

Master's thesis – master Innovation Sciences

The role of intermediary actors in inclusive innovation

Master Thesis Innovation Sciences

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Abstract

One of today's most pressing challenges countries face, is inequality, from a societal perspective and an economic perspective. Scholars argue that sustainable growth is hampered by inequality. Therefore, attention is asked for inclusive innovation. This study uses a constructivist notion, that states that the negative effect of a having diverse alternative meanings to crucial concepts should not be underestimated. Therefore, intermediary actors should play a role in bridging different viewpoints together. The overarching aim of this study is to look at the different roles ascribed by key players to intermediaries in stimulating inclusive innovations. To fully understand this role, the study focusses first whether there is a consensus is on what inclusive innovation is and how it can be implemented.

A framework is developed in which the different meanings ascribed towards inclusive innovation can be analysed: *what* kind of inclusion actors are targeting and *how* they want to achieve this inclusion. The framework is theoretically founded. The data of this study is based on qualitative interviews with key stakeholders of the Economic Board Zuid-Holland (EBZ).

The main finding from this study is that the viewpoints on inclusive innovation are very diverse. There is no correlation between actors type and their view on inclusive innovation. So from this, the study concludes that the basic conditions for a successful inclusive innovation strategy is not in place. The roles ascribed towards intermediaries vary too: varying from no role, a facilitator of learning role, and third a more pro-active role.

The study has theoretical implications. The most important is that important typologies must be supplemented with a basic role in organizing some kind of congruence in thinking between key stakeholders. In this role the intermediary could play a role in giving a clear description in what inclusive innovation entails, organize a process that helps bring synchronicity in opinions and facilitates a learning process between key stakeholders.

This EBZ faces a challenge, formulated in a critical report of the OECD to integrate inclusion in her strategy; facing a variety of meaning attributed to the *why*, *what* and *how* regarding inclusiveness and in the attribution of the role EBZ should play in this regard. A dilemma, which only can be overcome if EBZ is able to develop a more initiating, leadership-like role. It's urgent, especially in times of huge shortages in the labor-market, being a direct threat to sustainable growth of the economy in South-Holland.

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1. Introduction

One of today's most pressing challenges countries face is inequality (Planes-Satorra, S. & C. Paunov, 2017). In developing countries the steady overall economic growth masks the decline in economic and social welfare at the bottom (Chataway et al. 2014). Innovation causes economic growth, but also causes inequality. Inequality is not only a problem for developing countries, it is also a rising problem for OECD countries, where in the past 30 years income disparities have risen to an extreme level. In the OECD area, the richest 10% is earning almost ten times more than the poorest 10% (OECD, 2015a). More and more evidence shows that the growing inequality is not just morally unfair but also socially, by reducing cohesion and increasing conflict, and economically damaging, by constraining investment and ultimately consumption (Stiglitz 2012, Wilkinson & Pickett 2010).

In order to decrease inequality, policymakers are looking for ways to achieve inclusive growth. Inclusive growth is economic growth which creates opportunities for all parts of the population and distributes the dividends of newly increased prosperity fairly across society. This can be in monetary but also in nonmonetary terms (Planes-Satorra, S. & C. Paunov, 2017). Policies such as tax, social and labour market and education policies have traditionally been used to increase inclusion, but have failed to achieve inclusive growth.

One ingredient to growth that has been largely ignored in discussions about inclusive growth is innovation. Innovation is often seen as a driver of growth, leading to a view of innovation that centres around large scale technical transformation of nations (Lundvall et al., 1988). However, this type of innovation has centred around the economic core of nations, and not around the periphery, therefore causing inequality and exclusion (Foster & Heeks, 2015).

Recently, academics and policy makers are starting to look at inclusive innovation (OECD, 2020). George et al. (2012), defined inclusive innovation as: *'the development and implementation of new ideas which aspire to create opportunities that enhance social and economic wellbeing for disenfranchised members of society'*. Whereas conventional views of innovation see progress generalized by economic growth, inclusive innovation, in contrast, sees progress in terms of active inclusion of those who are excluded from the mainstream of development (IDRC, 2011; Foster & Heeks, 2014).

What is important to stress it that inclusive innovation is not only in need of more attention to policy makers because of the societal or political reasons, but also because of economic reasons. It can be seen as a characteristic of the desired process of the innovative initiatives, tapping in untapped economic potential from the otherwise excluded group (George et al., 2012). Important to bear in mind in an era in which all economic sectors face a shortage in the labour force (OECD, 2021).

There have been multiple attempts to conceptualize inclusive innovation and to create different categories within them. According to Heeks (2013), there can be levels in the amount of inclusiveness. He calls this the ladder of inclusive innovation. The theory of innovation systems states that innovation is not a linear process but that especially the context, the institutions, around the innovation matter (Lundvall, 2008). Following this, researchers say that to stimulate inclusive innovation policy makers should look at the infrastructure surrounding the innovation (Heeks, 2013; Longworth et al., 2019), and that inclusive innovation can be

improved by aligning the institutions around innovation towards a system that facilitates inclusiveness. According to Johnson & Andersen (2012), one way to stimulate inclusive innovation is to improve knowledge exchange in institutions around innovation towards users from excluded groups. They say that to stimulate inclusive innovation ‘interactive learning spaces’ need to be made.

However, according to Levidow & Papaioannou (2018), inclusion can mean different things for different people. One person could have a very different view about what is inclusive than someone else, and therefore have alternate solutions about how to achieve inclusiveness. Remedies towards inclusion thus differ and competing normative assumptions can exist, and thus the framing of the concept of inclusive innovation alters the conditions for which policies are inclusive. Hence, merely ticking boxes of inclusive innovation, e.g. stimulating the ‘poor’, and merely looking at the context surrounding inclusive innovation, will not suffice. This raises the question how these different views can be brought together.

Recent research on innovation suggest that intermediaries can play an important role in bringing different viewpoints together. Intermediary actors connect actors and transfer knowledge and technology between them rapidly and viably (Villani et al., 2017). Research about intermediary actors says that they are key catalysts that speed up change (Kivimaa et al, 2019; Page & Fuller, 2021). The role of intermediary actors is especially highlighted by researchers for system – level transitions (Kivimaa, 2014; Hodson et al., 2013). However, literature has not yet discussed how intermediaries can bridge different perspectives of stakeholders in relation to inclusive innovation. There is a need for a deeper understanding of what role intermediaries can play in bridging these perspectives, and how intermediaries can therefore stimulate inclusive innovation successfully. Hence, studying the contradicting normative viewpoints about inclusive innovation, and viewpoints about the role of intermediaries in bringing these together seem necessary to increase inclusion and thus decrease inequality. Therefore, the question this research tries to answer is:

What roles are ascribed to intermediary actors in order to stimulate inclusive innovation in South-Holland?

To fully understand the need for intermediaries to play a role in the process of inclusive innovation, and to have a framework for evaluating the role ascribed to them, we first need to understand the context in which the intermediaries have to operate in relation to inclusive innovations. The role an intermediaries has to play is partly depending on the meaning key players attribute to the concept of “inclusive innovation”. Especially the degree of divergence or convergence in the meaning attributed is important. Therefore this study first tries to answer the following question:

Are the conditions in place for a successful strategy of inclusive innovation in South-Holland, in a way that there is a kind of consensus around key players what the meaning and importance of inclusive innovation is?

This study will try to answer these questions by looking at the case of the Economic Board Zuid-Holland (EBZ). One of the triggers of this study was a report by the OECD (2021), which critiqued the Joint Growth Agenda created by the EBZ. They stated that there was too little attention paid to inclusion in the growth agenda. The OECD stated that “that the COVID-19 crisis has highlighted the importance of addressing already existing, deeply entrenched

social inequality”. The OECD urges EBZ not only to pay attention to inclusive innovation for social reasons, but also for economic reasons: “... but addressing inequalities and mainstreaming inclusive growth throughout the agenda can ensure that everybody benefits from the region’s recovery and help make growth more sustainable.” (OECD, 2021, P.43).

