

## The promise of the region – accelerating the energy transition by tailor-made solutions?\*

A comparative case study of regional governance of energy neutral housing in the three Dutch regions Noord-Brabant, Drenthe and Utrecht

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**ABSTRACT.** In order to combat climate change and accelerate the energy transition, uniform ambitious targets are set on the (inter)national level. One of these targets is the development of an energy neutral built environment in the Netherlands in 2050. The dominant assumption in recent policy is that the region is the right level to give substance to these targets by delivering tailor-made solutions which are both effective and legitimate. Scientific research underpinning this assumption is limited however. This study therefore questions the factors upon which regional governance is conditional, to investigate whether regional governance is actually generating these promised tailor-made solutions. We use a Subnational Comparative Method, zooming in on the Dutch regions Noord-Brabant, Drenthe and Utrecht. We expected variation in the regional governance in these regions, to be caused by both differences in the characteristics of the regional issue as well as variation in the already existing regional community. We found that regional governance is conditional upon the already existing regional collaborations and regional culture. It is however only limitedly customized to the specific regional characteristics of the problem. Regional governance does only partially generate tailor-made solutions: customized to the regional community but only limitedly customized to the regional problem.

**Keywords:** regional governance, energy neutral housing policy, regional differentiation

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## 1. Introduction: The region delivering tailor-made solutions?

Existing buildings account for 30 percent of the CO<sub>2</sub> emissions and are among the most extensive and lasting forms of human infrastructure (Filippidou, Nieboer, & Visscher, 2016; Golubchikov & Deda, 2011). Therefore targets are being developed and policies are being designed on the international and national level in order to develop renewable energy and to create more energy efficiency in this sector. Examples of these policies include European Union targets on sustainable housing and targets in the Dutch National Energy Agreement (2013) for an energy neutral housing stock in 2050.

Recent policy reports emphasize that the region is the right level to provide tailor-made solutions to such (transboundary) problems, which are both effective as well as legitimate. The region is in this respect understood as a node of societal, governmental and non-governmental actors that are together solving problems. The assumption is that the region generates tailor-made solutions that suit the specific regional characteristics. The customized nature of these regional solutions would make them moreover effective and legitimate and the region should in this respect be provided with room to differentiate (SOB, 2016; RLI, 2015, PBL, 2011). Recent policy (reports) on energy neutral housing follow this dominant assumption that the (inter)national targets on energy neutral housing can best be reached at the regional level (VNG, 2016; Ministry of Housing, 2016, Twynstra Gudde, 2016). The VNG program on energy saving in the built environment for instance expects regional collaboration to make *'optimal use of local 'best persons' and the 'regional DNA''* (2016, p.12). The Minister of Housing and the Central Government Sector, moreover, recently stated that exploring opportunities in the regional context is *'an important target of the transition'* (Ministry of the Interior and Kingdom Relations, 2016) Another recent study on energy neutral housing emphasized furthermore the need for an approach that *'provides insight in the diversity of variables for every region and tailor-made regional solutions'* (Twynstra Gudde, 2016).

Scientific knowledge on regional governance and the origins of variety between regional solutions is insufficient however. First of all, regions have been studied a lot from a territorial perspective, focusing on structure and form (Barnes & Foster, 2012). Research on the region as a fluid space, developing governance strategies for tackling transboundary problems, is however less advanced. It is, however, this fluid region that is assumed to be the appropriate level for linking up public, private and societal actors at multiple levels of governance by generating tailor-made solutions (Groenleer, 2016). Scientific knowledge understanding regional governance from such a moderate, fluid perspective has yet to be developed (Groenleer, 2016). Second of all, recent studies zooming in on energy neutral housing are for example focussing on individual decisions of adaptors of energy efficiency measures. There is, however, less research on the complex context in which energy efficiency measures in the housing sector emerge, characterized by many stakeholder interests and institutionalization (Hoppe, 2012). Therefore in-depth case study research is needed to understand the role of governance in these complex processes.

When we look at the current development of regional governance on an energy neutral housing stock, it is striking that although aiming to meet the same national target, we see

variety in the approach of regions. First of all the regional (intermediate) targets vary. Noord-Brabant for example signed a deal on Net Zero Energy housing (NZE-housing) to establish the refurbishment of a 1000 houses in 2017 up until a total energy neutral housing stock in 2050. Drenthe concluded upon an Energy Expedition with the target of 16 percent reduction of fossil energy in 2020 and an energy neutral housing stock already in 2040. In Utrecht, the provincial administration and the Economic Board Utrecht agreed upon the target of 50.000 NZE-houses in 2020. Second of all, in Noord-Brabant and Drenthe a wide variety of stakeholders – including municipalities, housing corporations and business parties – formally committed to the agenda. In Utrecht, on the contrary, the ambition was launched by the Economic Board Utrecht at a network event without asking stakeholders to endorse their commitment to the ambition with a signature.

Due to the aforementioned scientific knowledge-gaps, we do not know how we can explain this variation between regions. Studying this variation by exploring the factors upon which regional governance is conditional, is of importance to investigate the dominant assumption that regional solutions are ‘tailor-made’. Moreover, knowing whether regional governance is tailor-made to specific regional characteristics, can provide first indications regarding the probability that these regional solutions are effective as well as legitimate.

We study whether regional governance generates tailor-made solutions by zooming in at regional governance for the realization of an energy neutral housing stock in the non-profit sector. First of all because the non-profit housing stock represents 31 percent of the total Dutch housing market and is therefore dominating the Dutch housing stock (Filippidou, Nieboer, & Visscher, 2016). Second of all because in this domain we see all kinds of regional governance strategies develop. In sum, this paper studies the following question:

*Does regional governance of an energy neutral non-profit housing stock in the selected Dutch regions generate tailor-made solutions?*

In this study regional governance is the outcome variable and is defined as ‘*deliberate efforts by multiple actors to achieve goals in multijurisdictional environments*’ (Barnes & Foster, 2012, p.2). Based on the recent policy discourse we expect that regional governance results in tailor-made solutions customized to the structural factors of the regional scale and the regional community (Hooghe & Marks, 2016). We therefore hypothesize that there is a strong interaction between the already existing community in a region, the characteristics of the regional problem and the regional governance.

This study uses a Subnational Comparative Method with a Most Similar Systems design (Snyder, 2001), studying the selected regions of Noord-Brabant, Drenthe and Utrecht. Data was collected by document study of both publicly available and confidentially provided documents and by conducting 28 in-depth, semi-structured interviews.

The article continues with a brief overview of national policy goals and regional governance on an energy neutral housing stock followed by the theoretical model. Thereafter the method is described and subsequently we discuss the empirical findings, examining Noord-Brabant, Drenthe and Utrecht. We conclude with a section in which we answer the research question, elaborate on practical implications of our research and provide guidelines for further research.

## 2. An energy neutral non-profit housing stock – (inter)national policy objectives and regional governance

### 2.1 (Inter)national policy objectives

Around 40 percent of the energy that is consumed in the European Union (EU) is consumed by existing buildings. These existing buildings account for 30 percent of the CO<sub>2</sub> emissions. A large part of this energy consumption is consumption on behalf of the residential sector. Thirty percent of the energy of the total building stock is consumed by dwellings (Filippidou, Nieboer, & Visscher, 2016). Looking at the Dutch housing stock in particular, 31 percent of the total housing stock is dominated by non-profit housing (Filippidou, Nieboer, & Visscher, 2016, p. 108).

This large amount of CO<sub>2</sub> emissions produced, together with the fact existing buildings will be dominant in the housing stock for the upcoming 50 years, generates high interest in energy efficiency in the housing sector (Filippidou, Nieboer, & Visscher, 2016; Golubchikov & Deda, 2011). On both the European and the national level policies are developed to create more energy efficiency in the non-profit housing sector. In 2008 the long awaited implementation of the EU Energy Performance of Buildings Directive (EPBD) - ratified already in 2002 – took place and in 2012 an Energy Saving Covenant for the Rental Sector was being concluded upon (Hoppe, 2009; Ministry of the Interior and Kingdom Relations, 2012). Moreover, in the Dutch Energy Agreement of 2013, the objective of an energy neutral housing stock in 2050, for non-profit as well as owner-occupied housing, was being agreed upon by governmental, societal and private actors.

### 2.2 Tailor-made regional governance for effective and legitimate solutions

To realize these inter(national) ambitions, multi-level, multi-actor governance at the regional level is assumed to deliver tailor-made solutions which are both legitimate and effective.

The economic and societal reality of citizens and businesses is manifesting itself at the regional level (Studiegroep Openbaar Bestuur, 2016; Tordoir, Poorthuis & Renooy, 2015). The region therefore connects closely to the companies and citizens who are subject to environmental policies. The region is in this respect considered to have especially potential for creating legitimate solutions, by making a tailor-made connection between abstract sustainability policy and the everyday life of citizens (Hajer, 2011; Potts, 2010). Furthermore, especially in the field of climate change policy it is argued that the participation of multiple actors in the governance process contributes to the necessary acceptance of these policies on the ground (Newig, 2007).

