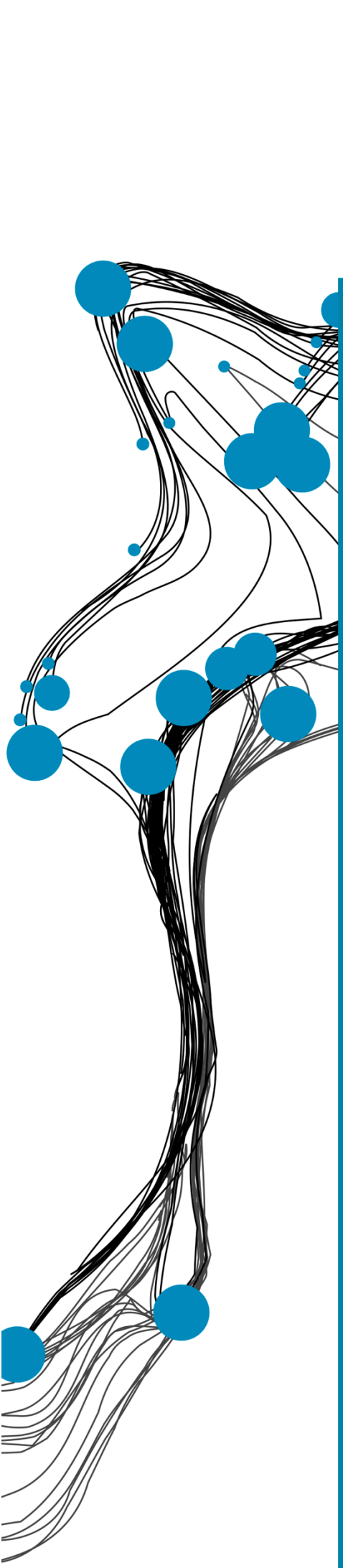

MASTER THESIS

Conceptualization of scale in the practice of integrated care

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Abstract

On what scale public-services should be organized is an often-discussed topic within the public-sector. Recently, researchers fed the discussion of “scale “in the practice of integrated care. What scale actual entails and how optimization could evolve by configuring scale properly are topics that are discussed. Logically, because currently the healthcare sector has a lack of resources and qualified personnel. There is thus a need to conceptualize scale properly so that it becomes clearer on how to create scale-advantages. We used the theoretical concepts of economies of scope and scale to identify how networks of integrated care could optimize. We have performed a literature review to explore how scale is used and applied in the scientific literature on public-service-delivery. Secondly, we were able to conceptualize three forms of scale in the practice of integrated care: volume, geographical and jurisdictional. We interviewed network coordinators about these scales and analyzed which values of integrated care were linked with the different scales. We can conclude that networks of integrated care are currently less concerned with optimization but are more concerned with overcoming jurisdictional barriers to arrange person centered care. Theories of economies of scope and scale explain that the environment where networks operate influence the likelihood of a successful network. More hierarchal orientated environments should result in networks where network participants share inputs and create scale-advantages more easily. Because the environment of the Dutch healthcare sector is not fully public nor fully private, it makes it more complex to share inputs as network participants.

1. Introduction

On what scale public-services should be organized is an often-discussed topic within the public-sector. When taking different forms of scale into consideration (for example the jurisdictional and geographical scale), scale is described as a much promising factor that can contribute to increasing or decreasing quality of healthcare (Postma, 2015). For that reason, the Dutch government uses scale as an instrument with down- and upscaling healthcare (Postma, 2015). With down and upscaling is meant the size of a scale. For example, for the geographical scale, a large or small geographical-area. An important change of the jurisdictional scale within the Dutch healthcare-sector was the introduction of the Wmo in 2015 (Wet maatschappelijke ondersteuning, 2015,). It was a decentralization where responsibilities were relocated from the national government to the municipalities. The goal of this decentralization was to cut back investments in healthcare and that citizens live as long as possible at home. With this change in the jurisdictional-scale, youth care and domestic-help became a responsibility of the municipalities. The policy-makers had arranged a new configuration of the jurisdictional scale. Furthermore, the role of the market increased and the role of healthcare-insurance companies became larger.

When organizing integrated care, multiple public services have to be organized and coordinated. Homecare as a form of nursing care, domestic care, specific disease related care, social care, etc. All these forms of care need to be arranged at home (in the neighborhood) and often cooperation is needed. Cooperation is needed to adjust the delivery of different forms of healthcare. The delivery of integrated care takes often place via networks. Healthcare-providers coordinate their services towards the patient in networks in case of integrated care. Networks that deliver integrated care do often have an umbrella organization that functions as a knowledge-network. This knowledge-network receives interregional-issues/topics and provide the regional networks with advice to handle these issues. The members of the regional networks deliver the actual integrated healthcare. The coordination of the delivery of local integrated care is performed by the regional network coordinator. However, if we look at the different integrated care networks different densities of regional networks across the country can be found. With this is meant the size of the geographical area of the regional networks (the more regional networks, the smaller the geographical area. The discussions arise, on what scale regional networks should be organized. Within this study multiple forms of scale will be described.

Nowadays healthcare-professionals argue that integrated-care (and other forms of healthcare) should be regionally organized. They claim that this would result in healthcare with higher quality because it is organized from the viewpoint of the needs of the patient. However, there is a research-gap regarding what scale actually entails in the practice of integrated care. Next to this it is not exactly clear what the boundaries of a region are and why it would result in high(er) quality of healthcare. The goal of this research is to describe what scale entails, how we can conceptualize it in the practice of integrated-care and what factors contribute to choose for specific scales.

1.1 Scientific Relevance

There is a lack of information in healthcare literature on what the concept of scale is and how it is applied in practice. There is thus a research-gap concerning scales within integrated healthcare (Minkman, 2020). There is a need for explanation why networks choose for specific scales and if these networks can be further optimized.

1.2 Societal-relevance

Policy- and decision makers can use the results from this research when they organize integrated-care with other healthcare-providers. An advanced description of scale will be given with concrete qualitative data about advantages for specific scales. This will support these actors to further optimize the network. Optimizing healthcare is an urgent topic because of the current situation of the healthcare-sector. Employees are difficult to find and resources are scares. Because of this it is very urgent to identify possible options to optimize the service-delivery of healthcare.

2.0 Research question

What scales can be identified regarding integrated care networks and what factors explain at which scales these networks are organized?

2.1 Sub-research questions

1.How is the concept of scale used and applied in the scientific literature on public-service-delivery?

This theoretical question will be answered by performing a narrative literature review. References to the literature that describes conceptualization of scale in the public-sector will be included. The aim of this research question is to analyze the concept of different forms of scale theoretically. The review aims to provide a deeper understanding of different scales and what they entail.

2. Which forms of scale can be identified regarding the organization of integrated care networks?

In order to answer this research question, multiple integrated care networks are analyzed. Based on the theoretical insights of the narrative review, data on characteristics of networks will be extracted and analyzed. A measurement will be performed with the variables of research question 1. A conceptualization will thus be described with the identified theoretical scales based on a sample of integrated care networks. The goal of this research question is to explain how theoretical scales can be translated towards the practice of integrated care.

3. Which values of integrated care have a role in different scales according to network coordinators?

This question will be answered by interviewing participants from the networks and combining this with the results from sub-questions 1 and 2. The interviews will be performed in a semi-structured way where the basic question is: How did your network evolve to the different scales and why? The list of topics that will be discussed during the interviews is designed based on the results from research question 2. By asking questions regarding the goals of these scales, information of why networks choose for specific scales will be collected. The values of Zonneveld (2020) are the values that are used to identify values of integrated care.

3.0 Theory

This section provides a theoretical exploration of the core concepts of the thesis. Firstly, the concept of scale itself will be described and secondly the underlying theoretical mechanisms that influence decision-making regarding scales. These concepts are economies of scope- and scale. Finally, integrated care will be described as a phenomenon

3.1 Scale

Postma (2015) describes scale as a multi-interpretable variable. Postma describes in his publication from the perspective of healthcare-providers. He developed a classification of scales: human, professional, economic and policy. Many of these types of scale are relevant when describing the organization of integrated care. When taking the description of each scale in perspective, each scale has a clear description of which dimensions of that particular scale are meant. When considering the multiple perspectives from stakeholders and the different dimensions where they operate in, “scale” is an instrument that can have different meanings and because of that will be interpreted differently by different actors. It makes it an instrument that never can be perfectly optimized because it is almost impossible to consider all perceptions of scale. However, in this section the different forms of scale that can be used to optimize integrated healthcare will be described.

Scale can abstractly be described as the size of a specific phenomenon within public-service-delivery. Scale has different dimensions and forms (Postma, 2015) And thus scale becomes a complex subject. Combinations of different variables can also define a form of scale. An example is the structure scale by Postma (2015) where the ratio between the client-group and the size of services is described. In this thesis the perspective on scale from Postma will be used: a specific size of a specific phenomenon.

One of the theoretical principles that will be used in the present study are economies of scale (Feiock,2007) and economies of scope (Panzar,1981). These principles describe that decisions regarding scale should aim to result in optimal-outcomes. These principles are originally built for the private sector to cut-down costs. However, Panzar is describing economies of scope from the perspective of the private sector and Feiock is describing economies of scale from the perspective of the public sector. Because the healthcare sector in the Netherlands is organized in the public-sector but is market incentivized, we have chosen to combine both theories to explain how economies of scope and scale can be achieved. What these economies entail will be described in the next part of this chapter.