The EBZ is an intermediary actor that brings together the thirty of the most important stakeholders of the economy of South-Holland, with the main goal of improving the ‘innovation climate’ within South-Holland. It is constructed based on the triple helix model, thus bridging actors from the business, education and public sector. In order to answer this research question we will look at how the different actors look at inclusive innovation and in that context find out the roles they ascribe to intermediary actors. This case is appropriate for this research because of the intermediary role of the EBZ in bringing together different stakeholders from different sectors with different viewpoints, and because of the challenge the OECD lays down for the EBZ in her recent report.

The questions will be studied by taking a constructivist approach in order to understand inclusive innovation, where we assume the importance of analysing the degree in which actors attribute different or similar meanings to innovations and their relationship to society. Research shows that actors can give different meanings to the inclusiveness of innovations as well and that it is relevant to explain the success or failure of strategies for inclusive innovation. This builds on the theory of the Social Construct of Technology (SCOT). Levidow & Papaioannou (2018) have also shown that this constructivist view helps to understand inclusion in relation to innovation. The constructivist framework learns us that when actors want to achieve a joint goal, there must be a kind of consensus between key players about the innovation process. This will be done by qualitative research, interviewing key stakeholders brought together by the EBZ and stakeholders of the secretariat of the EBZ themselves. They will be asked what meaning they give to inclusive innovation, what the role of the EBZ is now, and what they think the role of the EBZ should be in stimulating inclusive innovation. By doing this, this research will showcase different viewpoints of inclusive innovation and different viewpoints on the role of intermediaries with respect to inclusive innovation. These answers, combined with the literature on inclusive innovation and intermediaries, could then answer the research question what the roles are ascribed to intermediary actors in order to stimulate inclusive innovation. Thus, greater understanding of the role of intermediaries in stimulating inclusive innovation, can in turn lead to more inclusivity and therefore less inequality.

2. Theory

The following section is structured as follow: first, the concept of inclusive innovation will be further elaborated. Second, I introduce the constructivist approach to inclusion. Third, it will be explained why intermediary actors can play an important role in stimulating inclusive innovation. Last, a framework will be presented in which the different meanings people give to inclusive innovation can be explored.

2.1 Inclusive innovation

George et al. (2012), defined inclusive innovation as: *‘the development and implementation of new ideas which aspire to create opportunities that enhance social and economic wellbeing for disenfranchised members of society’*. Inclusive innovation has been a research topic for the past fifteen years or so, for which most research is written the last ten years (Heeks et al., 2013). Many researchers claim the origins of the term are traced to Utz & Dahlman (2007), in their study on how to strengthen India’s innovation environment. Inclusive innovation explicitly conceives of a regions development in terms of active inclusion to participate in/or benefit from innovation for excluded members of society. In contrast, the standard view of innovation sees development generalized as economic growth (Foster & Heeks, 2013).

Inclusive growth due to inclusive innovation initiatives can be seen as a desired social outcome of the innovation process, targeting those individuals who otherwise would not benefit from the innovation process. But, it can also be seen as a characteristic of the desired process of the innovative initiatives, tapping in untapped economic potential from the otherwise excluded group (George et al, 2012). Concepts such as: ‘below-the-radar innovation’, ‘grassroots innovation’, ‘BoP innovation’, ‘innovation platforms’ and many more (Cozzens & Sutz 2012; Hall et al., 2012; Heeks, 2013; Ramani et al. 2012; Smith et al., 2014), are closely related and often fall under the main terminology ‘inclusive innovation’.

Studies about inclusive innovation often arose from the field of innovation studies. In the system perspective of innovation studies, there is an emphasis on knowledge exchange and collaboration from a variety of actors, thus there need to be institutions around this system who optimally facilitates this (Klerkx & Leeuwis, 2009). Therefore, most models of inclusive innovation are based on the system models, with inclusiveness added. For example, the inclusive innovation readiness index (Heeks et al., 2013) states that inclusive innovation can best be supported by changing the institutions around the innovation. This follows the model of innovation system (Lundvall, 1988) closely, only adding inclusion to it. These new inclusive innovation models also stress the importance of knowledge exchange, but adds on to it by highlighting the importance of knowledge exchange specifically towards the excluded group (Johnson & Andersen, 2012). Longworth et al. (2019) state that to improve inclusive innovation barriers towards knowledge exchange must be broken down and institutions that facilitate knowledge transfer should be put in place. According to Planes-Satorra & Paunov (2017) best practices to improve inclusive innovation can be region specific, and their underlying success factors can thus be conditional. These models stresses the importance of the context around inclusive innovation.

An influential framework for studying inclusive innovation is the so-called ladder of inclusive innovation (Heeks et al., 2013). It states that inclusion can be achieved in many ways and not only by including an excluded group to the innovation process. The ladder of inclusive innovation consists of steps, from which each succeeding step involves a gradual deepening of the extent of inclusion of the excluded group in relation to innovation. Each step accepts the level of inclusion of the step below, but extends the level of inclusion further. So, one can say, every step on the ladder of inclusive innovation is meaningful, but also that the higher the features of the innovation process stand on the ladder, the more inclusion it adds to the innovation system.

The first three steps of the ladder are about the *users of the innovation*. The first step is about intention, which states an innovation is inclusive if it wants to address the problems of a certain excluded group. The second is about consumption, an innovation is inclusive if it is adopted by an excluded group. The third step is impact, it states that an innovation is inclusive if it has a positive impact on the livelihood of an excluded group. The fourth step of the ladder is about the *process* itself, if the excluded group is included in the development of the innovation, then it is inclusive. The last two steps are structure and post-structure. They state that an innovation is inclusive when the *institutions and the framing around the innovation* allow for inclusiveness. Thus, to achieve this level of inclusiveness on the ladder, the institutions around the innovation system must be aligned and framed in such a way that it supports a whole innovation system towards inclusive innovations.

The question arises which excluded group should be given attention in inclusive innovation? Dominant attention has been given to ‘the poor, those with the lowest income defined by an amount of US dollars (Heeks et al., 2013). However, by only using the distinction of ‘the poor’, a huge group is left out. In a study of the OECD (2020), a much more all-including definition of the excluded group is given and shows what type of inequalities can arise. In the study, a distinction between three forms of inclusiveness in relation to innovation is given. First, social inclusiveness, is about expanding the group of innovators by including the underrepresented group of people in research, business, entrepreneurship and innovation activities. This can be based on ethnicity, gender, social class, income, age et cetera. Second, industrial inclusiveness, is about expanding the group of innovative activities towards less innovative firms and traditional sectors, this can be sectors specific, for example the agricultural sector versus the life science sector. It can also be firm specific, for example multinationals versus small medium enterprises. Last, territorial inclusiveness, is about including lagging and less innovative regions to narrow the gap with leading innovation regions. Inclusive innovation should thus not only be about including certain people, but also things, such as sectors and territories.

2.2 Which inclusive innovation?

The different models of inclusive innovation described above all presume that inclusive innovation is relatively unproblematic in nature. If certain steps are taken, then inclusion can be achieved. Perhaps the best example of this is the ladder of inclusive innovation. This understanding of inclusion has recently been contested by authors such as Levidow & Papaioannou (2018), who put forward a constructivist understanding of inclusion that I will follow in this thesis. In essence, their argument is that people (can) have altering viewpoints about inclusive innovation: what is inclusive according to one group of people, may be exclusive to another. So, the extra dimension of using the constructivist frame work is that (inclusive) innovation is not a “mechanic thing”, using the right buttons and then the system works, but an awareness of the importance of a common understanding, similar viewpoints on what inclusive innovation is.