Regarding effectiveness, consensus oriented collaboration between public and private actors is assumed to be more effective than bureaucratic government (Ansell and Gash, 2008). This so-called collaborative governance is assumed to enhance the capacity of the participating actors and increase the creation of public value (Page, Stone, Bryson, & Crosby, 2015; Sørensen, & Torfing, 2014; Sørensen & Torfing, 2011). Specifically in the field of environmental policy, multi-actor governance ensures that locally held knowledge is effectively incorporated in the governance process (Newig & Fritsch, 2009). Regional

governance, tailored to the knowledge and preferences of actors active in the region, is in this respect expected to lead to more effective policies.

### 2.3 Regional governance on energy neutral housing

In the Netherlands in the last five years regional policies have been developed to establish an energy neutral built environment in 2050, both for the owner-occupied as well as the non-profit sector. For the owner-occupied sector there is a nationwide program with a regional approach led by the Association of Dutch Municipalities (VNG). Regions are supported by this program in their development towards more energy efficient owner-occupied dwellings. This program in the owner-occupied sector is a top-down, national program where regions were classified by the VNG.

Besides this top-down program in the owner-occupied sector, in several Dutch regions we see strategies emerge which are also incorporating the non-profit sector. Municipalities, housing corporations, business parties, the provincial administration and environmental organizations are setting ambitions together and are putting in regional capacity to realize more energy neutral housing. As described in the introduction, this study focusses on these regional governance strategies. In the following section, we will build a model to analyze the regional governance and explain the differences between regions by studying upon which factors regional governance is conditional.

## 3. Theoretical framework

In this section we develop a theoretical framework to assess whether the region generates tailor-made solutions on the topic of energy neutral non-profit housing. Regional governance is studied as the outcome variable (3.1 and 3.2). We expect that regional governance is tailor-made, by which we mean it is suiting the structural factors that are present at the outset of the regional governance: scale and community (3.3). The next sections describe the distinctive features of the model and paragraph 3.4 integrates and visualizes our theoretical approach.

### 3.1 The fluid region

At the core of the contemporary scientific discussion on the question ‘what is the region’ lies the difference in approach between a territorial perspective and a relational perspective (Paasi & Metzger, 2017). From a territorial perspective, the ‘region’ is defined by ‘*bounded spatial units*’ (Jonas, 2012, p.263). This perspective centers around borders and pre-set, defined territories in space. An example of a region that is defined in a territorial way are formal administrative unions, like the formal ‘safety regions’ in the Netherlands. On the contrary, a relational perspective centers around concepts drawing attention to ‘*interspatial relations, flows and networks*’ (Jonas, 2012, p.263). A region is thus, from a relational perspective, defined as an entity shaped by networks and social relations, creating complex interconnectedness and flows on a territorial scale (Jonas, 2012). The boundaries of regions that we perceive are in this sense just the result of formal and informal networks and connections. An example of a region from this relational perspective is a collaboration of stakeholders having the same issue and deciding to work together at a certain moment in time.

This radical relational perspective is criticized by other authors as being too one-sided. These authors perceive regions to be made out of territorial specificities that are defined by the

struggle between political and civil society (Varo & Lagendijk, 2013). This can be called a moderate approach in which both territorial elements and relational elements are combined (Varo & Lagendijk, 2013; Goodwin, 2013). This study uses this moderate perspective, by approaching the region as a fluid space: space and place keep being important but are variable (Groenleer, 2016; Barnes & Foster, 2012). The fluid region is not bounded to a specific, pre-set territory, but based on the specific problem at hand. The actor group, agenda and regional capacity are being defined by this problem (Barnes & Foster, 2012).

### 3.2 Regional governance

There have been great advances in studying regional governance from a territorial perspective, focusing on structure and governmental institutions. This dominant way of thinking from a territorial perspective, generated studies which gave attention especially to the *form* of the governance (Barnes and Foster, 2012). These studies have created advances in for example the understanding of inter-municipal cooperation (Levelt & Metze, 2014; Hulst & Van Montfort, 2007; Warner, 2006) and the understanding of (regional) governmental institutions (Peters, 2007; De Vries, 2008).

As described in section 2, climate change governance is becoming increasingly multi-level and participatory, resulting in multi-actor relationships on the regional level (Newig & Fritsch, 2009). However, the studies from a territorial perspective, focusing on form and structure, do not contribute to understanding these regional, multi-level, multi-actor collaborations. In these kinds of collaborations, actors work together defined by the problem at hand instead of territorial borders. Research from such a moderate perspective, perceiving the region as a fluid space, is less advanced. In this respect it is interesting to shift focus more to the fluid region as a space where non-profit, profit and government actors come together to solve (transboundary) problems (Groenleer, 2016). Approaching the region from such a moderate perspective asks for studies focusing more on capacity and purpose of regional governance instead of structure and form (Barnes and Foster, 2012, p.1).

Capacity focusses on the characteristics of regional governance, like how actors organize the decision-making, determine means of action, secure resources and act on regional issues (Barnes & Foster, 2012, p.1). Purpose means the objective that actors want to achieve regarding a regional problem or issue (Barnes & Foster, 2012, p.1). From this perspective of the fluid region, regional governance can be defined by the following characteristics. First of all it is crossing jurisdictional, sectorial and/or functional borders: it includes, but also goes beyond, the institutions and structures that establish and implement decision-making and action. The object of the effort is solving a regional problem. Consensus or cooperation is not assumed to be the dominant mode, but it assumes power to be exercised based on interests, values and ideas. In short: regional governance is not the goal, it is a means to solve the goal (Barnes & Foster, 2012).

This definition of regional governance is partly built on urban regime theory (Stone, 2005; Van Ostaaijen, 2010). Barnes and Foster (2012) state that, because urban regime theory is based on one jurisdiction, it is not suitable for studying regional governance. Other scholars did, however, develop the concept of urban regime theory into regional regime theory (Van Ostaaijen, 2010; Hamilton, 2004). These scholars define a regional regime as: *'the informal*

arrangements by which autonomous and semiautonomous actors work together to make and carry out governing decisions relevant to a specific region' (Van Ostaaijen, 2010, p.51). In sum, figure 1 visualizes the regional governance approach we use in this study in contrast to other approaches to the region and regional governance.