3.1.1 Economies of scale

Economies of scale in the classical sense determines that goods are produced in such numbers that the lowest price per unit is realized. Sometimes this means that scale (for example the number of units that is produced by an actor) needs to be increased to obtain a more optimal economy of scales. Central in this theory is that the average cost declines and that output increases (Feiock,2007). At the core economies of scale describe an optimum where spillovers are minimized and resources are used as efficient as possible. If resources are not used as efficient as possible we speak of diseconomies, this is also possible when determining the scale of a specific service. The optimal economy of scale results in the most efficient use of healthcare and ultimately in lower costs per client.

3.1.2 Economies of scope

Panzar (1981) is describing economies of scope as an optimum that can be reached by multi-product companies. It is evident that this means that the company produces more as one product with clear different characteristics. Panzar describes economies of scope as the following: “Whenever the costs of providing the services of the sharable input to two or more product lines are sub-additive (i.e., less than the total costs of providing these services for each product line separately), the multi- product cost function exhibits economies of scope”. Summarized it means that the production of multiple products in a network will be more cost-effective as producing the different products in separate organizations.

Panzar describes different issues with the theoretical-framework of economies of scope. First of all, he describes that economies of scope can only be achieved with “shared inputs”. Shared inputs are inputs which can be used for multiple outputs. Panzar describes an example of shared inputs as the productive capacity such as electric power generators. One of the issues with this theory is that the precise definition of such “shared inputs” is not clear. One of the goals of this study is to identify these shared-inputs in integrated healthcare and to describe their economies and diseconomies of scope. It will for example describe a theoretical balance of including different forms of healthcare to obtain integrated healthcare and to prevent possible diseconomies. An example of such a balance regarding Anssel & Torfing is overburdening network participants or to demand to less from network-participants (Ansell & Torfing, 2015).

The second issue that Panzar describes is the vertical structures of firms and markets for the service of shared inputs. With this issue the influence of different modes of governance (markets and hierarchies) are described. Panzar is here indicating that economies of scope will develop differently when markets produce products in comparing to hierarchies. Economies of scope will develop easier in hierarchal modes of governance because of public shared inputs. A more precise explanation of Panzar is not stated in the publication. I will interpret this issue as: A more market-incentivized environment where networks operate will not result in economies of scope with shared inputs as easy as in a more hierarchal-incentivized environment. The central idea behind this theory is that networks are more willing to share inputs when the environment in which they operate is less competitive

An example of economies of scope within the practice of integrated care is the use of information. Within integrated healthcare multiple healthcare-professionals are involved in providing healthcare. By involving these different professionals with their own expertise costs can be lowered and an optimal configuration of different forms of healthcare can be designed. An example of lowering costs is the fact that not every healthcare-professional will have to perform the intake of the patient. By performing this intake for the network this form of transaction costs can be significantly reduced. Another example are synergistic advantages. When taking the nature of the different forms of healthcare into consideration, the way each form of healthcare is provided can be more properly adjusted based on the way other forms of healthcare are provided.

3.1.3 Relation between economies of scope and scale

When trying to achieve an optimum in healthcare and the related costs, the range of services (scope) and number of patients (scale) are strongly connected to each other. An example is an academic hospital where a highly specialized treatment is offered. Because a hospital is specialized in a specific treatment, it is logical that the hospital steers to receive more of these specific patients and make this highly complex treatment routine for their own personnel. The scope in this example is rather low because they are specialized in only one treatment but the scale would be high because they operate more patients and obtain them from a larger scale (national).

3.2 Integrated-care

Integrated care means that a network of healthcare providers delivers multiple forms of healthcare and adjust their service delivery to each other. One of the main purposes of these networks is to overcome fragmentation (Steele Gray, et.al, 2020). More about fragmentation will be described in the result section of this thesis. To deliver the full spectrum of healthcare to clients, multiple forms of care have to be arranged. An integrated healthcare-network functions as platform where multiple healthcare-providers adjust their healthcare-delivery. This can be seen a form of economies of scope because within this one network multiple form of healthcare are provided towards the patient. It results thus in a less fragmented healthcare-delivery system and not every healthcare-providers needs to arrange all sets of healthcare. Especially for highly-specialized personnel where the number of patients is rather low, economies of scale can be achieved. However, it means that this specialized doctor, nurse, etc. need to be “shared” for patients from network-participants. These arrangements can differ, depending on the specific network for integrated care. Key elements of integrated care are represented in the Integrated care case study descriptive template (Zonneveld et al, 2020). This template entails: segmentation, coordination, engagement, success measures and the policy context. Summarizing the content of the template describes what the patient target-group is, how patients’ intake is performed, how success of providing health care is measured and how policy issues are dealt with (such as financing and chosen governance-structure). Zonneveld describes in another article the relevant values that are central within the

organization of integrated care (Zonneveld, 2020). We expect that these values are central in the organization of integrated care. Thus,

3.2.1Networks of integrated care

The networks that will be investigated in this research are groups of healthcare providers that provide integrated care. This means that they provide care for people that need various kinds of healthcare. Next to this the network need to entail at least three healthcare-providers that cooperate. These networks are concerned with a specific disease/condition but requires multiple kinds of expertise to deliver optimal care. Because of this it seems to be logical that a number of providers that provide different forms of healthcare cooperate with each other within one kind of care. An example is the healthcare for diabetes where Pharmacists, GP's, Dieticians, Internists and multiple other healthcare providers cooperate with each other to provide integrated diabetes care (Zonneveld, 2017).

4.0 Method

Strategy and design

The design of this research can schematically be consulted beneath (Figure 1). Within this chapter the methodology will be explained per research question.

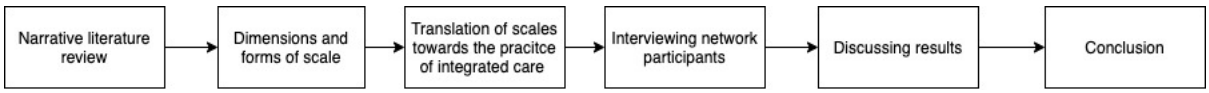


Figure 1

4.1 Methodology of research question 1:

1.How is the concept of scale used and applied in the scientific literature on public-service-delivery?

Narrative literature review

4.1.1 Search strategy 1

In order to identify multiple forms of scale, a narrative literature review was performed. First of all, the snowball technique has been used. The snowball-technique is nonprobability sampling technique where an existing study's reference list is consulted to recruit relevant study subjects from among other cited studies. Thus, the sample group is said to grow like a rolling snowball. As the sample builds up, enough data is gathered to be useful for this thesis. Inclusion criteria were:

1. Scale is explicitly described
2. Articles are not older as 2010
3. Scales could be translated towards the practice of integrated care

The publication of Minkman (2020) is used as a starting-point. This article was chosen because it is the most recent one and it is about scale in the practice of integrated care. One of the disadvantages of a snowball method is the result of retro perspective publications. By using a recent publication (2020) this disadvantage is reduced. relevant dimensions of scale within these articles were summarized in the table. We consulted the reference list of Minkman (2020) and found one suitable article because scale was here explicitly described. This was the article of Postma (2015). The article of Postma is included because scale is explicitly described and scales are described in the practice of healthcare. Because it is an extensive research about scale, highly suitable for the practice of integrated care, scales are explicitly described and because it fits with the goal to explore the concept of scale we only have chosen Postma from the reference list of Minkman (2020). All other 30 publications were excluded because was too old or scale was not explicitly described. From the reference list of Postma we have included Lieshout et al. (2017), Lieshout et al. (2012) and Termeer et al. (2010). We have chosen to include these articles because they met the inclusion criteria and because they included the most distinct forms of scale.