This builds on a constructivist understanding of technology, that has been previously put forwards by Bijker and Pinch (1984). They argue that the developmental process of a technology is a process of variation and selection. Because of this, the meaning that social groups who are concerned with the technology, give to specific technological problems is

important, as problems which need to be solved are only problems if people call them as such. Technology is culturally constructed and interpreted and thus not deterministic, which Bijker and Pinch call 'imperative flexibility' (Pinch & Bijker, 1984; Bijker, 1987). Imperative flexibility shows that neither an technological artifacts' identify, nor its success or failure, are intrinsic properties of the artifact, but rather that is subjective to specific social norms and views (Bijker, 1996; Djordjevic et al., 2016.). From this follows that if the identify and success and failure of innovations can be interpreted differently, that also its inclusiveness can be interpreted differently.

The SCOT framework highlights the importance of relevant social groups and the meaning they give to a specific artefact (Pinch & Bijker 1984). They describe the developmental process to consist of conflicts: conflicting technological requirements from the relevant social groups, conflicting solutions and even moral conflicts. The best technology is formed by a stabilization process where in the end the norms and values of all relevant social groups are taken into account. Thus, it can be said to form the best technologies, the norms and values of as much relevant social groups should be taken into account. This way of thinking is called the democratization of science (Kelly & Farahbakhsh, 2013).

Levidow & Papaioannou (2018) take such a constructivist approach to inclusion, by showing that actors not only (can) ascribe different meanings to innovation, but also inclusion. They say that although they agree that the context plays a crucial role, the framing of it as an external condition downplays the institutional responsibility for inequitable conditions. They argue that normative viewpoints how institutions should be designed can alter inclusiveness. According to Jiminez (2008) the best way to improve inclusive innovation can differ depending on the underlying political stances and societal arrangements.

Levidow & Papaioannou (2018) argue that normative assumptions about inclusive innovation relate two distinct theoretical camps about what social justice should be, namely that of the liberal-individualist and that of the social-collectivist. From a liberal-individualistic view, equity is framed as a fairer individual distribution of societal benefits versus their costs. That means that more high-tech investment, more and better skill training and cheaper products will lead to greater access for the excluded group. This view is in line with neoliberal political agendas. From a social-collectivist view, equity is framed as a basis to collectively constitute social benefits along more transformative lines. From this assumption, producers and consumers should seek fair and equal relationships for knowledge exchange as a mean to battle the dominant market power. The social-collectivist camp highlights the importance of collective action (Hargrave & van de Ven, 2006) to transform the constitutive conditions which sustain inequity. They argue that such transformative agendas define societal goods and bads more accurately (Martin, 2013). Therefore, by contesting the dominant neoliberal innovation agenda, power conflicts will arise. Thus, the social-collectivist camp contest the dominant neoliberal innovation agenda, and finds it not inclusive, whilst the liberal-individualist camp finds it inclusive.

By showing inclusive innovation through two different normative assumptions, Levidow & Papaioannou (2018) show that the way one views what is inclusive and how inclusion comes about, different views arise what policy measures should be taken. Therefore, different viewpoints about inclusive innovation and even between the distinctions of social, industrial and territorial inclusiveness exist. These different interpretations of innovations and

their inclusiveness can be explained with the constructivist theories of innovation, such as the Social Construct of Technology (SCOT) (Pinch & Bijker, 1984).

Thus, this constructivist framework can be linked to inclusive innovation in two ways. First the concept of imperative flexibility shows that views about inclusive innovation can – and most likely will - differ between stakeholders. And not taking into account this likelihood will hamper successful (inclusive) innovation at forehand. And thus, that the different interpretations of the relevant stakeholders should all be taken into account to achieve the broader goal of improving inclusive innovation. This being so, it raises the question whether inclusive innovation could benefit from actors who can act as brokers and bridge the different viewpoints of these actors.

2.3 Intermediaries

Intermediaries are organizations that work to enable cooperation between different parties to connect each other into bilateral or multilateral relationship (Dalziel, 2010). Intermediaries have been found to be a bridge between various actors where interaction between them is difficult due to high transaction costs (Kivimaa et al., 2019). The role of intermediaries is also highlighted when problems arise in communication because of differences in culture, interest or knowledge exchange. Researchers use different notions for intermediaries, for example ‘middle actors’ (Parag & Janda, 2014), ‘boundary spanners’ (Smink et al., 2015; Tisenkopfs et al., 2015), and ‘brokers’ (Winch & Courtney, 2007). Intermediaries are often used in the digital sector, in their role as search engines such as ‘Google’ and ‘Facebook’ (Nielsen & Ganter, 2018); in the financial world, in their role by facilitating trade (Ahn et al., 2011); and for stimulating innovation (eg Boon et al, 2008; Klerkx & Leeuwis, 2009; van Lente et al., 2003).

The role of intermediary in innovation systems have been widely researched. For innovations to be supported and succeed, different actors need to collaborate and align their activities (Klerkx & Leeuwis, 2009). From this perspective, collaboration between actors is crucial, and hence it is no surprise that intermediaries are thought to play a role in making innovation systems function properly. Intermediaries form the link between firms, research institutes, the demand side and the infrastructure of the innovation system (Boon et al., 2008, Howells, 2006).

Three basic functions arise (Klerkx & Leeuwis, 2008): 1) demand articulation, articulating the specific innovation needs and the corresponding demands in terms of technology, knowledge, funding, policy et cetera; 2) network facilitating, facilitating networks and linkages between different relevant actors, which can consist of scanning, scoping and matchmaking of possible co-operators (Klerkx & Leeuwis, 2009); 3) innovation process management, which consist of aligning and learning of the multi-actor network and facilitate learning and cooperation between them.

Intermediaries, however, can also take a more involved role, by focusing on the transfer of specific technologies between different firms and organisations. With the emphasis on transferring existing technologies and finding new uses in different sectors and industries (Hargadon, 1998). This stresses that intermediaries need to have more complete knowledge about the various technological areas in which they operate, and shows the bridging role it has between previously unrelated or unconnected groups (Howells, 2006). The role of

intermediaries is seen as front end, as they intermediate before the innovation process. However, some researchers even argue the role of intermediaries goes even further (Hayne & Vance, 2019), and say intermediaries have roles as standard setters and evaluators of technologies after it has been transferred.

If we interpret intermediaries through a constructivist lens, we can see that intermediaries may play a role in bringing together groups that attribute different meanings to a technology. As such, intermediaries, this study hypothesizes, could act as mechanism to foster discussion about different meaning of inclusiveness in the context of innovation, which Levidow & Papaioannou (2018) has pointed out exist. Intermediaries are actors that can bring actors with different meaning together, and perhaps even bring different meaning into the conversation with one another. Having an active participation in the innovation process by bringing different meanings into the conversation, the role of intermediaries could, and perhaps should, go beyond the scope of the role of intermediaries in the framework of Klerx & Leeuwis (2008). In this role intermediaries could decrease conflict about what measures should be taken to improve inclusiveness, plus it could enhance learning between different organizations. Martiskainen and Kivimaa (2018), build onto this and say that intermediaries can have clear normative assumptions and steer organizations through their translation.

Another role intermediaries in inclusive innovation could play is that of 'relational work' (Moss, 2009). Through this role intermediaries connect specific and local innovation projects, often grassroot innovations (Hargreaves et al., 2013) with one another. Specifically, they can identify common issues and problems encountered in multiple local projects and support future development by sharing this knowledge widely, helping subsequent projects benefit from this accumulated knowledge and experience. By taking on this role the intermediaries are operating more at the regime level, then the roles explained by Klerx & Leeuwis (2008), where they are operating more at the system level (Kvimaa et al., 2019).