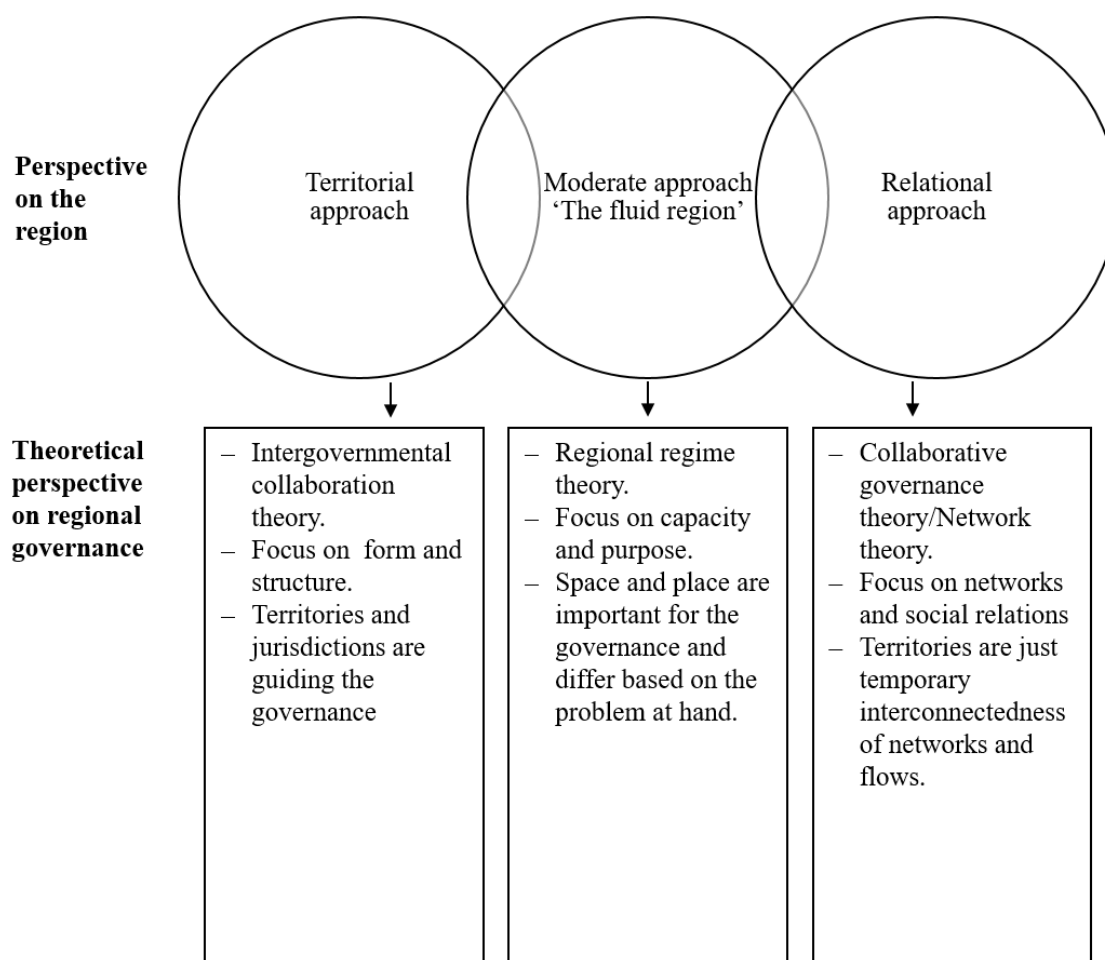


Figure 1 Approaches to the region and regional governance

Conceptualized as such, regional governance can be analyzed with the following four dimensions (Van Ostaaijen, 2010, p.51; Stone, 2005; Barnes & Foster, 2012, p.3). The first dimension is the agenda, addressing a distinct set of problems. Barnes and Foster state there are three indicators for such an agenda: framing, assessment and comprehension. The second dimension is a governing coalition, which is formed around this agenda. Indicators to describe this actor group are the commitment, the composition and the leadership of this group. Aspects of the agenda together with membership of the actor group, can be defined as the 'dynamic core' of regional governance processes (Barnes & Foster, 2012). The third dimension is regional capacity, which consists of all the resources needed for the pursuit of the agenda. These are brought in to be used by the members of the actor group. Indicators that describe this regional capacity are information, expertise, financial resources and authority (Barnes & Foster, 2012). To conclude, there is a certain mode of alignment or scheme of cooperation, indicating the way the actors are interacting and working together on the agenda (Stone, 2005; Van Ostaaijen, 2010).

Table 1 summarizes the factors of regional governance and the indicators that we will use in this study.

*Table 1 Factors and indicators of regional governance*

<b>Regional governance</b>	
<b>Factors</b>	<b>Indicators</b>
<b>Agenda</b>	<ul style="list-style-type: none"> <li>- Framing</li> <li>- Assessment</li> <li>- Comprehension</li> </ul>
<b>Actor group</b>	<ul style="list-style-type: none"> <li>- Composition</li> <li>- Commitment</li> <li>- Leadership</li> </ul>
<b>Regional capacity</b>	<ul style="list-style-type: none"> <li>- Information and expertise</li> <li>- Authority</li> <li>- Financial resources</li> </ul>
<b>Mode of alignment</b>	<ul style="list-style-type: none"> <li>- Interaction and way of working together</li> </ul>

### 3.3 Explaining regional governance

In general, literature states that structural conditions present at the outset of a collaboration have their influence on the way stakeholders work together (Ansell & Gash, 2008). In their overview article on collaborative governance, Ansell and Gash identified both the initial trust level between stakeholders and power/resource imbalances between stakeholders as important structural factors upon which the collaborative governance is conditional. As described however in section 3.1, we do not perceive regional governance from a pure relational perspective: space and scale are still important. Or, as Barnes and Foster (2012) state, regional governance varies based on: *‘place, time and goal, reflecting issue differentiation and evolution of alternative political economies and cultures’* (p. 2-3).

Hooghe and Marks combine in their recent work both this idea of regional issue differentiation and different collaborative cultures as the two factors upon which regional governance is conditional. In their words, regional governance is both conditional upon the functional logic of scale and the social logic of community (Hooghe & Marks, 2016). The social logic of community relates to the already established networks and the regional culture and identity. This logic incorporates the already established trust as identified by Ansell and Gash. The functional logic of scale assumes that regional governance is, besides the regional community, also conditional upon the specific regional characteristics of the problem. This incorporates the ‘issue differentiation’ as emphasized by Barnes and Foster. The next sections will discuss these two factors: scale and community.

#### *Scale*

The functional logic deals with the effect of scale diversity in the provision of public goods. Regions can differ in their externalities and economies of scale, creating differences in regional governance. Understanding regional governance from a functional logic emphasizes



that the differentiation of regional governance can be traced back to the idea of humans being ‘*homo economicus*’, aiming for functional efficiency (Hooghe & Marks, 2016). This relates to the idea of Barnes and Foster, who state that regional governance reflects issue differentiation (2012). This issue differentiation is expected to create differentiation on what is efficient regional governance for a specific region.

We hence expect regional governance to be conditional upon the specific regional characteristics of the issue.

### *Community*

Governance can be understood as the expression of ‘human sociality’, emphasizing that humans are social beings who want to have collective self-rule of the community of which they consider themselves a part (Hooghe & Marks, 2016, p.1). These communities can generate differentiation in regional governance that is not related to scale diversity. Communities can facilitate the provision of public goods because they ‘*nurture social networks, repeated interaction and long-time horizons that diminish free riding*’ (Hooghe & Marks, 2016, p.17). In literature on collaborative governance, the history of cooperation or conflict is stressed to be an important starting condition that influences the collaboration (Ansell & Gash, 2008). Negative experiences in history can generate an ‘us-versus-them’ dynamic which can poison successful collaboration and result in low levels of trust and commitment (Ansell & Gash, 2008). This regional prehistory of collaboration is both based on region-scale activity in general and region-scale activity on a specific policy objective. Furthermore, community is not only based on a shared past and the existing social networks. It is about what people ‘feel’: ‘*do they conceive themselves as sharing a past and do they expect to share a future?*’ (Hooghe & Marks, 2016, p.17). This deals with more ‘soft’ notions of regional identity and the feeling people have about the community in which they live. Whether regional identities in Dutch regions exist in such an urban country with mobile citizens is questioned by Duijvendak (2008). Regional policymakers, especially in rural, shrinkage areas, nonetheless put a lot of focus on their regional culture (Duijvendak, 2008).

In sum, we expect regional governance to be conditional upon the regional collaboration structures and collaboration culture present at the outset of the collaboration.

Table 2 summarizes the indicators of ‘scale’ and ‘community’ that we use in this study.

*Table 2 Explanatory factors of regional governance*

<b>Factors</b>	<b>Indicators</b>
<b>Scale</b>	- Characteristics of the issue
<b>Community</b>	- Regional collaboration structures and culture

### 3.4 Theoretical model and expectations

Figure 2 shows the theoretical framework we use to study the empirical data in the following sections. In the box on the left, the structural factors of scale and community are shown. In this study, we study whether regional governance is conditional upon these structural factors as is the dominant policy assumption. Therefore we expect that the dynamic core, the regional

capacity and the mode of alignment of regional governance can be explained by the structural factors ‘scale’ and ‘community’.

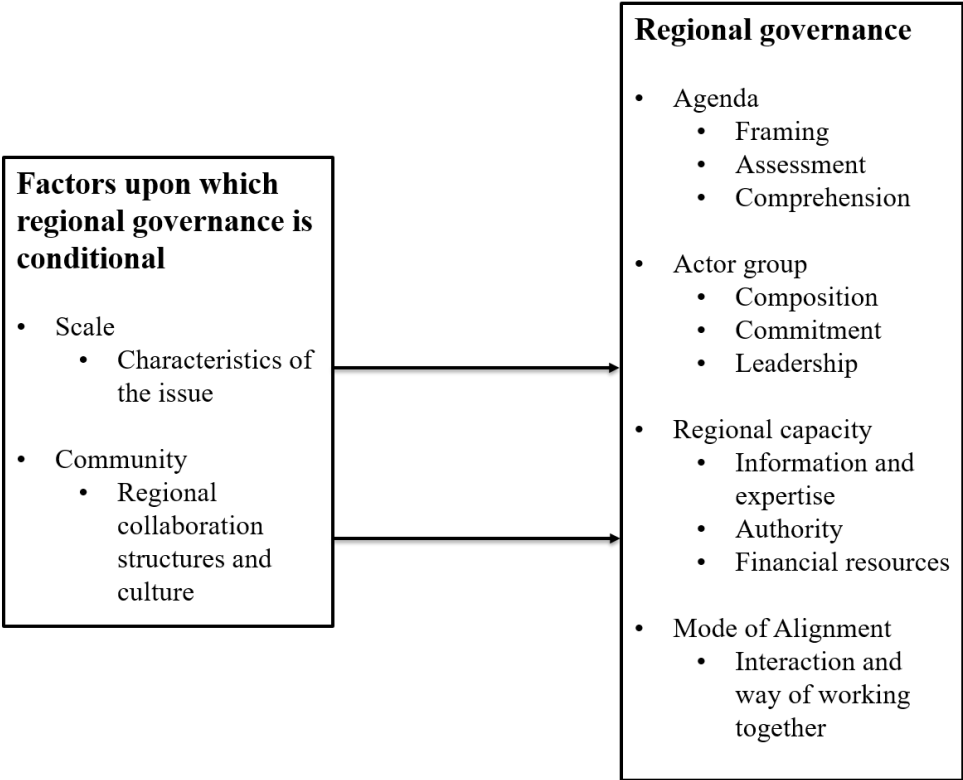


Figure 2 Theoretical framework

## 4. Methods and data

### 4.1 Subnational Comparative Method

In this study we use the Subnational Comparative Method (Snyder, 2001). Comparing subnational units is a tool to increase the number of observations and make controlled comparisons, thereby increasing the probability of attaining valid causal inferences in small-N research (Snyder, 2001, p.94). The Subnational Comparative Method overcomes a ‘whole-nation bias’. In this respect it increases sensitivity to within-nation variation, thereby providing an opportunity to study the spatially uneven nature of major societal transformations (Snyder, 2001, p.94). This study focusses on a within-nation comparison, because in a single country subnational cases can be most easily matched to national culture, history, ecology and socioeconomic dimensions (Snyder, 2001, p.96). This strengthens the ability to establish control over potential explanatory variables (Lijphart, 1971; Snyder, 2011, p.96).