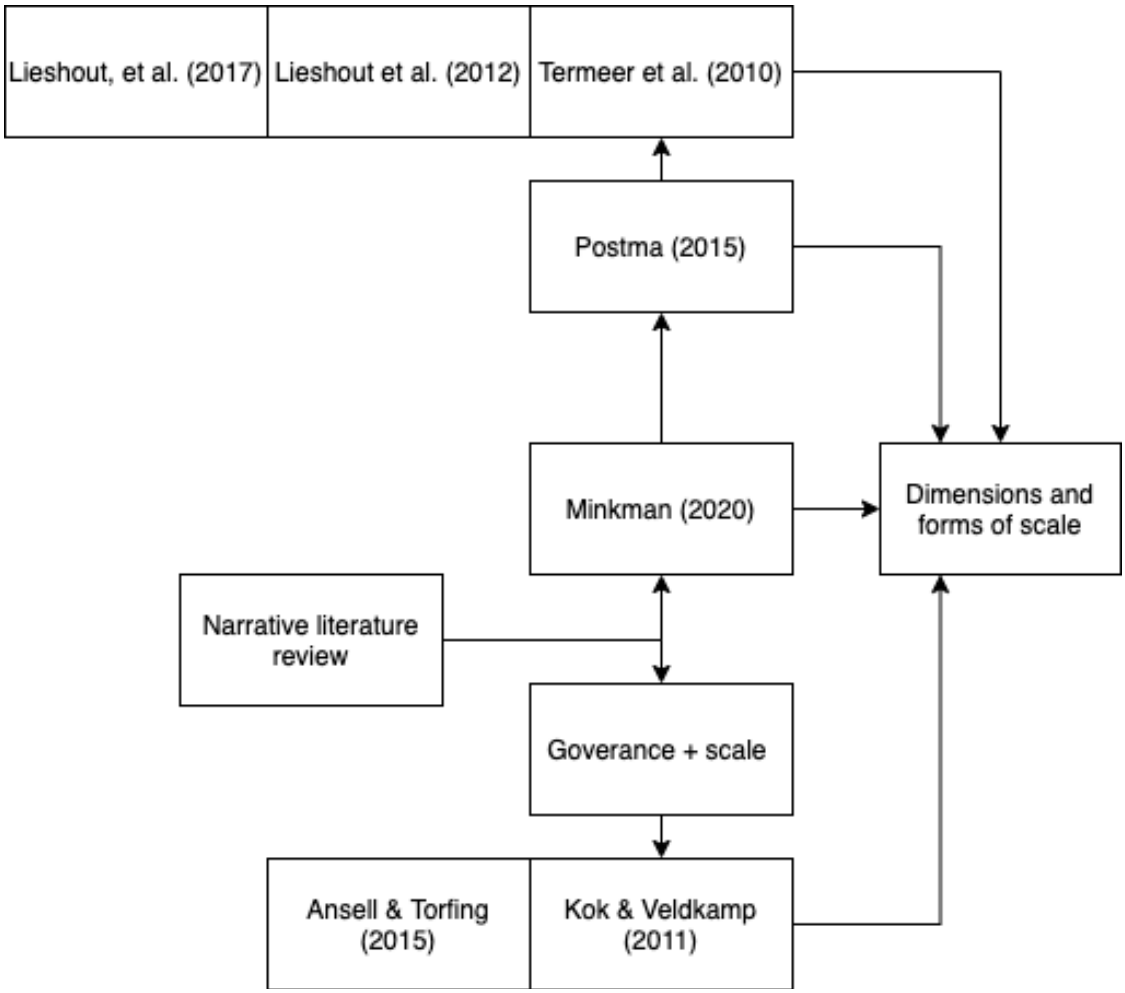
4.1.2 Search strategy 2

Inclusion criteria

To have a broader scope as the references lists from Minkman (2020) and Postma (2015) we have chosen to do a small literature-review specific for scale and governance. The inclusion criteria for this review are viewed beneath. The two literature-reviews can be schematically viewed in figure 2.

Search terms: Scale, Governance.
Publication date not older as 2010.
Amount of citations as high as possible within the search engine of Google Scholar.
Possible translation towards the practice of integrated care. This means that scales from other public sectors can be included as long they are also suitable in the case of integrated care.
Scales are explicitly described and comply with the chosen definition of scale (can be consulted in the theoretical chapter of this thesis).

Figure 2



The extracted data was synthesized. This means that identified forms of scale that entail the same but are named differently are bundled together into one category. This is performed by consensus with the supervisor of this report.

4.2 Methodology of research question 2.

What scales can be identified regarding the organization of integrated care networks?

4.2.1 Translation of variables towards the practice of integrated care

The different forms of scale will be empirically investigated by getting insight into the characteristics of networks. This will be done by analyzing the data from the identified scales from research question 1. The number of sub-networks and the size of the client group in the case of the volume-scale. The different jurisdictions that exist in the healthcare sector and a description how information is used in practice. This will be partly substantiated by the interviews and partly based on sector related literature.

4.2.2 Sample

To have a sample that can be compared, inclusion criteria for the sample are designed. The inclusion criteria are applied to have a representative sample. With this thesis the function of the regional integrated care networks and the function as knowledge-network from the umbrella-organizations are essential characteristics of integrated care networks.

Inclusion criteria

- Integrated care networks with a national umbrella organization and regional networks where the actual integrated care is provided.
- Integrated care networks that operate in the Netherlands.
- Regional integrated care networks that entail multiple forms of expertise/healthcare professionals.

The umbrella organizations functions as a knowledge network where regional networks are provided with relevant information. All networks have made decisions regarding different scales. The data that is extracted from this dataset (appendix 10.3) are the number of regional networks, the name of the network and in some cases contact details from the network coordinators. The dataset entails all known integrated care networks that have a national umbrella organization. Two networks are excluded from the dataset because they do not have regional integrated care networks. The variables that will operationalized and measured are the different scales (volume-, jurisdictional- and geographical scale).

4.3 Methodology of research question 3

Which values of integrated care have a role in different scales according to network coordinators?

To answer research question 3, Interviews were conducted. Every respondent has signed an informed consent (appendix 10.2). The topics that are discussed during

the interviews concern the different identified scales and the association with values of integrated care (appendix 10.1). The assumption was that the goals of organizing integrated care are aligned with the values of Zonneveld (2020). That's why we have chosen to use the article of Zonneveld (2020) where an expert-panel was asked which values were important regarding integrated care. Why we used this article and how will be explained in the theoretical framework. The variables that were used in this study are for example coordinated, trustful, shared responsibility and accountability, etc.). These values are thus indicators of integrated care. We will use these variables to code the relevant fractures of the interviews together with the different scales. The used variables and their definitions can be consulted from table 1.

Furthermore, we analyzed the data for possible economies of scope and scale in the different scales. We analyzed this to investigate how economies of scope and scale can be achieved in the practice of integrated care. Because the theories of economies of scope and scale suggest that these principles help to optimize scale-advantages and because there is an urgency to optimize integrated care, we choose to do so.

Table 1, Zonnveld, 2020, p5,

#	Value label	Description
1	Co-ordinated	Connection and alignment between users, informal carers, professionals and organizations in the care chain, in order to reach a common focus matching the needs of the unique person.
2	Trustful	Enabling mutual trusting between users, informal carers, communities, professionals and organizations, in and across teams.
3	Shared responsibility and accountability	The acknowledgment that multiple actors are responsible and accountable for the quality and outcomes of care, based on collective ownership of actions, goals and objectives, between users, informal carers, professionals and providers.
4	Holistic	Putting users and informal carers in the centre of a service that is 'whole person' focused in terms of their physical, social, socio-economical, biomedical, psychological, spiritual and emotional needs.
5	Co-produced	Engaging users, informal carers and communities in the design, implementation and improvement of services, through partnerships, in collaboration with professionals and providers.
6	Continuous	Services that are consistent, coherent and connected, that address user's needs across their life course.
7	Flexible	Care that is able to change quickly and effectively, to respond to the unique, evolving needs of users and informal carers, both in professional teams and organizations.
8	Empowering	Supporting people's ability and responsibility to build on their strengths, make their own decisions and manage their own health, depending on their needs and capacities.
9	Person-centered[a]	Valuing people through establishing and maintaining personal contact and relationships, to ensure that services and communication are based on the unique situations of users and informal carers.
10	Respectful	Treating people with respect and dignity, being aware of their experiences, feelings, perceptions, culture and social circumstances.
11	Led by whole-systems thinking	Taking interrelatedness and interconnectedness into account, realizing changes in one part of the system can affect other parts.
12	Comprehensive	Users and informal carers are provided with a full range of care services and resources designed to meet their evolving needs and preferences.
13	Collaborative	Establishing and maintaining good (working) relationships between users, informal carers, professionals and organizations – by working together across sectors, and in networks, teams and communities.
14	Preventative	There is an emphasis on promoting health and wellbeing and avoiding crises with timely detection and action by and with users, informal carers and communities.
15	Efficient[b]	Using resources as wisely as possible and avoiding duplication.
16	Reciprocal	Care is based on interdependent relationships between users, informal carers, professionals and providers, and facilitates cooperative, mutual exchange of knowledge, information and other resources.
17	Transparently shared[a]	Transparently sharing of information, decisions, consequences and results, between users, informal carers, professionals, providers, commissioners, funders, policy-makers and the public.
18	Effective[b]	Ensuring that care is designed in such a way that outcomes serve health outcomes, costs, user experience and professional experience.

[a] = value label has been reformulated
[b] = value has been newly suggested in the Delphi study

4.3.1 Sample

Respondents were selected from the integrated-care networks. One of the regional coordinators and one of the coordinators from the umbrella organizations were asked to participate. All networks from the dataset were asked to participate. One network has been excluded because the potential respondent indicated that the organization could not be indicated as an integrated care network. The network that is excluded from this sample is not excluded in the results of sub-question 2. This is not performed because the case meets the requirements of the inclusion criteria. Next to this we have two more networks excluded because they do not operate with regional networks that organize integrated care. In total 20 respondents were asked to participate of which 8 responded. The response percentage was thus 40%. We have tried to increase the percentage by calling the organizations. Furthermore, we have sent 3 mails: 1 invitation to participate and two reminders. One of the main reasons that not every respondent participated was because the regular healthcare was restarted after the most critical phase of the Corona virus.

5.0 Results

5.1 Research Question 1

How is the concept of scale used and applied in public-service-delivery?