From this we can see that although some of the roles of the framework of Klerx & Leeuwis (2008) are applicable to the roles of intermediaries in inclusive innovation, there are some extra roles which could be applicable that are not in their framework. The roles of the framework of Klerx & Leeuwis (2008), that are applicable is that of demand articulation. The intermediary can take different demands about inclusive innovations of various stakeholders and create an agenda (Boon et al., 2008). The entries on the agenda are weighed, discussed and in the end the intermediary can chose which action to pursue to take into account the values and norms of the most stakeholders as possible. When they are pursued, they are in turn issued to the stakeholders, for example in the form of creating taskforces for a specific topic or setting standards for specific inclusive technologies. What we see here is the learning process in intermediaries about characteristics of inclusive innovation which should be pursued. Also the role of network facilitator and via technology transfer, we can see how this role could also be taken on.

However, we also see some roles for intermediaries that are not in the framework of Klerx & Leeuwis (2008). For example, the role of relational work and that of bringing different meanings of inclusiveness of the technology together, or even bring their own meaning in to the conversation. Therefore, it is likely – but needs more research as will be shown in the conclusions – that a more specific or elaborate framework is needed to explain the role of intermediaries in inclusive innovation.

2.4 Framework for inclusive innovation

As is said before, in order to answer the research question, we first need to look at the different meanings actors give towards inclusive innovation, and after in that context can we look at the different roles which can be ascribed to intermediaries in inclusive innovation. In order to analyse these different meanings, a framework must be made in which the meaning of the actors can be categorized. This study will look at inclusive innovation in two dimensions: the first, described about *what* kind of inclusion the actors are targeting, which is based on the framework of the OECD (2020). The second dimension is about *how* these actors want to achieve inclusive innovation, and is based on the model of Heeks et al. (2013).

This framework is constituted the following way: horizontally it shows what kind of inclusion the actors are targeting, consisting of *social*, *industrial* and *territorial* inclusion. And vertically it shows the six steps of the ladder of inclusive innovation: *intent*, *consumption*, *impact*, *process*, *structural* and *post-structural*. So in the end it shows for every kind of inclusion they are targeting, the way they want to achieve this inclusive innovation. This can be seen in the framework below.

These two dimensions can be put together in one framework, because they shows important aspects of inclusive innovation, namely what kind of inclusion actors are targeting and how they want to achieve inclusive innovation. More important from a conceptual point of view, these dimensions can be put together, because they don't have any conceptual overlap with each other, and are perfectly complementary: the framework combines the *what* and the *how*.

Tabel A: Framework for inclusive innovation

	Social	Industrial	Territorial
Intent			
Consumption			
Impact			
Process			
Structural			
Post-Structural			

3. Methodology

3.1 Research design

Based on the constructivist lens on inclusive innovation, this study looks at the different meanings give towards inclusive innovation and the role actors ascribe to intermediaries in enabling (or hindering) inclusive innovation. To answer this question this study will look at inclusive innovation through two dimension, based on the framework discussed above. Importantly to note, by using this framework this research still follows the constructivist approach, but creates a roster in which actor types can be placed in. Using this framework the divergence of convergence in meanings given toward inclusive innovation can be analysed.

Additionally by analysing how specific actors respond to the question, correlations may be found between actor types, regions they operate in, the business they are in et cetera.

Then this study will look at the current role of the EBZ and look at the different viewpoints of stakeholders about what the role of the intermediary should be in relation to inclusive innovation. Important to know is that, this study will not use an existing framework to analyse the different roles ascribed to the EBZ. Instead, it will use grounded theory in order to get a complete as possible view on all the roles ascribed to the EBZ in enabling inclusive innovation. Grounded theory was established by Glaser & Strauss (1967) to acquire necessary interpretations from qualitative data. The tools creating grounded theory are explained by Bryman (2016) to consist out of theoretical sampling, coding, theoretical saturation and continuous comparison. A central aspect of this theory is an iterative approach, meaning there is coaction between data collection and data analysis (Buchanan & Bryman, 2007). This means that categories and concepts are being created following the data, and these concepts and categories are then used to explain the results found in the data. Following the results of the ascribed roles to intermediaries in inclusive innovation, these roles will be related back to theories about intermediaries in innovation.

The data of this study is based on qualitative interviews with key stakeholders from the EBZ. This study uses a qualitative research method for various reasons. For studying economic inequality most often big data sets are used, which are then studied quantitatively. But, this study is interested in looking at different perspectives of inclusion in relation to innovation, and therefore is looked at through a constructivist lens. This varies between actors, and can thus not be studied quantitatively. Because the EBZ acts as a connector between various partners, their role of bridging actors in relation to inclusive innovation can be analysed easily. By interviewing different partners about inclusive innovation and the role of intermediaries in improving inclusiveness in relation to innovation, the potential role of intermediaries can be analyzed closely. Qualitative interviews are the best way to analyze this because it can bring out different meanings easily, and then go into depth about them, specifically because these meanings cannot be found elsewhere.

Specifically, this study interviewed 16 key stakeholders who are brought together by the intermediary Economic Board Zuid-Holland (EBZ), these actors are all innovating themselves or are actively trying to stimulate the innovation climate. The way they act as intermediary, is by constructing and manage taskforces on specific topics and by holding four yearly conferences with all board members. In order to get a as complete image of the different meanings given to inclusive innovation as possible, this study will interview board members of the EBZ and members of the secretariat of the EBZ. In the end, in this study fourteen board members of the EBZ where interviewed and two members of the secretariat of the EBZ, this brings it to a total of 16 interviews. These interviews where around 45 minutes each, from which the shortest was 25 minutes and the longest 55 minutes. This study uses a standardized semi-structured interview guide, which allows for a guided, but open, conversation (Schmidt, 2004). The interview guide can be found in Appendix A.

The analytical strategy in a semi-structured interview can be presented in multiple stages. First, the framework is set up from which we try to understand the context of inclusive innovation in the area the actors are operating, to fill this framework I asked the interviewees questions about *which* types of inclusiveness they are targeting and *how* they do this. After this

the interviewees were asked what the current role of the EBZ was and what it should be according to them to stimulate inclusive innovation. The stakeholders will also be divided by their sector in the triple helix and the taskforce they are in. After this case overviews can be produced based on the respective categories and similar viewpoints are linked together. This study will then look for patterns about viewpoints on inclusive innovation and intermediaries and look if they indeed differ between stakeholders. Lastly, in the analytical stage these will be examined and linked back to the existing theories about different normative viewpoints about inclusive innovation and the role intermediaries could have.

3.2 Research quality

According to LeCompte & Goets (1982), the quality of a research depends on the internal and external reliability and internal and external variability. Internal reliability is dependent on the inter-observer consistency, and often refers to whether the observations of different researchers are the same. Because this study is carried out by one researcher, the inter reliability is sufficient. External reliability is about the degree to which the research can be replicated. Because the interviews will be semi-structured, an interview guide is created and added to the Appendix. So each interview could be replicated, and should have similar results if similar stakeholders are interviewed.

Internal validity depends on whether the observations of the research are in line with the theoretical idea that is being developed (Bryman, 2012). This is being done by interviewing the most important stakeholders brought together by the EBZ, by answering the two sub-questions, and answering the research question based on the sub-questions linked back to existing theories. External validity is depend on ensuring the generalizability of the results to other social settings (LeCompte and Goetz, 1982). This research focusses on all important stakeholders in South-Holland and the EBZ as intermediary. Therefore, this research gives a good overview on the viewpoints on inclusive innovation and the role of intermediaries in relation to innovation in South-Holland. In order to increase its generalizability, future research should focus on other regions.