### 4.2 Most Similar Systems Design

We use a Most Similar Systems Design (MSSD) in order to compare the regions (Przeworski & Teune, 1970). The national context creates similarities in a political, economic and cultural way and therefore creates conditions which are ‘as similar as possible’. If some important differences are found between regions in this similar national context, then the number of explanatory factors is minimized as much as possible (Przeworski & Teune, 1970, p.32;

Anckar, 2008, p.390). This strategy creates therefore an optimal sample for comparative inquiry (Przeworski & Teune, 1970, p.32).

#### 4.3 Case selection

As described in section 2, at the subnational level we see all sorts of collaborations are being developed on the topic of the energy neutral built environment. There are, for example, collaborations on the metropolitan level, the inter-municipal level and the provincial level. Because we use an MSSD, we use regions that are most similar on the possible control variables that can explain differences in the regional governance. We therefore made the following choices. First of all, we are studying regional governance that matches the territory of Dutch provinces. This choice creates similarities in for example the potential of actors that can be involved. This choice is furthermore substantiated by the fact that we see regional governance has emerged at this level in the last five years. This results in 12 possible cases. Second of all, as aforementioned, we decided to focus on the provinces that established a regional agenda – such as a deal or an ambition - by regional actors, incorporating the non-profit sector related to the objective of an energy neutral housing stock. Deals or targets only focusing on the owner-occupied sector and/or initiated by national actors instead of regional actors, were left out of the case selection. Following these selection criteria there are three collaborations left that have a regional agenda, in the form of a ‘deal’ or ambition regarding NZE-housing in (at least) the non-profit sector: Noord-Brabant, Drenthe and Utrecht (Energiesprong, 2017). Friesland is in a far stadium of agreeing upon a deal and Zeeland agreed upon a deal in March 2016. In the period of field research (October 2016 – February 2017), however, Friesland and Zeeland did not yet had an agenda. Based on the theoretical framework and the Subnational Comparative Method with MSSD we therefore study the regional governance on the development of an energy neutral non-profit housing stock in Noord-Brabant, Drenthe and Utrecht (figure 3).

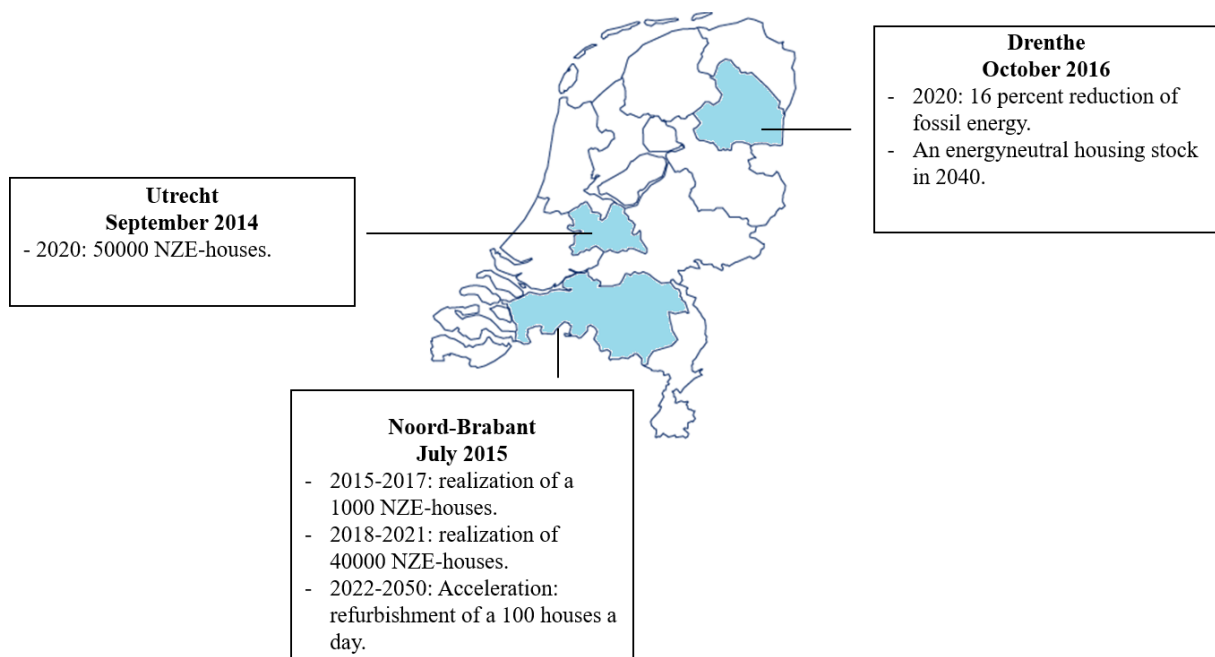


Figure 3 Case selection

#### 4.4 Operationalisation of the concepts

##### *Regional governance*

For the description of the regional governance we use the indicators as provided by Barnes and Foster (2012). We operationalized these indicators based on the questions stated in the workbook *Getting Things Done Together: A Workbook for Achieving Goals Regionally* by Foster and Malakoff (2012). We reformulated them into interview topics.

##### *Scale and community*

Considering scale, the characteristics of the issue are in this study operationalized as the characteristics of the regions non-profit housing stock. We use the research of Stroomversnelling (2015) to gain insight in the differences between regions concerning the suitability of their housing stock for NZE-refurbishments. Regarding community, we investigate specifically for the domain of energy what kind of collaborations there are in the region besides the regional governance on energy neutral housing. Furthermore we investigated how respondents experience these collaborations and asked respondents whether there is a specific (collaboration) culture in the region.

To investigate the influence of scale and community on the regional governance, we used a process tracing approach. First of all, we asked respondents to describe how the regional governance developed in the region. Then we asked about the current situation regarding the regional collaboration. We questioned what the respondents considered to be of influence on this process. Due to the explorative nature of this research and the semi-structured character of the interviews, other explanatory factors than the ones we identified could be brought up by the respondents.

#### 4.5 Data collection

In order to understand and explore the topic, we started with 8 explorative interviews both with professionals of the regions as well as experts on the national level in October and November 2016 (Van Thiel, 2009, p.21). Furthermore, we participated in a network meeting of the Dutch association of green housing corporations, in which municipalities, housing corporations and business parties discussed their progress on NZE-housing. Based on these explorative interviews, the network meeting and a study of the available documents, we created an overview of the most important relationships between actor. The municipalities, the provincial administration, the housing corporations and the construction and installation firms are the key actors regarding regional governance on NZE-housing in the non-profit sector. This overview is showed in figure 4 and the grey-coloured actors are the key actors. In our field research we therefore ensured that at least we spoke with representatives of these parties in every region.

Respondents of the explorative interviews were asked to mention names of people who they considered to be representative for the other actors in the region. This provided us with a first list of names of relevant persons. In the interviews with respondents that we got encountered through this snowball-method, we also asked whether the respondents we had already spoken to covered the most important actors in the field. By following up on the suggestions of the respondents, we also spoke with important freelancers on this topic in the region, environmental organizations, consultancy firms and a regional network organization, aside

from the key actors as identified above. Because in the exploration phase of the research we included the region Gelderland, we also conducted five interviews in this region.

In total, we interviewed 28 respondents, including 22 interviews with respondents in Noord-Brabant, Drenthe and Utrecht, 4 interviews with respondents from Gelderland and, to conclude, two interviews with national experts<sup>1</sup>. Interviews were conducted between October 2016 and February 2017, had a semi-structured character and lasted between 30 and 60 minutes. We analysed the transcriptions of the interviews of Brabant, Drenthe and Utrecht by using open, axial and selective coding (Boeije, 2009). This analysis was done using Nvivo software (version 10). To conclude, we also conducted a document study, studying both public as well as confidentially provided documents. Respondents were asked whether they had documents that could be relevant to study in addition to the already studied material.