First, the concept of scale will be abstractly described with the purpose that it will become more clear what scale is. Secondly a more in-depth review of how scale is used in practice will be described. Thirdly, results from the narrative literature study will be described. The narrative literature review is performed partly by the snowballing-method, starting with the publication of Minkman (2020). We selected this article because in this paper the urgency to investigate scale in the practice of integrated care is clearly described. Other reason were the recentness of the article and the practical review of scale and relevant cited articles. This resulted in one other relevant article of Postma (2015) where scale is explicitly described from multiple angles but all focused on the practice of healthcare. After consulting the reference list of Postma we have identified 3 articles that met the inclusion criteria. Especially the explicitness of scales was a criterion that was not by many articles.

To broaden the scope of the literature review there was a second search performed with Google Scholar with the search terms: governance and scale. These keywords are chosen because in the governance literature, scale is more often studied. Furthermore, the results of the studies had the ability to be translated to the practice of integrated healthcare. A small selection of articles is included based on the amount of cites.

The number of publications is limited because the goal of the literature review was to have a basic understanding of how scale is used in the public sector. Because there was a limited time to perform this study and other elements of this study needed also sufficient time we choose to limit the literature study with 7 publications. Furthermore,

because the identified forms of scale where suitable to translate in the practice of integrated care and there was sufficient data to operationalize scale, the goal of this sub-question was fulfilled.

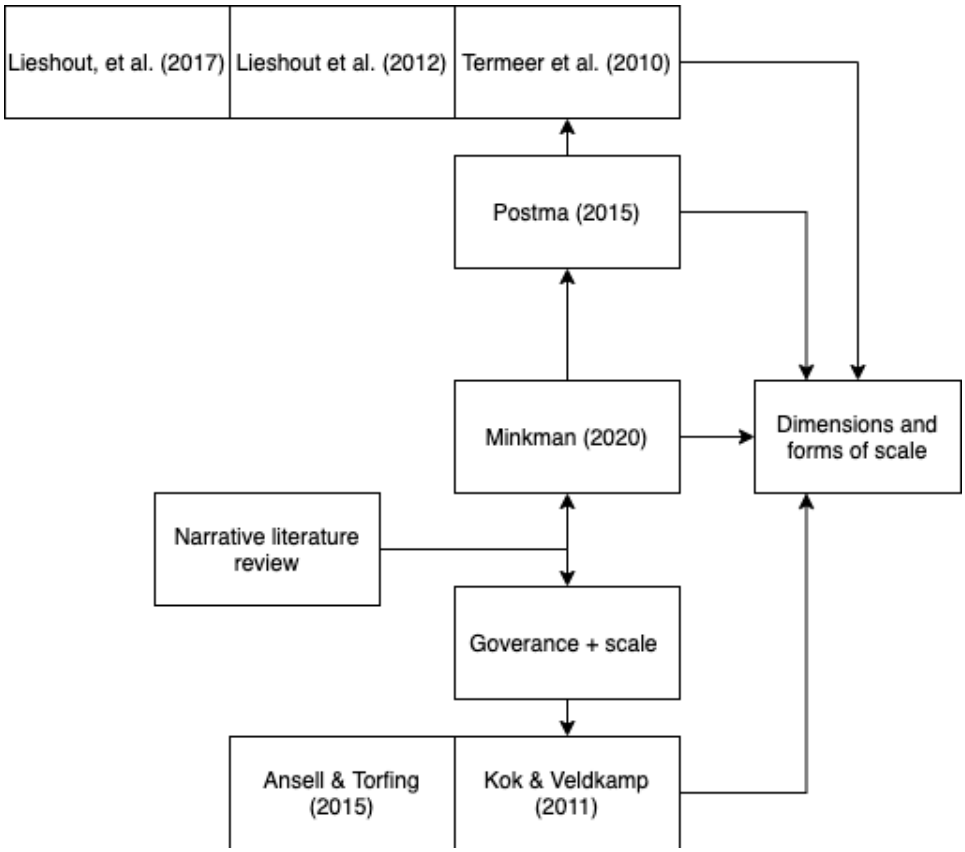


Figure 3

5.1 Conceptualization of scale

Scale can abstractly be described as a specific size of a specific phenomenon within public service delivery. In networks, scale can have multiple dimensions and forms. Examples are the number of participants in the network, budget size, level of jurisdictional scale, etc. If scale is studied it is evident that characteristics of networks will contain dimensions of scale. Basic principles of scale are geographical and the various kinds of activities (scope). On first sight scale can be seen as an important policy-issue in networks and therefore is important to configurate properly.

5.2 Scale as a policy issue

When studying publications that concern scale, the expectations of scale are seen as a promising factor that can increase or decrease quality/efficiency of healthcare (Postma, 2015). For example, lowering costs by increasing the scale or lowering the scale and making healthcare more personalized. There are for example situations where managers and politicians use scale as a framing instrument. Scale can be used in debates and can be framed where: upscaling & downscaling and scale coupling can be used as framing-mechanisms (Lieshout, 2012). Especially within scale-coupling where policy-issues are related to specific administrative levels are

subject of scale-framing. In this case politicians try to frame specific policy-issues towards specific administrative levels to make the specific administrative level responsible for the policy issue. Results of the literature review can be found below in table 2.

Table 2: Identified scales

Study	Relevant forms and dimensions of scale with quotations
Minkman (2020)	Volume Treatments that require specialized knowledge benefit from a high **volume** of this specific treatment, Knowledge Specialized **knowledge** needed for small groups of people who live spread out over a large area, could lead towards a concentration of **knowledge** on a small **scale**. History Rethinking scale never starts from scratch. Including characteristics and **history** of specific contexts
Postma (2015)	Human The **human** scale discourse entails such words as 'home', 'neighborhood', 'human', 'care' and 'community'. The discourse demarcates the space that patients, clients and citizens inhibit as the scale that is most relevant. Professional The discourse of the **professional** scale comprises such words as 'professional', 'work floor', 'quality', 'specialization' and 'autonomy'. The **professional scale** discourse focuses on the organizational space's healthcare professionals. Business The **business** scale discourse entails such words as 'market', 'competition', 'money', 'efficiency' and 'production'. Actors argue that a large scale provides organizations with economies of **scale** in development of technology. System The **system** scale discourse comprises such words as 'policy', 'law', 'government', 'governance' and 'system'. The healthcare system as a whole is central in the discourse.

	Structure, For example, the number of clients in a facility for elderly care, the number of doctors in a hospital or the turnover of a home care organization Space The arena where cooperation and competition find a fragile stand-off Symbol attribute meaning to **scale**, which becomes symbolic for different definitions of 'good' and 'bad' care.
Lieshout, et al (2017)	**Sector** Agricultural **Administration** Municipal, Provincial, National, EU, Global **Time** Past, present, future
Lieshout, et al (2012)	Spatial Local, regional, national and global developments about spatial issues as landscape firm size and location of developments Administrative About international, national, provincial and municipal administrative matters, referring to one of the administrative levels or concrete places in an administrative context, public officials, policies and interaction, accountability **Time** pace, timeframe
Termeer, et al. (2010)	**Jurisdictional scale, scale** of state, province and municipality **Size of client-group** especially size (number of inhabitants) Spatial scope One relevant jurisdiction at a particular spatial scale, such as a municipality or the European Union. Temporal Externalities on temporal scales bring with them some specific governing problems because the future is surrounded by uncertainties and most politicians focus on showing results within their terms in office. **Institutional** Constitutions, laws and operating rules but they also have to deal with the hierarchies of constitutions and laws Knowledge The linkages between general and specific **knowledge.**

Ansell, Torfing (2015)	Temporal Refers to the time frame in question (for example; short term or long term) **Quantative** To mobilize greater support, capacity, expertise, legitimacy or revenue Quantitative: to bring together the key players for a certain project; **Geographic** Refers to the extent of **geographical** space **Jurisdictional** representation. **Functional** Increase production vs overburdening members, ramp up projects vs close projects, economies of scope vs more customization
Kok, Veldkamp (2011)	Space, time, jurisdictional, **institutional**, **management**, ***network***, knowledge

With the results from the literature-review we have conducted a synthesis of the variable. This resulted in four scales: volume, jurisdictional, these theoretical scales will be explained and answers will be given on what defines them. Secondly, the results from the literature review will be used to explain how different authors view scales.

5.3 Synthesis of variables

The narrative review resulted in 25 forms of scale (Table 2). Our analysis resulted into a classification of 4 categories: the volume, jurisdictional, geographic, and information scale. For all variables researcher and supervisor (N.Zonneveld) reached consensus regarding the synthesis. We only recoded the knowledge scale into the information scale under consensus. The process of coding is not independently performed because of the supervisor's background. However, the supervisor's expertise lies in the organization of integrated care. Because of this the coding is more suitable for the practice of integrated care and somewhat less independent. We choose to focus on the suitability to translate identified scales towards the practice of integrated care.

The objective of the results of this method is to illustrate how we can interpret scales and how we can define them. It is not a complete blue-print about what scale entails, it is rather a description of different views on? scale and their dimensions.