4. Results

This study looks at the different meanings important actors of the innovation climate in South-Holland give to inclusive innovation. The actors are plotted on a framework in which they are analyzed, which is shown below. The results of this research will be presented by using colours to identify how many interviewees share a specific meaning. It is very important to bear in mind that the more uniform the spectrum of colours and darker the shades are, the more consensus has been found. This will be a starting point for the analyses, regarding the complete picture. Second, there will be a focus on particular fields in this framework, because they seem to represent a kind of consensus on the level of these particular fields.

Table B: Framework inclusive innovation South-Holland

	Social	Industrial	Territorial
Intent	Almost all actors: A diverse own team Two actors: automation leads to exclusion One actor: Giving computers to certain scholars Few actors: Creating products that are available to everyone	Several actors: Should also focus on sectors other than Technology	Two actors: International local projects, sustainability One actor: local projects Rotterdam One actor: Automation technology (harbor)
Consumption	Few actors: Creating products that are available to everyone	Nothing	Two actors: Subsidies targeting innovation for certain districts
Impact	Few actors: Digital inclusion One actor: Focusing creating medicine for woman as well Two actors: Frugal Innovation	Nothing	Two actors: Subsidies targeting innovation for certain districts
Process	Almost all actors: a diverse team One actor: Social innovation	Two actors: Stimulate innovation SME	One actor: Harbor sector
Structural	Two actors: Innovation knowledge should be widely available Several actors: Reskilling certain people	Few actors: Reskilling towards certain sectors Few actors: Changing viewpoints of certain sectors to attract people	One actor: Mechanisms innovation focused on Tu Delft One actor: Mechanism innovation focused on the Randstad
Post-structural	One actor: Economic system bias towards certain people	One actor: Economic system build around innovation with bias towards Technology sector	One actor: Economic system bias towards Tu Delft

4.1 Main findings

The main finding that can be drawn from this study is that the viewpoints on inclusive innovation are very diverse, with a few exceptions. The viewpoints are scattered through the framework, not because all actors mention all dimension, but because all actors appear to have specific views. A second main finding is that there are no clear correlation between actor types and their meaning given to inclusive innovation. These findings relate to the first question this research tries to answer, and show that the basic conditions for a successful innovation strategy are not in place, and therefore warrant that there is the need for an actor which can bring these views together. Third, is that the roles that the interviewees ascribe to intermediaries in inclusive innovation are also diverse, ranging from no role to a strong guiding role

The results show diversity in what inclusion the interviewees want to achieve, in the way they want to achieve this and in terms of how those forms of inclusion are spread across the different actors, so I did not find a pattern where all interviewees from an actor type (e.g. public sector) had the same view on inclusion and or the role of intermediaries. The viewpoints are diverse in that there are no clear patterns, which Levidow & Pappiaonou (2018) suggested there were, but that there are many different viewpoints each actor can have.

Looking more specific at certain viewpoints it shows that almost all interviewees target social dimensions of inclusive innovation whereas about half of the interviews also target either industrial or territorial dimensions of inclusive innovation. So, despite the scattered pattern, the interviewees see social inclusiveness as the main focus of *what* kind of inclusion they are targeting. Interestingly, there are no actors who only focus on one dimension of *what* kind of inclusion.

Another interesting finding is that there are two sections in the framework where almost all of the actors can be categorized in. They are both in the social dimension and in the intent and the process step off the ladder of Heeks et al. (2013).

In this study the interviewees are from the business sectors, from the public sector and from knowledge institutions. Interestingly, this study has not found correlation between the viewpoints of actors and the sector they are working in. For example, some actors of the public sector can be mostly categorized in the social dimension and on the lower levels of the ladder, while other actors from the public sector can be categorized in all dimensions and are mostly in the higher levels of the ladder.

The actors this study looks at are divided in certain taskforces within the EBZ. In these taskforce the actors focus on a specific issue and have shared goals they want to achieve. For example in “Human Capital”, the parties commit themselves to firm objectives concerning the (re)training of personnel, the guidance of employees from work to work and the attraction of international talent. Because of this it would not be strange to assume that the actors within these taskforces have similar viewpoints. But again, the data does not show any correlation between the taskforce the actor is in and their meaning given towards inclusive innovation. For example, some actors in the “Circulaire Economie” taskforce focus almost primarily on the social dimension, while others focus on the territorial dimension and industrial dimension as well.

These findings show confirmation on the constructivist view on inclusive innovation. While using semantically the same language about inclusive innovation there are indeed many diverse viewpoints about inclusive innovation. To understand the role that they ascribe towards intermediaries in inclusive innovation, these diverse meanings will be further laid out in the following section,

4.2 Viewpoints on inclusive innovation

In the following section I will show the diversity for every type of inclusion: *social*, *industrial* and *territorial*. Within these dimensions I will describe in more detail how the interviewees want to achieve those types of inclusion if that was noted. By doing this I show how the framework above was filled in and give more in depth analysis about how I came to the main findings.

4.2.1 Social inclusiveness

As noted before, all but one actor focus on social inclusiveness in innovation. These actors all said they focus on gender and ethnicity, so in this area viewpoints are very similar. For example an interviewee who works at an R&D company mentioned that “ we try to look not only at gender but also at other nationalities in our innovation teams” - Interviewee 7. Such activities can be understood as being socially inclusive because they target specific actor groups, and as being inclusive in terms of process by including excluded groups in the innovation process. This was the type of inclusion that was found most often (hence the dark brown color in Table B). Another interviewee, a policy advisor of a large company mentioned that “the figures show that we have a fairly middle aged white male dominated distribution, we have to do something with this.” - Interviewee 2. Because these activities are not around the innovation teams, this can be seen at the intent level of the framework.

Beside gender and ethnicity, the interviewees also target other types of social inclusion, for example along the line of income, education level, religion, age, and character traits. So although there seems to be an kind of consensus regarding the importance inclusion in terms of social inclusion, the way interviewees define this concept, shows again a diversity in interpretation. Most interviewees define social inclusiveness in a different way. Besides that – in line with the second conclusion in the paragraph main findings - there is no correlation found between actor type and what kind of people they focus on. For example, we cannot say that people that work in the public sector all focus on gender, ethnicity and education level.

Looking at how these interviewees want to achieve social inclusion, we see that almost all actors try to achieve at the intent and process level. Interestingly, the way they operationalize these two levels show resemblance. These interviewees say they want to achieve this at the intent level, by creating a diverse own team. They focus on the process by stating that research and development teams should consist of a diverse group of people, as this would increase innovation output.

Some actors focus on the consumption level and state that in order to achieve inclusiveness, products should be made that are available to everyone. They say they often focus on the cost aspect of the innovation and should thus be affordable to everyone. The actors who say that are from all three sectors of the triple helix, and thus we again see no clear pattern.

Other actors focus on the impact level, and state multiple ways to achieve inclusiveness. A few actors state that digital inclusion is important. They highlight the importance of the digital revolution and making sure that no people are left behind, for example, one employee working in the public sector said that “with innovations, it is often older people who have difficulty keeping up. Because of the digital revolution, we really have to take that into account. We are now thinking about that, setting up special projects” – Interviewee 10 . One actor says that in order to achieve inclusiveness, in research for medicine, people should also look at the effects specific medicine have on woman, instead of only men. Two more actors state that to achieve inclusiveness, one has to focus on frugal innovation. Creating cheap products, so that the innovation is widely available to all.