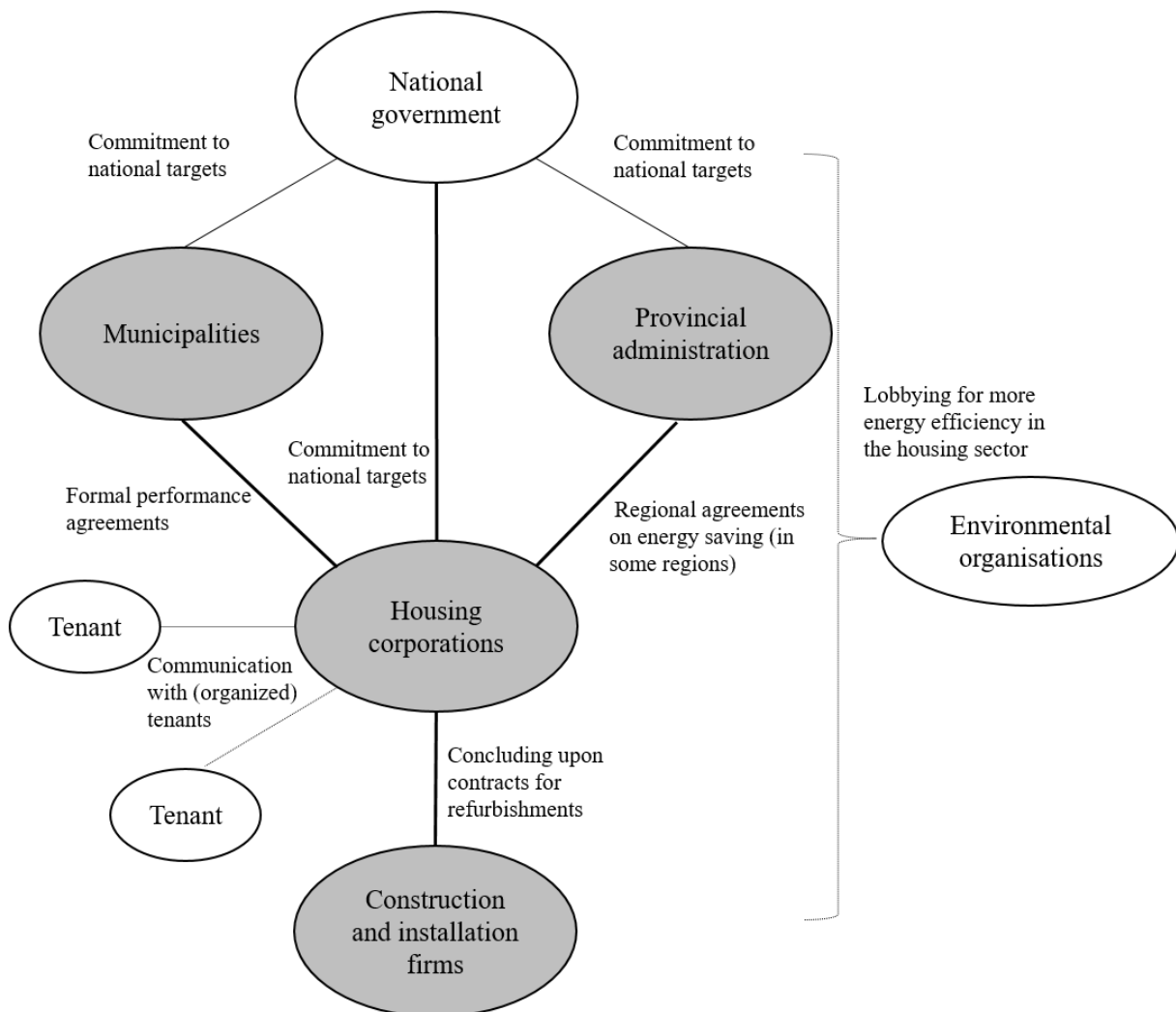


Figure 4 Actor analysis of regional governance on energy neutral non-profit housing

## 5. Regional governance differs among regions

The next sections describe the regional governance in the three regions chronologically. We then summarize the characteristics of the regional governance in a schematic overview and indicate the differences and similarities between the regions.

<sup>1</sup> Two recordings are missing. One recording was not saved and one file is damaged.

### 5.1 Utrecht (2014) – 50,000 NZE-houses in 2020

The Economic Board Utrecht and the provincial administration together set the clear target of 50,000 NZE-houses in 2020 as a *'point on the horizon'* in September 2014 (**framing**). The provincial administration included the target in its coalition agreement. They launched this ambition at a network event of the Economic Board Utrecht which was amongst others attended by housing corporations, business parties and municipalities. The target was not generated deliberatively (**comprehension**). In general, the target is known by the actors (**assessment**).

Initially, there was a lot of enthusiasm at the aforementioned launching event. There was, however, no request for the formal commitment of the participating parties – housing corporations and municipalities - to the regional target. The deal, therefore, was not signed by the actors, but some respondents recall a photo moment at the launching event of the ambition – including political leaders with the target – as an endorsement of the ambition by these parties. The parties that are participating in creating these NZE-houses, therefore, are hazy and also the commitment turned out to be unclear. The political leaders who celebrated the target at the launching event afterwards had their questions and doubts on the realization of it. Or as a respondent state: *'After the event especially political executives thought: 'What an ambition, and I have executive responsibility for this too. I would have preferred to have been involved with this since the start of the process''* (**composition and commitment**). After the launching event, a quartermaster presented a plan to establish a regional organization to help achieve the target of 50,000 NZE-houses in 2020. For the realization of the supportive structure a financial contribution was requested from regional actors. This plan, however, was turned down because actors were not willing to contribute financially.

Therefore, there currently is no clear leadership regarding the target (**leadership**). Because the plan was turned down, there is no regional financial capacity and no steering team with authoritative figures (**financial capacity and authority**). The realization of the target is not hindered by a regional lack of knowledge: respondents assume that there is enough expertise and information available in the region to reach the target (**information, expertise**).

After the supportive plan to realize the ambitions was turned down, the provincial administration of Utrecht decided to fund a 'NZE-alliance'. Via this initiative freelancers were paid to bring expertise into the region and to realize concrete projects. They write a monthly newsletter and support concrete initiatives if there is a requests for help. At the start of 2017, the period of funding for this alliance stopped. At the moment, they are working on a tender for a follow-up on this initiative (**mode of alignment**).

### 5.2 Noord-Brabant (2015) - Net Zero Energy housing deal (NZE-deal)

In July 2015, 111 parties – including the provincial administration, municipalities, housing corporations and business parties – agreed upon a deal on NZE-housing. In the months prior to the agreement upon the deal, two quartermasters investigated the needs and willingness of these parties by approaching them individually and by inviting them to a two-day event with all the interested actors (**comprehension**). There appeared to be an overwhelming enthusiasm for participation: the plan to agree upon a deal gained a lot of attention and the quartermasters continuously got phone calls of parties that were willing to join (**assessment**). Following from

this enthusiasm, all actors believed to be necessary for the deal to succeed, formally signed the deal (**commitment and composition**). Actors thereby committed themselves to the target of a 1000 NZE-houses in 2017 up until 800,000 NZE-houses in 2050 (the total housing stock) (**framing**). After the deal was agreed upon, the quartermasters organized another meeting. In this meeting they presented a plan for a supportive structure to reach the deal's targets by a financial contribution from all the actors. Similar to Utrecht, in Noord-Brabant actors did not think this plan for funding was realistic either, resulting in the fact that the plan of the quartermasters was turned down. The quartermasters term of financing finished and as a result a vacuum of leadership emerged.

Because parties did not want the entire plan to be off the table, they then decided to create a bottom up steering committee: *'Then we decided to appoint some people belonging to every 'stakeholder group' who would then need to find out how we should advance. That is how it came into being'* (**leadership**). Every stakeholder group – business parties, housing corporations, municipalities, the provincial administration – delivered representatives with authority in their own group (**authority**). This new steering committee asked for funding again – a smaller amount than the initial plan - via a letter to all the actors who signed the deal in July 2015. The majority of these actors were willing to financially contribute (**financial capacity**). With this money, two regional program managers were hired. Furthermore, according to the respondents there is enough expertise and information available in the region with housing corporations, municipalities and business parties to realize the NZE-housing goals (**information and expertise**).

Almost two years have passed since July 2015. Currently, the steering committee is in search for its own role, but is going to organize learning sessions for the deal's partners. In the meantime, the committee is communicating about the progress with the actor group via e.g. a general newsletter. Also, the two regional program managers are catching up with individual, interested parties. Respondents are, in general, disappointed in the concrete effects of the deal. The enthusiasm that was present when concluding upon the deal disappeared (**mode of alignment**).

### 5.3 Drenthe (2016) –Deal Drenthe Energy neutral housing 2040

Last of all, in Drenthe in October 2016 governmental organizations, business parties and housing corporations signed a deal for an energy neutral housing stock in 2040. Contrary to Noord-Brabant and Utrecht, they chose for an open approach regarding the methods to achieve more energy efficiency. Their targets are therefore not framed in numbers of NZE-houses, but in percentages of fossil energy reduction of the housing stock (which should equal a 100 percent in 2040) (**framing**). The deal is, when compared to Utrecht and Noord-Brabant, the youngest regional collaboration. Like in Noord-Brabant, a freelancer (quartermaster) was hired to investigate whether there was enthusiasm among the actors and to convince the actors to sign the deal. Currently 84 parties have committed to the agenda (**composition and commitment**). The deal is widely known in the region and the number of organizations participating in the deal is still growing (**assessment**). Resistance was mostly brought forth by the housing corporations, which were not sure whether the targets were achievable. Therefore,

the housing corporations decided to sign the agreement, but added a cover letter to it in which their concerns were expressed (**comprehension**).

The provincial administration decided to put 6,500,000 euros aside for the deal. Other actors were not requested to contribute financially (**financial capacity**). Regarding information and expertise, respondents assume the necessary knowledge to be available in the region (**information and expertise**). Besides the deal, an organizational structure was developed too. The provincial administration delivered an ‘expedition leader’. Leadership is shared by this expedition leader and the expedition team, in which representatives of the different stakeholder groups are present (**authority**). The expedition leader emphasizes that he aims not to put himself (and in line with that the provincial administration) in the lead, but that he aims to facilitate a network approach with equal membership (**leadership**). The expedition also created ‘acceleration teams’ in which the different stakeholder groups (for example housing corporations and business parties) work together.