5.4 Volume

The volume scale entails the relation between (the size of) a client group and the size/capacity of the healthcare provider. An example is the number of clients (client group) in a nursing home (public service). The idea behind this scale is that there is an optimum that can be achieved by matching the amount/size of the public service and the number of clients. Postma (2015) is describing the structure scale as a phenomenon that can be measured. Examples are the number of patients in a hospital or for a homecare team. In this example it describes a ratio between the amount of services and the number of patients. The organizational scale (Postma, 2015) describes the relation between the size of the patient group and the capacity of the network. Ansell, Torfing (2015) is referring to the quantitative scale as the number of stakeholders in the network. Minkman (2020) describes volume as a phenomenon where a specific number of clients is described. Another example how Minkman is describing volume is the amount of treatments. Termeer, et al. (2010) describes it as the number of inhabitants. Both studies describe them from the perspective of clients that receive public services. Therefore, the term volume is a combination of basic characteristics of a network: the size of the client group and the amount of healthcare providers in the network.

The volume scale is a potential scale for economies of scope and scale. Larger healthcare providers do often have more capacity to include more specialized healthcare professionals. By organizing integrated care in network, more specialized healthcare professionals can be shared with other healthcare providers to use the full potential capacity of the specialized healthcare professional. Next to this the volume scale can be a potential subject for economies of scope because multiple healthcare professionals can be included from multiple healthcare providers. It results thus in a platform where healthcare providers do not have to admission patients separately.

5.5 Jurisdictional

With the jurisdictional-scale is meant in which jurisdiction(s) the network is operating. It refers to laws, rules and policies that regulate organizations that are providing services that fall under these laws and rules. This finding implies that the jurisdictional scale determines significantly the scope of networks. The more jurisdictions (Wlz, Wmo, Zvw, Jeugdwet etc), the broader the scope of the network. Each jurisdiction implies also a different type of clients. With the Wlz long term care is arranged and with Zvw hospital care and home care are organized. Other forms of the jurisdictional scale are: institutional scale, system scale and administrative scale. The institutional scale is referring to the specific rules of the jurisdiction and to the constitution of a country. (Termeer et al. 2010). Postma (2015) is referring to the scales of the system, the policy and the economy as the aspects that the government wants to regulate and how they influence the outcomes of regulations. The regulating activities itself are described as law, incentives and inspection. These forms of regulating can all be described within the jurisdictional scale because they all have a dominant jurisdictional component. The jurisdictional component entails specific laws, rules and policies that are applicable towards the specified sector. Lieshout, et al.

(2012) (2017) is describing scale as a phenomenon that entails a specific level. The administrative scale is used for the indication if policy issues are the responsibility of the municipality, province, national government or the European Union. If we combine this definition with the definition of Postma for system scale we can explain that both authors mean the regulating function of administrations and their agencies at different levels. This implies that the scope of the laws and rules specify what the scope of activities will be. Lieshout (2017) is also referring to a specific sector as a form of scope. Within specific sectors different resources, processes, activities, etc. need to be arranged and will have an impact on other scales.

We expect that the jurisdictional scale can be seen as a boundary for healthcare providers to provide integrated care. The more forms of care that are included in a network the more jurisdictions have to be included. Because each jurisdiction has its own actor that arranges and applies rules, more need for coordination will be present.

5.6 Geographical

The geographical scale refers to the geographical area where a network is operating. A larger geographical scale means thus a larger operational working area. In the case of networks, the geographical scale exists out of the geographical areas where organizations operate and together they form the potential geographical scale of the network. Postma (2015) is referring to a space as a form of geographical scale. However, Postma is also referring to possible representations of space and of the multiple processes that can arise in a space. An example is the geographical area they provide services to clients and based (for example hold office). Lieshout (2012) is describing the spatial scale as places where specific spatial issues happen. These can for example entail issues at the local, regional or national level. Finally, Termeer (2010) describes that the geographical scale is strongly relate to the jurisdictional scale. With this Termeer refers to the regulating activities of municipalities, provinces, national governments and the European union and possible geographical mismatches between these scales. Concluding, the geographical scale can be seen as a scale that defines the geographical area where networks operate. Furthermore, the geographical-scale is strongly connected with the jurisdictional scale because the geographical scale is often described and governed by rules and policies (jurisdictional scale).

The geographical scope can be seen as a potential scale for economies of scale. The size of the geographical area where the network is active, will determine how large the client group is. By reconfiguration this scale the size of the client group can be adjusted or healthcare providers can be in- or excluded.

5.7 Information

The information scale entails a description about how information is used in decision making and the functioning of networks. The assumption is that different information is collected and is accepted/used in different networks.

The information scale is described differently by authors. More often the scale is coded as knowledge scale. Kok and Veldkamp (2011) describe knowledge scale as an arena where specific information is accepted. This definition of scale does not meet the definition of scale in this thesis (a phenomenon with a specific size). However, because it describes an important aspect of integrated healthcare, it is described in the results. These arenas are thus less concerned whether information is indeed true. It is rather concerned with the question if knowledge claims by network participants are accepted by other participants. The acceptance of information from different sources will be different for different network participants. We include information as a topic in this research because knowledge is rather important in the practice of integrated care. Because of this we have included information as extra label in the coding-book. Because we did this we can identify what the role is of information regarding the different scales. This topic is for this reason also included in the topic-list for sub-question 3.

6.0 Sub-Question 2

What scales can be identified regarding the organization of integrated care networks?

This research-question will be answered by first explaining what integrated care is and how different forms of scale can be measured. Secondly the scale-values of the sample of networks will be described. The goal of this question is to explain how the identified theoretical scales can be empirically be measured in the practice of integrated care.

6.1 Volume scale

The volume scale describes the relation between the number of patients and the amount of regional network (Table 4). The number of clients is taken from a national database (Volksgezondheidenzorg, 2020). Sometimes there is no clear definition of the patient-group. In these cases, we use the reported number of clients by the networks. The different types of healthcare represent the diversity of networks. This scale is especially interesting when comparing the relative number of regional networks towards the number of patients in the country. This scale is chosen to analyze because from research the scale of providing services can influence the quality. Therefor it seems to be relevant to investigate if there is a relation between

the number of patients that need to be treated per regional network (roughly) and experiences from network-coordinators.

Table 3: Volume scale

Type of healthcare	Number of networks in 2020*	Incidence of disease in 2019 (+/-)	Ratio: incidence/number of regional networks
Stroke	42	500.000 (Volksgezondheidenzorg, 2020)	11.906
Dementia	46	100.000 (Volksgezondheidenzorg, 2020)	2.173
Brain injury	17	600.000 (hersenletsel.nl, 2020)	35.294
Palliative care	65	100.000 (IKNL, 2020)	16.667
Parkinson	70	50.000 (Volksgezondheidenzorg, 2020)	714
MS	19	15.000 (herseninstituut, 2020)	789
Chronical pain	20	2.250.000 (Boekensteun, 2020)	112.500
Child palliative care	7	5.000 (kinderpalliatief.nl, 2020)	714
Intensive care	11	80.000 (Volksgezondheidenzorg.info, 2020)	7.273

* These networks are tied to the umbrella organizations, in some cases there are networks active who are not connected to the umbrella organization.

From table 1 we can see that there is no clear relation between the number of patients per regional network. However, we can classify them in different categories. (700-2.500, 2.500-10.000 10.000-100.000, 100.000+).

6.2 Jurisdictional scale

The Jurisdictional scale is an often-used form of scale within the publications. With jurisdictional scales is meant that different jurisdictional-frameworks that are present. In the case for of integrated care there are four important jurisdictions Wmo (municipality), de Jeugdwet (municipality) Zvw (healthcare insurance), Wlz (National government). Within these jurisdictions different forms of healthcare are arranged and they all have different rules. Each jurisdiction indicates thus a specific scope of healthcare. The more jurisdictions networks operate in, the broader the scope of activities. The jurisdictions that are mentioned above are healthcare oriented. However, in some cases education oriented and work oriented jurisdictions are included. This is because they are relevant for the patient within the network. The coordinator of the network includes the various kinds of healthcare and other relevant public services. When the different fragmented forms healthcare is organized central

towards the patients we speak of integrated care. Especially if we take it from the perspective of the jurisdictional scale. Integrated care is an important goal to fulfil all needs from clients (Zonneveld et al, 2020). The jurisdictional scale is thus an indication in which jurisdictions a network is operating. For example, only the Wmo or Wmo + Wlz or other combinations. This will of course depend from the participants in the network and their activities. The jurisdictional-scale can be seen as an important form of scale because many other forms of scale are depending from this scale.

Table 4: Jurisdictional scale

Type of healthcare	**Number of networks in 2020**	**Included jurisdictions** **A= Wmo** **B= Zvw** **C= WLZ** **D= Jeugdwet**
Stroke	42	A+B+C
Dementia	46	A+B+C
Brain injury	17	A+B+C+D+" Participatiewet"
Palliative care	65	A+B+C
Parkinson	70	A+B+C
MS	19	A+B+C
Chronical pain	20	B
Child palliative care	7	A+B+C+D+"Passend onderwijs"
Intensive care	11	B

6.3 Geographical scale

The geographical scale can be described as the geographical area where clients receive integrated care from the network. The concentration and diversity of participants can fluctuate depending where network participants operate. It entails the geographical area where the actual healthcare is provided by healthcare-professionals and thereby the core activity of healthcare providers. The geographic scale can also be seen as a barrier for healthcare providers. This is because healthcare providers do not get compensated for the time and effort to get to the patient. Therefore, a wider spread client group would result in more transaction costs. A more clustered client group (for example in a large city) will result in less transaction costs per patient. The geographical scale of local, regional and national are strongly tied with the jurisdictional scales (Wmo (municipal tariffs), Zvw (regional purchase of care by healthcare insurance companies) and Wlz (national applicable tariffs). If we look more closely to the results of the data and order them properly

(table 6) we can see a relation between the number of regional networks and the amount of square kilometer that each network has to cover (table 6). The higher the amount of regional network, the smaller the number of square kilometers.