Some actors try to achieve inclusiveness by stating that knowledge streams should be accessible to everyone, and that the system should be altered in order to do this. They state that some knowledge about innovation is hard to find when people are lower educated. In order to achieve inclusiveness in relation to innovation, this knowledge should be widely available to everyone. So changes should be made at the system/structural level. Some actors from the “Human Capital” and “Circulaire Economie” taskforces state that certain people should be reskilled so they have more opportunities. For example, one interviewee active in the taskforce “Human Capital” mentioned that “people with a migrant background are less inclined to choose a technical education and more inclined to choose an economic education.” – Interviewee 9. This interviewee argues that if these people switch towards a technical education they are much more like to be included. But, other actors from these taskforces only focus on the process level or lower. Again, there are no clear patterns here.

Lastly, one actor (Interviewee 9) stated that in order to achieve inclusiveness we should look at how our economic system is built and the way we frame innovation. According to this actor, the way we frame how our innovation system is built, leads to a specific bias to white, higher educated people. If we truly want to achieve social inclusion, we should frame how our innovation system is built differently.

These results highlight the diversity of the meanings the interviewees give to social inclusion, and confirms the constructivist notion of this study. Whilst most people focus on gender and ethnicity, and focus on the intent and process level, we also found a variety of other ways how the interviewees view social inclusion and how they would go on to achieving it. This supports my notion that, while almost all of the interviewees focus on social inclusion, there is still a lot of diversion between the viewpoints they have. What looks like consensus on this particular topic, appears to be, on a conceptually deeper level, a collection of diverse meanings.

4.2.2 Industrial inclusiveness

Interviewees highlight different types of industrial inequalities that require inclusive innovation, including inequalities between different sectors, or between small and large

companies. For example, one interviewee active in the public sector mentioned that “when you talk about the power of the big companies. Then I think that if we want to play a bit of a levelling role in the province, you also have to be able to give the smaller companies opportunities for our subsidies.” – Interviewee 5. A little over half of the actors were targeting inclusion in the industrial dimension. However, there is no clear pattern in the area they operate, the taskforce they are in or the type of actor they are in the triple helix and what they understand under industrial inclusiveness.

Several interviewees mentioned there is too much a focus on the technology industry, and that is important to also look at other sectors, especially for innovation. These interviewees don't really explain how this should be done or how they address this themselves, so therefore these viewpoints are put at the intent level. Again, we see actors from all parts of the triple helix with this viewpoint, and we don't see other patterns.

Interestingly, we now see the only two sections in the framework where none of the interviewees say anything about. This is at the consumption and the impact level. None of the actors say that industrial inclusiveness should be achieved by creating products that target specific sectors or firms and or have impact on these sectors or firms

Some actors say something about achieving territorial inclusion at the process level, for example one actor mentioned “They developed a lot of innovations that they could apply in their own environment. Ordinary companies also just need new innovation.” – Interviewee 16. They note that specific attention need to be paid to include more small-medium enterprises in the innovation process and that there should be taken measures to not only focus on multinationals when investing and or targeting innovative activity. Other actors the public sector say nothing about small-medium enterprises, so again no patterns can be found.

Quite a few actors feel like industrial inclusiveness can be achieved at the structural level by reskilling people towards certain sectors and by changing the viewpoints about certain sectors in order to gain attraction towards these sectors. An example given by multiple actors is that the technology sector still has the image of people getting dirty hands, which especially in some cultures is being looked down on. Therefore, there are not enough people being educated towards these sectors. One manager of an R&D company mentioned that “Talk about how nice the work is, show that it is not the work it used to be” – Interviewee 12. To battle this some actors even suggest limiting the freedom of choice of education. Many actors of the ‘Human Capital’ taskforce have this viewpoint, but not all of them and there are also actors from other taskforces, so again we see no patterns.

Lastly, one actors (Interviewee 9) spoke of the bias of how we frame our economic system and our innovation system. Therefore, there is an inherent bias towards the technology sectors, and to battle this we should rethink our whole view of how our economic system.

These results highlight again the diversity of the meanings the interviewees give territorial inclusion. Whilst there is some overlap, especially about the importance of focusing on other sectors than the technology sector, there is still much diffusion how to achieve territorial inclusion. We see, besides the harbor sector, no clear pattern in the area they operate or the actor type they are and the way they look at industrial inclusion.

4.2.3 Territorial inclusiveness

About half of the interviewees are targeting inclusion at the territorial dimension. They come from all the taskforces and from the three components of the triple helix, which shows the diversity in viewpoints. Interestingly, for almost all interviewees the region they are targeting is also the region they operate in. For example, two interviewees working in multinational companies target territorial inclusiveness at the international level, “..... even in poor countries, a reasonable living can be guaranteed thanks to the innovation of products that we bring.” – Interviewee 4. They focus on local-local projects in foreign countries to improve these regions.

An interviewee working closely with the harbor of Rotterdam questions whether “all the work will be done by robots or do we also want innovations that will allow people to keep their jobs” – Interviewee 3. There is the intent of at least thinking what will happen when automation causes certain people to lose their jobs. And lastly, an actor stationed in Rotterdam wants to attract more local projects within Rotterdam. These actors don’t give specifics about how to achieve territorial inclusiveness, but show that they are at least thinking about how to achieve it, therefore they can be categorized within the intent level.

Two interviewees from the public sector (Interviewee 3 and Interviewee 10) argue that there is the need to improve territorial inclusiveness by giving targeted subsidies towards innovation projects for certain districts. They argue that some districts are inherently lacking behind other districts and with subsidies for innovation projects this could help immensely. However, not all interviewees from the public sector focus on these levels and some don’t even focus on territorial inclusiveness at all. Therefore, we can again not find any patterns.

One interviewee argued that “the point is, the port is a fairly closed bulwark, because of safety due to security reasons” – Interviewee 7. It is not easy to find new people that can work within the harbor. Therefore, word of mouth advertising is the main way to find new workers, and they tend to find people similar to themselves. There is a need to pay specific attention to this, because he argues that increased inclusivity in the innovation process will also improve innovative activity.

One interviewee from a knowledge institution argues that there is an inherent system bias: “we design our systems in such a way that white boys and girls at the Tu Delft in particular can come up with innovations” – Interviewee 9. One interviewee from the secretariat of the EBZ argues that this bias is towards the Randstad. In order to improve inclusivity they both argue that there is a need to alter the system towards other regions as well. Again, we don’t see patterns here.

All these different kind of inclusion the interviewees are targeting and the different ways the interviewees want to achieve these inclusions show the enormous diversity in viewpoints about inclusive innovation. If they want to stimulate inclusive innovation there is indeed a need for a broker that can bring these viewpoints together. This is where intermediaries, and in this case the EBZ, can play a role. Now, understanding the different viewpoints in South-Holland and the great diversity between them, the following section will elaborate the different roles ascribed to the EBZ.

4.3 Meanings ascribed to the role of the intermediaries in respect to inclusive innovation

Unsurprisingly, the interviewees ascribe a range of different roles to intermediaries in achieving inclusive innovation, and these roles are diffused along the actors as well. There is no correlation between how the actors view inclusive innovation or how to achieve inclusiveness and the role they give to the intermediary to tackle this. There is also no correlation between the actor type and their roles ascribed towards the intermediary. This study found three distinctive roles ascribed towards intermediaries in inclusive innovation. The first is *no role at all*, the second is a *facilitator of learning* role and the third is a more *pro-active role demonstrating the importance of inclusive innovation* and goalsetting.