Respondents have high expectations of the deal, but emphasize that the real work has yet to be done in the upcoming years (**mode of alignment**).

#### 5.4 Comparing regional governance in Noord-Brabant, Drenthe and Utrecht

In sum, in both Noord-Brabant and Drenthe the agenda is clear, deliberatively constructed and the actor group is formally committed. On the contrary, in Utrecht the target is constructed non-deliberatively and there is no formal commitment to the target by the actor group. Regarding the regional capacity and the mode of alignment, in Noord-Brabant a second call for collaborative funding by the bottom-up regional steering committee succeeded. At the moment, therefore, there is shared financial capacity and two regional program managers are working on the realization of the ambitions. In Drenthe the provincial administration funds the program and other actors did not have to pay to participate in the program. These actors are, however, investing a lot of time in both the expedition and the acceleration teams. There is a clear mode of alignment with an organizational structure. Last of all, in Utrecht there is no clear way of working together and no shared regional capacity.

Table 3 summarizes the characteristics of the regional governance in the three regions, alongside the dimensions of the agenda, actor group, regional capacity and mode of alignment. The next section will explore factors that may help to explain these differences.



Table 3 Regional governance in Noord-Brabant, Drenthe and Utrecht

	Noord-Brabant	Drenthe	Utrecht
<b>Agenda</b>	- Well-known agenda	- Well-known agenda	- Majority of the respondents knows the agenda
	- Clear targets that are deliberatively constructed	- Clear targets that are deliberatively constructed	- Clear target that is not deliberatively constructed
<b>Actor group</b>	- Actor group representing all major actors	- Actor group representing all major actors	- Actor group is hazy, no formal commitment of actors
	- Clear leadership by steering committee	- Clear leadership by an expedition leader and expedition team	- No clear leadership on the target
	- Formal commitment of actors	- Formal commitment of actors	
<b>Regional capacity</b>	- Financial: all the actors together created a regional budget	- Financial: only the provincial administration provided money.	- Financial: no shared financial capacity because the proposed plan was turned down
	- Information/expertise: enough expertise available	- Information/expertise: enough expertise available	- Information/expertise: enough expertise available
	- Authority: representatives with authority are part of the steering committee	- Authority: representatives with authority are part of the expedition team	- Authority: there is no regional organization or team with authority
<b>Mode of Alignment</b>	- Steering committee communicates with the actor group	- Expedition leader and expedition team are leading the expedition	- No shared supportive organization
	- Regional program managers are organizing knowledge sessions	- Acceleration teams are working on topics such as innovation	- Province of Utrecht now has its own program to stimulate NZE-housing by the partners in the region

## 6. Explaining differences in regional governance

In the previous section we found that regional governance varies among regions. In the next sections we will explore why this governance varies, by investigating the factors upon which the regional governance is conditional. In accordance with our theoretical approach, we first zoom in on the explanatory value of scale and then continue to investigate the explanatory value of community.

### 6.1 Scale

#### *The characteristics of the housing stock differ among regions*

Regions differ in their suitability for NZE-refurbishments. In the study of Stroomversnelling (2015) the researchers measured the most important characteristics for a region to be suitable for NZE-refurbishments. The researchers incorporated the popularity of living areas, whether houses have an above average energy bill, whether houses are land based and are built between 1950 and 1980. Furthermore, they incorporated whether houses have an above average value, are owned by private owners or housing corporations with financial room for investment and to conclude are in an area with either a lot of removals or a below average number of removals. The results of this study indicate that both Noord-Brabant and Utrecht have a relatively high number of suitable dwellings for NZE-refurbishments. Drenthe has less suitable dwellings for NZE-refurbishments. Furthermore, what is interesting is that of the 10 municipalities indicated as the most suitable for NZE refurbishments, six are located in Noord-Brabant, one in Utrecht and zero in Drenthe<sup>2</sup>.

#### *Regional governance is only limitedly conditional upon scale*

We expected that these differences in the characteristics of the housing stock would also generate differences in regional governance due to the fact that it is customized to these characteristics. We found however that remarkably, the regional governance in the three regions is only to a limited extent tailor-made based on the specifics of the regional issue.

First of all in Noord-Brabant, the regional governance was not customized in accordance with the characteristics of the regional housing stock. A respondent explains, when he was asked how the targets in the deal were being substantiated: *‘800,000 NZE-houses in 2050. That amounts to refurbishing 150 houses a day. It was a simple calculation but it worked fantastically’*. They simply recalculated the national goal of an energy neutral built environment in 2050 for Noord-Brabant. Some respondents state this is unfortunate, given the fact that the 800,000 NZE-houses ambition is unrealistic. In practice, monumental buildings or very old houses, for example, will not be refurbished. As a respondent states: *‘There are houses that will be replaced by newer buildings since they are too old and badly maintained. Therefore, these houses do not have to be a part of the 800,000 houses of the objective. In this respect, I think that the target should have been set a little more realistically’*. Moreover,

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<sup>2</sup> Whereas the regional governance in the cases of Utrecht and Noord-Brabant explicitly focusses on NZE-housing, Drenthe leaves room for other approaches towards an energy neutral housing stock. In this respect, using the research of Stroomversnelling as an indicator of the suitability of a region for NZE-refurbishments is a limitation. The effect of this limitation, however, is limited due to the fact that for other ways of developing energy neutral housing too variables like the characteristics of the inhabitants, the housing market and whether a region is growing or shrinking turn out to be relevant (Twynstra Gudde, 2016).

respondents emphasize that the fact that the first NZE-deal was concluded upon in Noord-Brabant, is in their view not related to the specific characteristics of the Noord-Brabant's housing stock. They just looked where there was 'energy' and *'it was not an analytical process looking for the province where such a deal could most probably be able to succeed'*.

In Drenthe we see the same pattern emerge. The text of the deal states that actors should give *'substance to the National Energy Agreement'* and can even accelerate this goal by cooperation. The deal does not mention considerations regarding the specific characteristics of the housing stock. When referring to the collaboration, respondents do, however, recall one element as being relevant (this is also incorporated in the research of Stroomversnelling): the shrinkage issue. Drenthe is, contrary to Utrecht and Noord-Brabant, a shrinking area in terms of population. Respondents refer to this shrinkage-issue as creating strong relations between actors. Municipalities are, for example, accustomed to look towards the provincial administration in a wide range of policy fields. The shrinkage-issue, or other characteristics of the housing markets, are not mentioned, however, in relation to for example the development of the deal and the enthusiasm of the actors.

In Utrecht, the ambition of 50.000 NZE-houses is high compared to other regions. One respondent states it was calculated that 50.000 NZE-houses in 2020 should be realistic. Another respondent referred however to a simple recalculation of the National Energy Agreement goals to the region: *'10 percent energy saving in 2020 [National Energy Agreement goal]. There are 500,000 houses in this province and we said: 'We can make many houses more energy efficient, or 10 percent of all dwellings (50,000) should be made into NZE-houses.'* The provincial administration endorsed the target in its coalition agreement, because due to the large amount of built environment in the province they were happy with such an initiative. Or as a respondent stated, the provincial administration *'happily embraced'* the target. The provincial administration thus referred to characteristics of Utrecht's housing stock – that is having a large amount of built environment – as creating enthusiasm for a regional approach. Moreover, in the interviews with housing corporations, a municipality, a market organization and the environmental organization, respondents did not mention characteristics of the housing stock as being of influence on the regional governance.

## 6.2 Community

### *The level of community differs among regions*

The three regions also differ in the level of regional community. In the three regions, the respondents characterize the regional collaboration structures and culture in different ways.

First of all in Utrecht on the topic of sustainability, municipalities work together with the provincial administration in the Utrecht Energy Alliance. Furthermore, the regional network organization (Economic Board Utrecht) has a committee on the topic of the energy transition. In 2008 the provincial administration created a regional Energy agenda (Utrecht 2040), however this network is 'non-active' at the moment. Regional collaboration is characterized by respondents as not easy to establish. As a respondent states: *'In other provinces the regional networks are much stronger, in Utrecht that is always a bit disappointing, we do not work that much together.'* Respondents refer to the fact that in the provincial territory two

municipalities – Utrecht and Amersfoort - are very dominant, because of their relatively large size and organization. As a respondent describes: *‘It is maybe difficult for the provincial administration that they have two big municipalities who are minding their own business’*.

In Noord-Brabant, respondents emphasize that in general there are strong collaboration structures, for example between the five largest municipalities (B5-network) and these municipalities together with the provincial administration (BrabantStad). These are characterized by respondents as strong networks of both administrative and political collaboration. In the specific domain of the energy transition, the Noord-Brabant Energy Agreement was being concluded upon in March 2015. Noord-Brabant and Gelderland are the only two provinces with such a regional agreement, elaborating on the National Energy Agreement. Furthermore, respondents frequently refer to a Noord-Brabant culture, where people know and trust each other. As a respondent describes: *‘it works here like this, people should just know each other, that trust is very important’*. In sum, respondents characterize the regional collaboration structures and culture as strong, based on relationships of trust and ‘knowing each other’.