Table 5: Geographical scale

Type of healthcare	Number of networks in 2020*	National coverage of the network +/- %	Ratio: Square km /number of regional networks
Stroke	42	90%	890 km^2
Dementia	46	70%	632 km^2
Brain injury	17	100%	2.444 km^2
Palliative care	65	100%	639 km^2
Parkinson	70	100%	593 km^2
MS	19	50%	1.093 km^2
Chronical pain	20	100%	2.077 km^2
Child palliative care	7	100%	5.935 km^2
Intensive care	11	100%	3.777 km^2

Table 6: Relation between number of networks and square kilometer

Type of healthcare	Number of networks in 2020*	Ratio: Square km /number of regional networks
Child palliative care	7	5.935 km^2
Intensive care	11	3.777 km^2
Brain injury	17	2.444 km^2
MS	19	1.093 km^2
Chronical pain	20	2.077 km^2
Stroke	42	890 km^2
Dementia	46	632 km^2
Palliative care	65	639 km^2
Parkinson	70	593 km^2

6.4 Information

As earlier stated information is included as an important factor in this thesis but is excluded as a form of scale. Information in this thesis is described as the function of information in networks. The assumption is that the value of information will depend on the goals, organization and norms and values of networks. Information is an important resource that is used by integrated care networks. Minkman (2020) argues that expertise is needed to deliver highly specialized treatments. Kok & Veldkamp (2011) describes his knowledge scale as an arena where specific information is accepted. Termeer (2010) describes the possible consequences if information “scales” are not aligned with other scales. This means in practice that specific information is needed to deliver integrated care. This can result in a concentration of specialized knowledge, what could result in a situation where healthcare providers do not have sufficient information needed to provide adequate care. Instead, they have to reach out to more specialized healthcare providers to overcome these barriers.

7.0 Sub-question 3.

Which values of integrated care have a role in different scales according to network coordinators?

One network has been excluded because the potential respondent indicated that the organization could not be indicated as an integrated care network. Next to this we have two more networks excluded because they do not operate with regional networks that organize integrated care. The sample that is interviewed (table 7) is viewed beneath. In this chapter we describe which values have a roll in the identified scales according to the interviewed network coordinators. and how (potential) economies of scope and scale are/could be achieved.

Table 3: Respondents that participated

Condition	Regional coordinator	Coordinator at the Umbrella organization
Brain injury*	(X)	X
Child palliative	X	X
MS**		X
Stroke	X	X
Palliative	X	X

* The one respondent was active as regional coordinator and as coordinator at the umbrella organization.
** Due to the corona virus and the size of the organization, there was no regional coordinator that had sufficient time to participate.

7.1 Volume scale

The volume scale is mostly linked with the coordinating of integrated care. All respondents discussed this scale as the activities of network-members and healthcare professionals that coordinate integrated care. Next to coordinated 6 respondents discussed the volume scale as the scale where a comprehensive set of care is organized. This can be seen as the level of integration thus, a broad scope of activities that is arranged by the network (the more network participants, how broader the potential scope). Furthermore 6 respondents associated their function and the of the network participants with collaboration. Collaboration as arrangements and critical interactions that resulted in successful collaborations that contributed to the function of the network. Less associated with the volume scale are continuous, trustful, shared responsibility and accountability that were only mentioned by 1 or two respondents. The relation between the number of network-participants and the number of patients is thus strongly associated with the process (collaboration) of coordinating (coordinated) high level integrated (Comprehensive) care by the participants.

7.2 Jurisdictional scale

The jurisdictional scale was less discussed by the respondents. The most discussed value within this scale was coordinated by 5 respondents. The respondents described the jurisdictional scale with coordinated as value as the influence of the jurisdictions and the need for more coordinating. Furthermore, this value is mentioned as the coordinating activity where exceptional cases are discussed with the healthcare-insurance company to collect extra funding. Relevant to mention is that this process is only mentioned by respondents that operate in low dense populated areas (high geographical scale, low volume scale). This means when the volume scale is rather low, more person-centered care can be achieved according to the respondents. Especially the process of organizing the funding of "extra" care is critical. We can see from the interviews that when the amount of cases is rather low and the healthcare-professional is willing to argument why extra care is needed, the health insurance-company is willing to fund the extra care.

R6: "that this care is not included in the law such a Zvw… Yes, but that is a case-by-case consultation with the health insurer to make this possible. We do have options there, but we have to approve that on a case-by-case basis"

Finally, coordinated is discussed as the coordinating activity to overcome jurisdictional boundaries. Examples are lobby-activities by the umbrella organization and collecting interregional-problems to do so. Next to this somewhat less mentioned is person-centered as relevant value. This value is highly associated with the negative consequences of rules and policies.

R4: "Definitely, a very big problem is the limit of 18+, that certain organizations are only allowed to provide care up to the age of 18 and then an organization must be added that provides 18+ care while the patient has the understanding of a 3-year-old child. So, because someone is 18 or older, they must receive adult care".

The respondents indicate that rules prevent network-member to provide person-centered care or that rules result in situations where the funding of care is not complete. This can result in healthcare-providers who have to provide care that is not funded to provide full set of care. Ultimately, it could result in less financially healthy healthcare providers or in healthcare providers that refuse to deliver care. This value is almost identical with continuous with the difference that care is not provided. With this value respondents indicated that sometimes forms of care that are included in the network are no longer funded because a pilot stopped. Another form of this value is the fact that some of these respondents described projects/pilots where the aim of the pilot was to increase or sustain funding of specific networks and/or specific treatments that can be funded due to the pilot/project. Less mentioned values are information and geographical that are only mentioned by 1 or 2 respondents. This value is thus strongly associated with the influence of regulations and the need for coordination (coordinated), to overcome boundaries that are present due to these regulations with the goal to organize more comprehensive (comprehensive) and continuous (continuous) care.

7.3 Geographical scale

The geographical scale is highly associated with collaboration. 7 respondents mentioned collaboration as a relevant value for the geographical scale. With this value on this scale the respondents meant the influence of specific geographical areas on the coordinating activities of the network. Respondents explained that they assume that because network-members are situated in a specific geographical-area (region) coordinating activities are differently designed. This specific aspect is separately coded as “local characteristics – collaborative” and is mentioned by 6 respondents. This can entail for example specific protocols for providing care or the decision to prescribe specific drugs but also expectations about how collaboration work and influence coordination. One other separated value is the of competition which is also mostly associated with the geographical scale. Respondents described their task to temporarily diminish the role of competition to come to actual collaboration. Respondents described that the role of competition is more present in geographical areas where the amount of healthcare providers is rather high. This automatically results in geographical areas where the volume scale is high and the geographical scale relatively low. The very nature of the geographical-scale influences thus the level of competition. When the geographical scale is rather low, the volume scale is relatively high and the amount of healthcare providers is rather high which results in more competition. One of the respondents described that this mechanism can be explained because of the freedom of choice of the health insurance companies to contract care. Healthcare insurance companies will contract the most efficient healthcare providers but are evidently dependent on the actual healthcare providers that are present in the region. When there are more healthcare providers, the healthcare insurance companies can be more selective.

R6: *“But if you look at physiotherapy in the neurology network, occupational therapy, geriatric rehabilitation or medical specialist rehabilitation there is absolutely no competition because we have geriatric rehabilitation options in Leeuwarden and in Drachten and Heerenveen and in Sneek and one in Dokkum. But yes… there is no competition in that sense, it is all very regional”.*

Furthermore, the value of comprehensive is mentioned by 5 respondents. Respondents explained that the presence of sufficient specialized healthcare professionals is strongly dependent where the network is situated. Again, in low dense populated area’s (high geographical scale and low volume-scale) the problem occurs more that there is no presence of sufficient specialized healthcare professionals. In this case patients need to decide for themselves if they are willing to be treated with less specialized healthcare providers or that they are willing to travel to claim more specialized care. Finally, efficient is mentioned a relevant value by 5 respondents. Respondents described this value for example where mergers of healthcare providers, the basic rule that networks are organized around hospitals and the prevention of doing the same work multiple times resulted in more efficient networks. Especially mergers that result in a higher geographical scale is explicitly associated with the assumption that the quality of care will increase because it results in more room for specialization in the organization (economies of scale).

Effective as value and volume as form of scale was only associated by one respondent. The geographical scale is thus strongly associated with collaboration to achieve comprehensive (integrated) care.