First, six of the actors feel like the EBZ and their taskforces *are not the right place* where inclusive innovation should be targeted. Most of them argue that the EBZ and the taskforces are brought to life for specific purposes, where connecting it with inclusivity does not work. Others feel like we should not make the problem bigger than it is, for example one interviewee mentioned that “I don't miss it either. And I like that, sometimes it's not a subject because we are already inclusive.” – Interviewee 2. And lastly, some feel like the people who are within the EBZ should be diverse, but making the board more diverse is enough. They don't feel like the EBZ should focus on inclusion in relation to innovation other than diversity. These actors are from all types of the triple helix, and of the different taskforces. We again see no patterns here.

Second, the next role interviewees ascribe to intermediaries is that of a *facilitator in the learning process* about inclusive innovation. Five of the interviewees ascribe this role towards the EBZ. They argue that the main role the EBZ should play is that of getting actors together to start the conversation about inclusive innovation, what it means for the different actors, how to solve it and therefore learn from each other. For example one interviewee mentioned that “so step one is actually to start the conversation. Talk to each other and learn from each other” – Interviewee 1.

Lastly, the last role ascribed to intermediaries is that of a *pro-active role demonstrating the importance of inclusive innovation*. Five of the actors feel like the EBZ should play an active role in improving inclusive innovation. Four of them feel like the EBZ need to show the economic interest in improving inclusivity. They argue that it is simply unwise to not use the now excluded resource of people/sectors/regions, as they simply put are resources that should be used, “we need to look at it from an economic perspective to ensure that we get the positions filled” – Interviewee 7. They feel like showing to the outside world the economic importance as well and not only the social relevance will lead to more cooperation from other parties. Three of them feel like there should be discussions about setting inclusivity standards, especially if the money is publicly funded. And lastly, three of them argue that within the EBZ there need to be a well-defined definition about what inclusive innovation is, why it is important, set goals and define a strategy how to achieve this. All these roles are that of highlighting the importance of inclusive innovation, and how to achieve this. Therefore, they can all be put in this one category. Again, no clear pattern could be found, for example, actors who considered social inclusion important did not assign a pro-active role demonstrating the importance of inclusive innovation towards the EBZ.

4.4 How do the ascribed role to intermediaries in inclusive innovation relate to the theory about intermediaries in innovation?

This study used grounded theory, because this methodology allows to create new concepts to emerge from the data. In order to further explore what these new concepts could potentially mean, it is important to compare these concepts to earlier literature on intermediaries in innovation. Therefore, the new concepts that emerged are first analyzed, and after this I try to explain why some roles, who are present in literature about intermediaries in innovation, did not emerge out of this data in this study.

The viewpoints ascribed towards intermediaries in inclusive innovation relate to the literature in the following way. First, the notion that the intermediary actor should not play a role in connecting viewpoints of inclusive innovation goes against the constructivist notion of this study, which states that intermediaries could have an important role in bridging viewpoints together. Stated otherwise, when meanings differ, one needs “something” to bring them together in order to formulate a successful strategy. The second role ascribed towards intermediary actors in inclusive innovation is that of facilitating a learning process between parties. This is in line with the innovation process management function Klerkx & Leeuwis (2009) describe in their three basic functions of intermediaries in innovation. This study thus has shown that intermediaries could also use this role for inclusive innovation. The last role ascribed to intermediaries in inclusive innovation is that of a pro-active role demonstrating the importance of inclusive innovation. This builds upon the demand articulation function of the framework of Klerkx & Leeuwis (2009), but goes much further. It shows an active role in articulating the notion of inclusive innovation and goes even further by elaborating why it should be pursued. This might have theoretical implications regarding the completeness of the framework of Klerkx & Leeuwis (2009) if used for inclusive innovation.

The role of network facilitator described by Klerkx & Leeuwis (2009) did not come forward in the roles ascribed by the interviewees. None of the interviewees argued that the intermediary actors could act as an actor who could act as a matchmaker of possible cooperation partners regarding inclusive innovation. It is not easy, looking at the results as such to explain why this is the case. This is maybe caused by the fact that the EBZ also has other areas in which it operates as intermediary other than for stimulating inclusive innovation, and that the interviewees feel like there should not be new board members attracted purely for inclusive innovation.

The roles of technology transfer and the role of relational work also did not come forward in the roles ascribed by the interviewees. For relational work this may be ascribed because the scale of the EBZ is the whole of South-Holland and therefore targeting individual grassroots innovation maybe too small. For technology transfer this could maybe explained by the fact that inclusive innovation is still a relatively new topic, and the interviewees feel like this topic must be explored first, before intermediaries can take a very active role by transferring specific technologies between actors and sectors.

5. Discussion

The trigger of this study was the report of the OECD (2021), which critiques the “Joint Growth Agenda (JGA)” that there was not enough attention being paid to stimulate inclusion in Zuid-Holland. The study argues that the JGA has an opportunity to close the social gaps created by this crisis and address structural inequalities that were already present and have been exposed through the COVID-19 crisis (OECD, 2021). The results of this study provides an explanation, together with the used theoretical framework explains why the attention for inclusive innovation at the level of the EBZ was absent and therefore shows that the OECD was right to criticize this growth agenda: there was not consensus on this topic and for some key players it was not on the top of their minds at the moment. It became clear that important actors in South-Holland collectively are not paying enough attention to inclusive innovation as a way to improve inclusion. This is highlighted in the framework created in this study, which shows that most actors are in the upper left part of the framework, which shows an bias towards low levels of inclusion, predominantly focused on social inclusion. The ladder of inclusive innovation (JHeeks, 2013), states that the highest level of inclusion will be achieved with innovations at the structural and post-structural level, and in South-Holland almost none of the actors focus on these levels. The study also gives an explanation of the absence of inclusive innovation in the strategy of EBZ: the diversity of opinion on the subject itself and the diversity of opinions of the role the interviewees subscribe to the intermediary actor.

This lack of attention being paid towards inclusive innovation could be explained in multiple ways. First, it could be that inclusive innovation is a relatively new topic which has not been thought about very much yet. You may ask yourself whether this is a tannable view in 2022, because as research on inclusive innovation has shown it is an important tool to achieve inclusive growth, and it has not only a social significance, it also has an economic significance, as pointed out earlier with reference to the OECD-report. Perhaps a more precise explanation in this respect could be the lack of insight that inclusiveness is not only important because of societal reasons, but also because of economic reasons. A small minority of interviewees stressed this point of view and pointed out that we are facing more and more shortages of employees, and thus by including them in the innovation process it leads to economic gains as well.

Second, it could also mean that inclusive innovation is such a demanding topic that it is impossible for every actor to deal with all aspects of it. If that would be the case, then one could expect that the interviewees look at the EBZ to organize the needed cooperation. As this study showed, some interviewees do, most of them don't.

Last, it could be that inclusion is so context specific that what the key factors are is totally specific to the scope of the business. In the results of territorial inclusiveness it came forwards that the scope of companies is highly important to how they view inclusion. This would mean that the actors cannot look beyond their own interests and would it make it very hard to achieve inclusive innovation.

Therefore, the role that intermediaries in bridging these different viewpoints are vital. In a way, looking at how the EBZ views itself, it is understandable that that quite few of the interviewees don't ascribe a role to the EBZ in stimulating inclusive innovation, and some interviewees only ascribe a facilitator role that enables learning from each other. Looking at the

way the EBZ presents itself on her website, the EBZ seems to feel comfortable in a reacting role, rather than in a initiating of proactive role. The EBZ leaves the initiating role to her participants. Again, the question is if we have a tannable positioning here. If the OECD rapport (2021) critiques the JGA about the lack of attention being paid to inclusion and the actors don't 'ascribe a big role for the EBZ to stimulate inclusiveness, how will such an important aspect, both socially and economically, ever be achieved.