In Drenthe, we found the same high level of community as in Noord-Brabant. As a respondent states: *‘I can give another five examples of Drenthe being the first to collaborate ... we work a lot together and that is on a wide range of topics’*. On the energy transition, municipalities and the provincial administration are working together in the Drenthe Energy and Climate Consultation. Especially remarkable about the collaboration on the specific field of energy neutral housing, is that in Drenthe there is a covenant on energy saving that the provincial administration concluded with 8 housing corporations. Drenthe was in 2008 the first province in the Netherlands concluding such a covenant, in which housing corporations were voluntary engaged in a relationship with the provincial administration. Furthermore, in Drenthe, respondents refer a lot to Drenthe as being ‘small and compact’ resulting in an orderly scale for collaboration. There are only 12 municipalities and 8 housing corporations. *‘We stand rather close to one another and therefore we know each other’*. The bureaucratic layers in the province and the communication *‘are familiar to us’*. And another respondent states: *‘the craft of the provincial dynamic is that you are in a manageable region, the field is clear. Although in Drenthe there also differences between subregions, it is manageable’*.

#### *Regional governance is highly conditional upon community*

In Noord-Brabant, the regional governance on NZE-housing is highly embedded in the already existing collaboration culture and structure. For example in the months that the quartermasters were investigating enthusiasm for the NZE-deal, the Noord-Brabant Energy Agreement was being concluded upon. The quartermasters used the Noord-Brabant Energy Agreement in the phase of deal making as anchoring point for the NZE-deal. As a respondent describes: *‘we used the Noord-Brabant Energy agreement to get mandate for our own program’*. Together with the enthusiastic alderman, they managed to get the target of 800,000 NZE-houses in 2050 incorporated in the Agreement. The Noord-Brabant Energy Agreement caused a ‘gateway effect’, by generating *‘a kind of anchoring in structures that ensures that the issue is also shifted to other persons and organisations’*.

Also the other strong collaboration structures, like the aforementioned B5-network, at the regional level were used to spread the idea and gain both administrative and political support for the deal on NZE-housing. As respondents describe, this made it easier to gain commitment from the largest five municipalities, on contrary to the unorganized smaller municipalities. Moreover, respondents refer to the aforementioned specific collaboration culture as being of influence on the process. As a respondent describes: *‘Something that is brought up at the national scale, is not directly interesting for someone from Noord-Brabant’*. And as another respondent describes, this resulted in a preference for self-control: *‘we want to do it here ourselves, we want to have control ourselves, not being a client of some national initiative or being governed by them. We want to do this, we want to decide ourselves on this’*. Due to this idea of a Noord-Brabant culture, for example market parties were happy with a regional deal. They expected this deal to be close to the actors in the region, eventually leading to more demand for NZE-refurbishments in the region.

Also in Drenthe, both the quartermaster and the Drenthe Environmental Organization emphasize they tried to interact as much as possible with the already established collaborative structures: *‘they provided clues that were important for the deal to be concluded upon’*. Respondents emphasize that because there were already strong regional collaborations, they tried to establish new structures as less as possible. The aforementioned Drenthe Energy and Climate Consultation was, for example, in the phase of concluding upon the deal, used to spread the idea of the expedition and to gain support. Moreover, when the deal was concluded upon this committee was also used as the ‘acceleration team’ for the municipalities. Also the already established relationship between the province and the housing corporations, was used to gain support and to work together with the 8 housing corporations. To conclude the manageable size, in which respondents know each other, is recalled as being of positive influence in the establishment of the regional governance. In this respect, the deal on NZE-housing is really customized to the collaboration culture and structure of the region.

To conclude, also in Utrecht we found that the regional governance is highly influenced by the already existing collaboration culture and structures. The supportive plan that was presented by one of the quartermasters could for example find not enough support. When respondents reflect on this process, it became clear that this was caused by the individual mentality of the different organizations. We see the same pattern when looking at for example collaborations between housing corporations. They do not work much together and do not think that the regional governance will be helpful in achieving more NZE-housing. They emphasize they are having a quite independent way of acting and a provincial covenant – like in Drenthe – is therefore not expected to have much value.

### 6.3 An overview

We found that both scale and community differ among regions. Utrecht and Noord-Brabant have a housing stock that is more appropriate for NZE-refurbishments than Drenthe. We found however that remarkably, regional governance is not highly conditional upon these characteristics. Both in the document study as well as in the interviews with respondents, the reference to specific regional characteristics of the problem is very limited. On contrary, we found that regional governance is highly conditional upon the already established regional collaboration structures and culture. In both Noord-Brabant and Drenthe, already established

regional collaborations – on the topic of energy but also on other topics – were frequently used to establish an agenda, gain commitment and create regional capacity. In Utrecht the regional collaboration culture and structure appeared less developed. The fact that a regional supportive structure, generating regional capacity and regional mode of alignment, did not succeed can be traced back to these structures.

## 7. Conclusion and discussion

This study investigated whether regional governance of an energy neutral non-profit housing stock generates tailor-made solutions. To study this question we studied in three regions – Noord-Brabant, Drenthe and Utrecht – how the regional governance differs and traced back the origins of the regional governance. Based on the dominant policy assumption, we expected that regional governance differs based on structural differences between the regions and in this respect generates customized solutions. In our theoretical framework we operationalized these structural factors as being scale and community.

First of all, although aiming for the same target of an energy neutral non-profit housing stock, the regions we studied organized their governance differently. In Noord-Brabant, a NZE-deal was concluded upon and the targets of this deal were deliberatively constructed in the months prior to the launch of the deal. Capacity was brought in by all the stakeholders and a steering committee – representing all stakeholders - is currently taking the lead. In Drenthe, we see a same pattern emerge, however with a more guiding role of the provincial administration, both by providing financial capacity as by delivering an expedition leader. To conclude, in Utrecht the target was set by a regional network organization without deliberation with the stakeholders. No formal commitment of actors was asked and a plan for a regional supportive organization did not gain enough support. Currently, there is therefore only an initiative of the provincial administration at the regional level.

We found furthermore, that regional governance is highly conditional upon community and remarkably, only to a limited extent conditional upon scale. Regarding the latter, in all three regions the targets were just recalculated for the region based on the national target of an energy neutral built environment in 2050. They were not tailor-made based on characteristics of the housing stock. Furthermore, only in Drenthe we heard that actors were more willing to collaborate based on the fact that they assume collaboration is valuable in light of the shrinkage issue. Other respondents in the regions did not make any linkage between characteristics of the housing stock and the actor group, regional capacity or mode of alignment. What did however turn out to be explanatory for the regional governance in the three regions is the regional community, present at the outset of the governance. In Noord-Brabant and Drenthe, respondents refer to regional collaboration structures as strong networks. There is the idea of a strong collaboration culture and a specific way of working together. In both regions, these strong networks were used to embed the new program on energy neutral housing. In Utrecht, we found that the regional community is less developed. Regional collaboration is more contested which resulted in resistance against a regional supportive plan and a lack of commitment from actors to the regional target.

As showed in the introduction, policies on the realization of an energy neutral housing stock in the Netherlands are increasingly based on the idea that the region generates customized

policies. This is assumed to enhance the legitimation of these policies and make them more effective. We find however that the regions provide regional governance that is only tailor-made with respect to the regional community, and only limited to the specific regional issue. In other words, we find that the regional governance suits the already existing collaboration structures and collaboration culture in the region, but that characteristics of the regional issue do not seem to determine the regional governance. Because we found that the regions developed regional governance that fits their community, we assume – in line with the current regional policy paradigm - that this increased the legitimacy and effectiveness of the governance. Whether the solutions are in fact more effective and legitimate, is however a topic that demands further research. Given these findings, we recommend policymakers to preserve or even expand the room for region to organize their governance on energy neutral housing their own way. This turns out to ensure it fits the already established structures and culture and is therefore more likely to be effective and legitimate. Based on our findings we should however also provide policymakers, believing in ‘the promise of the region’, with a critical note. The expectation that regional governance is effective and legitimate because it suits the regional issue should, given our findings, not be overestimated.

Reflecting on the theoretical contribution of our study, we explored the still limited researched concept of the ‘fluid region’ and the origins of differences between the regional governance of regions. We empirically tested the relatively new model of Hooghe and Marks (2016), indicating the importance of the factors scale and community to understand regional governance. Because their framework is however initially designed for studying formal levels of government, we encourage further research on the origins of regional governance from a fluid perspective. We did not find concrete clues to adjust the model, however, research on regional governance in other domains or with a large-N design could further develop our understandings of the factors upon which regional governance is conditional. Furthermore, as outlined in the introduction, research on the complex context of energy neutral housing policy, characterized by diverging stakeholder interests, is still limited. Given our findings, we emphasize the need to study this complex context with sensitivity to regional characteristics and regional variation. Studies aiming to understand the complex context of energy neutral housing policy merely at an (inter)national level, generate insights that may not be generalizable to individual regions with their own characteristics.