7.4 Information

One of the most mentioned values regarding information is transparently shared, this value is mentioned by 4 respondents. Central with in this value is the influence of information about network-participants and their performance regarding to network-activities. When information is critically reviewed, the performance of network-members can be measured and can be used as input to address lack of performance when applicable. Furthermore, information about performance, number of patients, etc. is not always present. Network coordinators explicitly stated that the next objective is to collect this data to be able to make more strategic decisions. All other values are mentioned one or two times by respondents such as: collaborative, person centered and effective. Information is thus mainly concerned (according to the respondents) with the influence of transparently sharing information.

8.0 Conclusion & Discussion

In the final part of this thesis we will reflect on the theoretical framework based on the results from this study. Next to this we will answer the research question and describe with which certainty we can answer the research question. Finally, we will describe what kind of research is needed to answer the research questions more properly.

Panzar and Feiock describe that economies of scope and scale can contribute in more efficient organizations by working in networks. However, because the authors have described the principles from different perspectives, private (Panzar) and public (Feiock), the concepts and their mechanisms cannot be translated directly towards the practice of integrated care. Feiock describes the scenario where a garbage-truck can be used as a sharable input with other municipalities. A pure public orientated scenario. Panzar describes economies of scope from the perspective of a firm thus, purely from the private sector. As Panzar described in his article, the environment where networks share inputs will influence the positive effect of the economies of scope. More hierarchal incentivized environments would result in more efficient economies of scope because competition could prevent sharing inputs in the case of a more market incentivized environment.

If we translate the principles as the authors have described to the practice of integrated care we see a few differences. One of the differences is the fact that the healthcare system is not purely public or private. Instead it is a mix of market orientated actors (for example healthcare insurance companies) and public actors (municipalities, ministries, etc..) but also quasi-public organizations (healthcare providers). The way Feiock is describing economies of scale in the case of garbage-trucks would become evidently more difficult when other (private, quasi-public) actors also have to be included. We can conclude from the theoretical framework and the results that the environment and the complexity of the system will affect the likelihood of achieving economies of scope and scale. An environment that is more market incentivized with a more complex system will result in more difficulty in achieving economies of scope and scale.

If we look at the data from our interviews we can conclude that efficiency is not often mentioned as linked value with a specific scale. Coordination and collaboration are often mentioned values. We can conclude that economies of scope and scale are mechanism to achieve more efficiency. We expected also from our interview-data that we could identify concrete economies of scope and scale. However, this is not the case. Instead, respondents describe situations where they try to overcome jurisdictional boundaries and suitable network participants. It seems to be the case that these issues have to be solved before efficiency issues can be tackled.

8.1 Answering the research question

What scales can be identified regarding integrated care networks and what factors explain at which scales these networks are organized?

We can conclude that the volume, geographical, jurisdictional scale can be identified and can be operationalized in the case of integrated care. Furthermore, it seemed to be impossible to operationalize the information scale. Next to this we can conclude that different configurations of scale and the matching goals can be linked with the values of integrated care (Zonnveld et.al, 2020). Furthermore, there were other factors that influenced the configurations of scales. These were competition and local characteristics. We can conclude that scales influence assumptions from network coordinators about processes and behavior from network participants.

The different forms of scale influence each other and therefore cannot be configurated distinctly from each other when organizing integrated care. When analyzing the results from the interviews an overlap with scales was unavoidable. During the interviews, given the fact that a specific scale was present, it was already clear that another scale would also be established. For example, a high-volume scale will come with a smaller geographical scale.

Discussion

Panzar describes with economies of scope that a market-incentivized environment is less suitable in environments where networks operate and share inputs. This in comparing with the situation where networks share inputs in a hierarchal-incentivized environment. However, the healthcare-sector in the Netherlands met the introduction of a more market-incentivized environment the last years. This automatically bring us to the question if networks are suitable for coordinating integrated-healthcare. Above all we can see from the results that network-coordinators have an active role in temporarily diminishing the competitive-environment to come to actual collaboration. In this case the network-coordinator was able to breach the competitive-environment. What is remarkable is that this was achieved in one of the networks where the smallest patient-groups was treated. This could indicate that if the size of the client-group is smaller, the stakes for healthcare-providers are rather low and thus are more willing to cooperate. The stakes are lower in this case because when another healthcare provider is more capable to provide more efficient care, the healthcare insurance company is more likely to contract this provider. But, because the size of the client group is rather low, the effect on the healthcare provider is low. We can conclude from the data that economies of scope and scale are goals to further optimize integrated care networks. According to Panzar, optimization of networks with economies of scope and scale need a more hierarchal-incentivized environment to stimulate sharing inputs.

8.6 Future research & limitations

This study provides a basic classification on how scale can be interpreted and how it can be analyzed in the practice of integrated care. One of the limitations of this study is that scale is analyzed in the practice for integrated care. It could for example be more suitable to include other forms of scale in other sectors. Another limitation is the fact that only network coordinators are interviewed about scales. For future research it would for example be suitable to limit the number of networks and increase the amount respondents per network. It would result in more reliable results concerning values and scales.

The goal of the narrative literature review was to explore the concept of scale in the public sector. However, because this literature review is not systematically performed, it could be the case that important literature is missing. To have a more complete “picture” of scale more research should be performed. Next to the literature review is the number of interviews rather low (N=8). Because of this we can explain the results give insight in the cases but because of the low amount of interviews the generalizability of the results is rather low.

With this thesis we have performed a explorative research concerning scale in the practice of integrated care. Policy makers can use this thesis to discuss scale in the practice of integrated care more precise. This research entails a first conceptualization of scale. When policy makers, researchers need more insight in the concept of scale as now presented, additional research need to be performed. This could be performed by a more systematic literature review concerning scale and/or by increasing the number of participants that are interviewed about scale.

9.0 References

Actiz.nl, Over ActiZ, consulted at: 21-01-2020, https://www.actiz.nl/over-actiz
Ansell, Chris, Torfing, Jacob, 2015, Policy & Politics, Volume 43, Number 3, July 2015, pp. 315-329(15) Policy Press,DOI:https://doiorg.ezproxy2.utwente.nl/10.1332/030557315X14353344872935
Boekensteun, 2020, Boekensteun.nl, retrieved from: https://boek-en-steun.nl/boek-en-steun/waarom-ff/
Doing scalar politics: interactive scale framing for managing accountability in complex policy processes, Critical Policy Studies, 6:2, 163-181, DOI:10.1080/19460171.2012.689736
Dranove, 1998, Economies of scale in non-revenue producing cost centers: implications for hospital mergers
Herseninstiuut, 2020, Herseninstituut.nl, retrieved from: https://herseninstituut.nl/onderzoek/onderzoeksgroepen/huitinga-groep/multiple-sclerosis/
Hersenletsel.nl, Hersenletsel.nl, 2020, retrieved from: https://www.hersenletsel.nl/alles-over-nah/wat-nah/feiten
Howitt, R. (1998). Scale as relation: Musical metaphors of geographicalscale. *Area*, *30*(1), 49-58. https://journals.sagepub.com/doi/abs/10.1177/1065912907313077?journalCode=prqb
https://www.zn.nl/350584833/Zorgkantoren
IKNL, 2020 IKNL.nl, retrieved from: https://www.iknl.nl/getmedia/ec16a960-d5b9-4762-b6c2-b9f360988e03/Kerncijfers_Palliatieve_Zorg_2019_PZNL_IKNL.pdf
Karkkainen, B. (2002). COLLABORATIVE ECOSYSTEM GOVERNANCE: SCALE, COMPLEXITY, AND DYNAMISM. *Virginia Environmental Law Journal, 21*(2), 189-243. Retrieved April 29, 2020, from www.jstor.org/stable/24785995
Kevin Morgan (2004) Sustainable regions: Governance, innovation and scale,European Planning Studies, 12:6, 871-889, DOI: 10.1080/0965431042000251909
Kinderpalliatief, 2020, Kinderpalliatief.nl, retrieved from: https://www.kinderpalliatief.nl/professionals/kennis/over-kinderpalliatieve-zorg/medisch
Klein, Koppenjan, 2016, Governance networks in the public sector, consulted at: 31-01-2020, https://www.researchgate.net/publication/284158898_governance_networks_in_the_public_sector
Kok, K., and T. (A.) Veldkamp. 2011. Scale and governance: conceptual considerations and practical implications. *Ecology and Society* **16**(2): 23. [online] URL: http://www.ecologyandsociety.org/vol16/iss2/ art23/
Maartje van Lieshout, Art Dewulf , Noelle Aarts & Catrien Termeer (2012)
Maartje Van Lieshout, Art Dewulf, Noelle Aarts & Catrien Termeer (2017) The Power to Frame the Scale? Analysing Scalar Politics over, in and of a Deliberative Governance Process, Journal of Environmental Policy & Planning, 19:5, 550-573, DOI: 10.1080/1523908X.2014.936581
Minkman, 2020, Suitable Scales; Rethinking Scale for Innovative Integrated Care Governance, consulted at: 21-01-2020, https://www.ijic.org/articles/10.5334/ijic.5468/