We are facing a profound dilemma here. The diversity in opinions and the need to pick up the topic of inclusive innovation – again because of it societal *and* economic benefits – urge for a initiating role for the EBZ. But the way the EBZ sees itself and the role interviewees subscribe to the EBZ seem to be prohibitive for a successful start of the development of an effective strategy on inclusive innovation. It asks for a redefinition of the role and position of the EBZ.

If the EBZ truly wants to stimulate inclusive innovation, in my opinion it should do the following. First, it should give a clear description what inclusive innovation entails, at least organize a process that helps to bring about the synchronicity in opinions. The framework created in this study could be an useful tool to do this. It should find out for themselves why they want to achieve inclusive innovation and should explain this convincingly to the board members. Then it should create quantifiable goals which they want to achieve and share these goals with it board members. After this has been done, they should play an active role in facilitating the discussion about inclusive innovation, facilitate learning and constantly update the goals in response to this learning process.

The theoretical implications of this study towards the framework of Klerkx & Leeuwis (2009) is that, whilst the functions could be useful in stimulating inclusive innovation, before these roles can be taken on there must be some kind of congruence in thinking between key stakeholders. This is a role that an intermediary in inclusive innovation can take, but stands at the beginning of the innovation process. In this role the intermediary could play a role in giving a clear description in what inclusive innovation entails, organize a process that helps bring synchronicity in opinions and facilitates a learning process between key stakeholders about their viewpoints on inclusive innovation and lastly create together with key stakeholder or even by himself clear goals to strive towards. So, the roles of intermediaries in inclusive innovation go beyond the scope of the framework of Klerkx & Leeuwis, and if they want to expand their framework towards inclusive innovation they should explore this further.

What stroke me while doing the interviews, is the following. I felt a kind of “concept tiredness”. Multiple interviewees elaborated that they find all the different concepts being thrown around tiresome and say they slam shut when they hear new concepts. Thus, this also highlights the important of the role of the EBZ of precisely explaining what inclusive innovation entails, but more importantly also explain why it should be something the actors should pursue.

Limitations of this study are that it has a relatively small sample size of only sixteen interviewees and only looks at players in South-Holland. Future research should thus increase this sample size and look at other regions as well. By doing this they can get an even broader view of the different viewpoints on inclusive innovation and the role actors ascribe to intermediaries. This could either verify the results found in this study that the viewpoints on inclusive innovation are diffused or it could lead to correlations which have not been found in this research.

The study of Levidow & Pappioannou (2018) was a big starting point of this study. The study used a constructivist approach to explain inclusive innovation. They stated that there were two distinct camps of viewpoints actors could have on inclusive innovation. The liberal-individualistic camp and the social-collectivist camp. In this study these two distinctive camps did not come forward. Almost all interviewees in this study had viewpoints that could be placed in both of the camps, and there did not come other camps forward. So, although the study was a basepoint of this research the findings did not match with the findings found earlier by Levidow & Pappioannou. This could maybe be explained by the fact that these authors did not use the same framework as was used in this study or by the fact that the sample size in this study was relatively small. Nevertheless, it gives a reason to further explore these camps of viewpoints Levidow & Pappioannou created and gives reason to further explore whether there are different camps of viewpoints.

Another interesting findings is that Heeks et al. (2013) say that the levels of the ladder of inclusive innovation build upon the lower levels. In this study some interviewees can be categorized at the process level of the ladder of inclusive innovation, but not on the lower levels. This contradicts the normative framework of Heeks, which state that all the levels of the ladder build upon each other, and raises the interesting question how to deal, in practice and theory with this 'imperfection'. Further research on how this levels of the ladder compare to each other is thus warranted.

6. Conclusion

This study attempts to answer what the roles are ascribed to intermediary actor in stimulating inclusive innovation in South-Holland. Inclusive innovation is the development and implementation of new ideas which aspire to create opportunities and enhance social and economic welfare for disenfranchised members of the society. Inclusive innovation is not only important from a social or political standpoint, but also from an economic standpoint because it exploits resources, labour force, which were otherwise not used. To answer this research question, this study used a constructivist approach to look at inclusive innovation. This constructivist approach assumes that people give different meanings to inclusion, and in order to stimulate it as well as possible these different viewpoints should be brought together.

Therefore, this study has looked at the meanings the different board members of the Economic Board Zuid-Holland give towards inclusive innovation. These actors are among the most important actors in the innovation system in Zuid-Holland, and have articulated the wish to improve inclusion. First, to understand the roles ascribed towards intermediary actors, the different meanings of views on inclusive innovation in Zuid-Holland have been outlined. This study has showed that in South-Holland, there are a lot of different ways actors look at inclusive innovation. This is on the one hand positive, because actors are targeting all kind of inclusion and inclusion levels, but on the other hand make it hard to stimulate inclusive innovation. This thus means that the conditions required for stimulating inclusive innovation are not yet present, and that there could be a big role for intermediary actors bringing these different meanings together.

After this, the study outlined the roles ascribed towards intermediaries in inclusive innovation, and found three distinctive roles. First, that intermediaries should play no role in bridging the different meanings actors describe towards inclusive innovation. This contradicts the constructivist notion of this study. Second, the intermediary actors should play a facilitating role of a learning process about inclusive innovation between actors. This is in line with the function of innovation process manager of Klerx & Leeuwis (2009). And the last role ascribed was that of playing a pro-active role demonstrating the importance of inclusive innovation. This is an extension of the demand articulation role described by Klerx & Leeuwis (2009), by going beyond articulating demand by taking an active role in articulating the notion of inclusive innovation and goes even further by elaborating why it should be pursued.

Concluding, if an intermediary organization wants to stimulate inclusive innovation in South-Holland playing a passive role is not enough. If it truly wants to stimulate inclusive innovation it should take an active leadership role in which it should give a clear definition on what kind of inclusion they should target, how they want to achieve this and explain why this is important. In other words it should outline a perspective on inclusive innovation. For the sake of the economy. For the sake of society.

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Appendix A

1) Introducerende vragen

- Wie bent u precies?
- Wat houdt uw baan precies in?
- Wat houdt je organisatie in?
- Is inclusie/exclusie een issue voor jullie?

2) Vragen omtrent inclusie

- Wat verstaat u onder inclusie in relatie tot innovatie?
- Als we het over inclusie hebben over welke groepen mensen hebben we het dan bijvoorbeeld in jullie werk?
- Als we het over inclusie hebben welke sectoren hebben wij het dan over, of ziet u daar geen verschil in?
- En is inclusie ook op geografisch gebied ook belangrijk?

3) Vragen omtrent inclusie

- Kunt u voorbeelden geven van innovaties waar u nu in uw werk mee bezig bent/mee bezig bent geweest waar inclusiviteit mee gestimuleerd is?
 - o Als het een proces innovatie is, doorvragen of het ook op het product zelf kan slaan en vice versa
 - o Doorvragen of het men op een proces of product moeten focussen of dat het juist belangrijk is om het system als een geheel te veranderen
 - o Is dat voldoende? Of moet er meer mee moeten gebeuren? Wat zou er dan precies moeten gebeuren?

4) Vragen omtrent inclusie

- Op welke manier zou u inclusie in relatie tot innovatie bevorderen?
 - o Wat zijn uw ambities op het gebied van inclusie in relatie tot innovatie
- Heeft u ook strategieën gezien die met elkaar kunnen botsen?
 - o Zo ja, hoe zou u hiermee omgaan?

5) De rol van intermediaire organisaties

- Op welke manier speelt inclusie een rol binnen de taskforce en de EBZ?
- Op welke punten doet de EBZ nog te weinig in relatie tot inclusie, dus waar zou de taskforce nog meer kunnen doen?
- Wat zou de rol van de EBZ moeten zijn om verschillende percepties bij elkaar te brengen?