigrant respondents represent a well-integrated segment of the immigrant population in Norway. Larger sample sizes may have produced more statistically significant differential effects, and the differences between immigrants and non-immigrants may have been larger if more immigrants with low education and short residence time were included in the survey. Third, we analyse cross-sectional data and therefore cannot rule out the possibility that the relationship between community characteristics and individual social capital is caused by self-selection – that is, that any of the estimated relationships (including the insignificant ones) could be wrong due to self-selection.

Taking these limitations into account, the results in this study may nevertheless be viewed as more or less dramatic. The optimist would be calmed to see that ethnic diversity appears less negative in a Norwegian context than what Putnam (2007) originally presented from the United States. The pessimist could argue that Norway is a critical case, and that finding some evidence in favour of the constrict claim is proof for the validity of Putnam's hypothesis. As has been emphasized elsewhere, American and European countries have different historical legacies, institutional structures and state policies; most importantly European countries typically have much more active 'multicultural policies' (Meer & Tolsma 2014, 474). In the United States, ethnic diversity is more often mixed with segregation, inequality and other unfavourable social factors, which in sum is likely to boost the negative effects of diversity.

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NOTES

1. The proportion of immigrants in the different communities varies between ~3 and ~50 percent.
2. Answer distributions on neighborhood socialization (left) and on both measures of voluntary work (right) were skewed. We therefore estimated additional models with the exponentiation and the natural logarithm of these variables. Results did not change substantially (see the Online Appendix).

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