NVLF, 2020, NVLF.nl, retrieved from: https://www.nvlf.nl/stream/8c-de-prevalentie-en-incidentie-van-autismespectrumstoornissen.pdf
Panzar, J., & Willig, R. (1981). Economies of Scope. *The American Economic Review, 71*(2), 268-272. Retrieved May 13, 2020, from www.jstor.org/stable/1815729
Parkinsonnet. (z.d.). *Mijn regionale netwerk*. Consulted at: 26-03-2020, retrieved from: https://www.parkinsonnet.nl/zorgverlener/regio/
Postma, 2015, Scaling Care, consulted at: 17-01-2020, https://repub.eur.nl/pub/78305
Seawright, Gerring, 2008, Case Selection Techniques in Case Study Research, consulted at: 12-01-2020,
Skipr, 2018, Scepsis over decentralisaties onverminderd groot, consulted at 10-01-2020, https://www.skipr.nl/nieuws/scepsis-over-decentralisaties-onverminderd-groot/
Steele Gray, C., Zonneveld, N., Breton, M., Wankah, P., Shaw, J., Anderson, G. M., & Wodchis, W. P. (2020). Comparing International Models of Integrated Care: How Can We Learn Across Borders?. *International journal of integrated care*, *20*(1), 14. https://doi.org/10.5334/ijic.5413
Termeer, C.J.A.M. & Dewulf, Art & Lieshout, Maartje. (2010). Disentangling Scale Approaches in Governance Research: Comparing Monocentric, Multilevel, and Adaptive Governance. Ecology and Society 15 (2010) 4. 15. 10.5751/ES-03798-150429.
Volksgezondheidenzorg, 2020, Volksgezondheidenzorg.info, retrieved from: https://www.volksgezondheidenzorg.info
Wetten.overheid.nl, Wmo 2015, retrieved from: https://wetten.overheid.nl/BWBR0035362/2020-03-19
ZN.nl, Zorgkantoren, consulted at: 21-01-2020,
Zonneveld, 2017, The development of integrated diabetes care in the Netherlands: a multiplayer self-assessment analysis, consulted at: 06-03-2020.

Zonneveld et al. BMC Health Services Research (2020) 20:224
https://doi.org/10.1186/s12913-020-5008-y

10.0 Appendices

10.1. Topic list

Hoe lang bestaat het netwerk?

Op welke juridische schaal (Wmo, Zvw, WLZ) wordt er binnen het netwerk geopereerd en wat zijn de ervaringen hiermee?

Hoe groot is de patiëntengroep per netwerk en waarom is hiervoor gekozen?

Hoe wordt het netwerk gefinancierd? (Regulier tarief vanuit eerdergenoemde juridische schalen, donaties, specifieke regel vanuit ZiN)?

Waarom is er gekozen voor deze specifieke indeling qua regionale netwerken? (Waarom lokale regionale of andere vormen van geografische schaal).

Waarom is ervoor gekozen om dit specifieke aantal participanten te laten toetreden tot het netwerk (waarom het aantal en waarom met deze expertise)?

10.2. Informed Consent

Informatieblad voor het onderzoek: Conceptualization of scale within networks of integrated-care

Doel van het onderzoek
Dit onderzoek wordt geleid door Joost Veenstra
Het doel van dit onderzoek is om schaal als onderwerp duidelijker te definiëren en om te achterhalen waarom bepaalde keuzes hierin zijn gemaakt.

Hoe gaan we te werk?
U neemt deel aan een onderzoek waarbij we informatie zullen vergaren door:

- U te interviewen en uw antwoorden te noteren/op te nemen via een audio-opname/video- opname. Er zal ook een transcript worden uitgewerkt van het interview.

Uitsluitend ten behoeve van het onderzoek zullen de verzamelde onderzoeksgegevens worden gedeeld met Vilans gevestigd in Nederland

Potentiële risico's en ongemakken

- Er zijn geen fysieke, juridische of economische risico's verbonden aan uw deelname aan deze studie. U hoeft geen vragen te beantwoorden die u niet wilt beantwoorden. Uw deelname is vrijwillig en u kunt uw deelname op elk gewenst moment stoppen.

Vergoeding
U ontvangt voor deelname aan dit onderzoek geen vergoeding.

Vertrouwelijkheid van gegevens
Wij doen er alles aan uw privacy zo goed mogelijk te beschermen. Er wordt op geen enkele wijze vertrouwelijke informatie of persoonsgegevens van of over u naar buiten gebracht, waardoor iemand u zal kunnen herkennen.
Voordat onze onderzoeksgegevens naar buiten gebracht worden, worden uw gegevens zoveel mogelijk geanonimiseerd, tenzij u in ons toestemmingsformulier expliciet toestemming heeft gegeven voor het vermelden van uw naam, bijvoorbeeld bij een quote.

In een publicatie zullen anonieme gegevens of pseudoniemen worden gebruikt. De audio-opnamen, formulieren en andere documenten die in het kader van deze studie worden gemaakt of verzameld, worden opgeslagen op een
De onderzoeksgegevens worden bewaard voor een periode van [10 jaar]. Uiterlijk na het verstrijken van deze termijn zullen de gegevens worden verwijderd of worden geanonimiseerd zodat ze niet meer te herleiden zijn tot een persoon.
De onderzoeksgegevens worden indien nodig (bijvoorbeeld voor een controle op wetenschappelijke integriteit) en alleen in anonieme vorm ter beschikking gesteld aan personen buiten de onderzoeksgroep.

Tot slot is dit onderzoek beoordeeld en goedgekeurd door de ethische commissie van de faculteit BMS anderszins.

Vrijwilligheid
Deelname aan dit onderzoek is geheel vrijwillig. U kunt als deelnemer uw medewerking aan het onderzoek te allen tijde stoppen, of weigeren dat uw gegevens voor het onderzoek mogen worden gebruikt, zonder opgaaf van redenen. Het stopzetten van deelname heeft geen nadelige gevolgen voor u of de eventueel reeds ontvangen vergoeding.
Als u tijdens het onderzoek besluit om uw medewerking te staken, zullen de gegevens die u reeds hebt verstrekt tot het moment van intrekking van de toestemming in het onderzoek gebruikt worden.
Wilt u stoppen met het onderzoek, of heeft u vragen en/of klachten? Neem dan contact op met de onderzoeksleider.

Joost Veenstra
Tel. 0640545214

Voor bezwaren met betrekking tot de opzet en of uitvoering van het onderzoek kunt u zich ook wenden tot de Secretaris van de Ethische Commissie van de faculteit Behavioural, Management and Social Sciences op de Universiteit Twente via ethicscommittee-bms@utwente.nl. Dit onderzoek wordt uitgevoerd vanuit de Universiteit Twente, faculteit Behavioural, Management and Social Sciences. Indien u specifieke vragen hebt over de omgang met persoonsgegevens kun u deze ook richten aan de Functionaris Gegevensbescherming van de UT door een mail te sturen naar dpo@utwente.nl.

Tot slot heeft u het recht een verzoek tot inzage, wijziging, verwijdering of aanpassing van uw gegevens te doen bij de Onderzoeksleider.

Door dit toestemmingsformulier te ondertekenen erken ik het volgende:

1. Ik ben voldoende geïnformeerd over het onderzoek door middel van een separaat informatieblad. Ik heb het informatieblad gelezen en heb daarna de mogelijkheid gehad vragen te kunnen stellen. Deze vragen zijn voldoende beantwoord.
2. Ik neem vrijwillig deel aan dit onderzoek. Er is geen expliciete of impliciete dwang voor mij om aan dit onderzoek deel te nemen. Het is mij duidelijk dat ik deelname aan het onderzoek op elk moment, zonder opgaaf van reden, kan beëindigen. Ik hoef een vraag niet te beantwoorden als ik dat niet wil.

Naast het bovenstaande is het hieronder mogelijk voor verschillende onderdelen van het onderzoek specifiek toestemming te geven. U kunt er per onderdeel voor kiezen wel of geen toestemming te geven. Indien u voor alles toestemming wil geven, is dat mogelijk via de aanvinkbox onderaan de stellingen.

3. Ik geef toestemming om de gegevens die gedurende het onderzoek bij mij worden verzameld te verwerken zoals is opgenomen in het bijgevoegde informatieblad.	JA	NEE
4. Ik geef toestemming om tijdens het interview opnames (geluid/ beeld) te maken en mijn antwoorden uit te werken in een transcript.	□	□
6. Ik geef toestemming om mijn antwoorden te gebruiken voor quotes in de onderzoekspublicaties.	□	□
7. Ik geef toestemming om de bij mij verzamelde onderzoeksdata te bewaren en te gebruiken voor toekomstig onderzoek en voor onderwijsdoeleinden.	□	□
Ik geef toestemming voor alles dat hierboven beschreven staat.	□ □	

Naam Deelnemer: Naam Onderzoeker:

Joost Veenstra

Handtekening: Handtekening:

Datum: Datum:

10.3 Data-set integrated care networks

* This dataset entailed more information but is removed because of privacy-reasons from the respondents.

Indeling op type zorg/doelgroep	
Type zorg	Aantal
Beroerte/CVA	72
Dementie	77
Austisme	24
NAH	17
Palliatieve zorg	63
Parkinson	70
Reuma	19
MS	13
Chronische pijn	20
Kinderpaliatieve zorg	4?
Acute zorg	11
PATZ	210 groepen
Integrale vroeghulp	19