This study has its limitations regarding the researched subjects, the research design and the collection and analysis of the data. Considering first of all the researched subjects, we spoke in the three cases with 6 up to 9 respondents. We ensured that these respondents covered the most important actors by an analysis of the actors in the explorative phase of our study. We furthermore encountered these persons by a snowballing-method, asking respondents to mention names of other persons representative for a stakeholder group. The regions we chose are however big and in Noord-Brabant we spoke for example with 1 of the possible 64 municipalities to gain knowledge on the point of view of municipalities in the Brabant NZE-deal. Furthermore, we gradually noticed that using the snowball-method to find representative stakeholders, generated a sample of respondents that were relatively active in the regional collaboration. In this sense, in our respondent selection there is a bias towards active members in the regional collaboration which may affected our results.

Secondly the research design has its limitations. Regarding the case selection we have encountered case-contamination (Rosenthal and 't Hart, 1994). We found both by document study as by the interviews that the deal in Drenthe that was concluded upon in October 2016 is influenced by the Brabant NZE-deal out of 2015. This fact that these cases are in this respect intertwined with each other, decreases the theoretical generalizability of the results (Rosenthal and 't Hart, 1994). We furthermore measured the regional governance only at one moment – the period of the field research – whereas the regions did not follow the same timeline. In Utrecht, the target we studied already developed in 2014 whereas in Drenthe the agenda was set only 4 months prior to the interviews. Further research to these regions with a longitudinal approach could overcome this limitation.

Lastly, there are limitations in the data collection and analysis. Due to the fact that we studied regions that are geographically spread over the Netherlands, we combined face to face interviews with phone interviews. Limitation of these phone interviews is the lack of non-verbal signals and the fact that the respondent may feel less trusted. We did however clearly introduce the research and the personal background of the researcher in order to make respondents feel as comfortable as possible. To conclude, because this paper is part of an individual master thesis project, there was only one researcher involved in the analysis of the data. In this respect, we did not establish intersubjective and inter-rater reliability. This possibly effected the reliability of the results.

## 8. Literature

- Anckar, C. (2008). On the applicability of the most similar systems design and the most different systems design in comparative research. *International Journal of Social Research Methodology*, 11(5), 389-401.
- Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.
- De Vries, M. (2008). Falling between two cracks: The indeterminate character of mid-level government. *Public Organization Review*, 8(1), 69-87.
- Duijvendak, M (2008). Ligamenten van de staat?. Over Regionale Identiteit En de Taaiheid van de Provincie. *BMGN-Low Countries Historical Review*, 123(3), 341-341.
- Energiesprong (2017). Voor de troepen uit. Eindrapport programma Energiesprong 2010-2016.
- Filippidou, F., Nieboer, N., & Visscher, H. (2016). Energy efficiency measures implemented in the Dutch non-profit housing sector. *Energy and Buildings*, 132, 107-116.
- Barnes, W., & Foster, K. (2012). *Towards a more useful way of understanding regional governance*. Presented at the Conference of the European Urban Research Association, Vienna, Austria, September.
- Boeije, H. (2009). *Analysis in qualitative research*. Sage publications.
- Foster, K., & Malakoff, L. (Forthcoming 2012). *Getting Things Done Together: A Workbook for Achieving Goals Regionally*. Washington, DC: National League of Cities.
- Golubchikov, O., & Deda, P. (2011). Governance, technology, and equity: An integrated policy framework for energy efficient housing. *Energy Policy*, 41, 733-741.
- Goodwin, M. (2013). Regions, Territories and Relationality: Exploring the Regional Dimensions of Political Practice. *Regional Studies*, 47(8), 1181-1190.



- Groenleer, M. (2016). De regio als redding? - Over de governance van ruimte en plaats in de netwerksamenleving. *Inaugural address*.
- Hajer, M. (2011). The energetic society: in search of a governance philosophy for a clean economy. PBL Netherlands Environmental Assessment Agency.
- Hamilton, D. K. (2004). Developing regional regimes: A comparison of two metropolitan areas. *Journal of Urban Affairs*, 26(4), 455-477.
- Hooghe, L., & Marks, G. (2016). *Community, Scale and Regional Governance*. Oxford University Press.
- Hoppe, T. (2009). CO2 reductie in de bestaande woningbouw: een beleidswetenschappelijk onderzoek naar ambitie en realisatie. *PhD thesis*. Enschede: University of Twente.
- Hoppe, T. (2012). Adoption of innovative energy systems in social housing: Lessons from eight large-scale renovation projects in The Netherlands. *Energy policy*, 51, 791-801.
- Hulst, R., & Van Montfort, A. (Eds.). (2007). *Chapter 7: the Netherlands: Cooperation as the only Viable Strategy*. In: Inter-municipal cooperation in Europe, 238, 139-168. Dordrecht: Springer.
- Jonas, A. (2012). Region and place: Regionalism in question. *Progress in Human Geography*, 36(2), 263-272.
- Kuub (2015). Wijkanalyse NOM Onderzoek naar interessante wijken voor Nul op de Meter renovaties op dit moment.
- Levelt, M., & Metzger, T. (2014). The legitimacy of regional governance networks: Gaining credibility in the shadow of hierarchy. *Urban Studies*, 51(11), 2371-2386.
- Lijphart, A. (1971). Comparative politics and the comparative method. *American Political Science Review*, 65(03), 682-693.
- Ministry of the Interior and Kingdom Relations (2016). Kamerbrief over uitkomsten lange termijn verkenning energie in de gebouwde omgeving. Kenmerk 2016- 0000359889.
- Ministry of the Interior and Kingdom Relations (2012). Convenant Energiebesparing Huursector. 28 juni 2012.
- Newig, J. (2007). Does public participation in environmental decisions lead to improved environmental quality? Towards an analytical framework. *Communication, Cooperation, Participation (International Journal of Sustainability Communication)*, 1(1), 51-71.
- Newig, J., & Fritsch, O. (2009). Environmental governance: participatory, multi-level – and effective? *Environmental Policy and Governance*, 19(3), 197-214.
- Paasi, A., & Metzger, J. (2017). Foregrounding the region. *Regional studies*, 51(1), 19-30.
- Page, S., Stone, M., Bryson, J., & Crosby, B. (2015). Public value creation by cross-sector collaborations: a framework and challenges of assessment. *Public Administration*, 93(3), 715-732.
- Peters, C. (2007). *Het opgeblazen bestuur: een kritische kijk op de provincie*. Amsterdam: Boom.
- Plan Bureau voor de Leefomgeving (2011). Ruimtelijke verkenning 2011. Nederland in 2040 – Land van regio's. PBL publicatienummer: 500169001
- Potts, T. (2010). The natural advantage of regions: linking sustainability, innovation, and regional development in Australia. *Journal of Cleaner Production*, 18(8), 713-725.

- Raad voor de Leefomgeving en Infrastructuur (2015). Ruimte voor de regio in Europees beleid. ISBN 978-90-77166-59-8
- Rosenthal, U., & 't Hart, P. (1994). Het één en het ander: case-contaminatie en andere methodologische complicaties in beleidswetenschappelijk onderzoek. *Beleidswetenschap*, 2(14), 1-63.
- Snyder, R. (2001). Scaling down: The subnational comparative method. *Studies in Comparative International Development*, 36(1), 93-110.
- Sorensen, E., & Torfing, J. (2011). Enhancing Collaborative Innovation in the Public Sector. *Administration and Society*, 29(2), 115-138.
- Sorensen, E., & Torfing, J. (2014). *Enhancing social innovation by rethinking collaboration, leadership and public governance*. Social Frontiers. The next edge of social innovation research.
- Stone, C. (2005). Looking back to look forward: Reflections on urban regime analysis. *Urban affairs review*, 40(3), 309-341.
- Studiegroep Openbaar Bestuur (2016). Maak Verschil. Krachtig inspelen op regionaal-economische belangen.
- Teune, H., & Przeworski, A. (1970). *The logic of comparative social inquiry*. New York: Wiley- Interscience.
- Tordoir, P., Poorthuis, A., & Renooy, P. (2015). De veranderende geografie van Nederland - De opgaven op Mesoniveau. *Regioplan*.
- Twynstra Gudde (2016). Analyse uitkomsten stakeholderproces 'Verduurzaming gebouwde omgeving'.
- Van Ostaaijen, J., Horlings, I., & Stoep, H. van der (2010). *Conditions for vital coalitions in regional development*. In I. Horlings (Ed.), *Vital coalitions, vital regions: Partnerships for sustainable, regional development*, 157-175. Wageningen: Wageningen Academic Publishers.
- Van Thiel, S. (2009). *Bestuurskundig Onderzoek - Een methodologische inleiding*. Bussum: Coutinho.
- Varró, K., & Lagendijk, A. (2013). Conceptualizing the region—in what sense relational? *Regional Studies*, 47(1), 18-28.
- Vereniging van Nederlandse Gemeenten (2014). Ondersteuningsprogramma Energie 2014-2016.
- Warner, M. (2006). Inter-municipal Cooperation in the US: A Regional Governance Solution? *Urban Public Economics Review*, (6), 221-239.
- Zahran, S., Grover, H., Brody, S., & Vedlitz, A. (2008). Risk, Stress and Capacity - Understanding Metropolitan Commitment to Climate Protection. *Urban Affairs Review*, 23(4), 447-474.