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Public-private partnerships in Dutch vocational and higher education

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**Governance regimes and
problem-solving capacity:**
Public-private partnerships in Dutch
vocational and higher education

Pieter Moerman

**Governance regimes and problem-solving capacity:
Public-private partnerships in Dutch vocational and higher education**

Academisch proefschrift

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Preface

This thesis, “Governance regimes and problem-solving capacity: Public- private partnerships in Dutch vocational and higher education”, is the result of a puzzle that I encountered in 2014-2015, when I was actively involved in supporting schools and companies to form partnerships together. The government – of which I was often considered a representative – was frequently blamed for not providing any scope for experimentation and for strict rules and guidelines which prevented the partnerships from engaging in problem solving. At the same time, however, some partnerships became very successful while others failed entirely, with no apparent connection to the actions of the government.

The puzzle that I wanted to solve through my research was how this apparent contradiction could exist, what could be done to make the partnerships much more successful, and whether the schools and companies were right to blame the government. Whilst trying to solve this puzzle, I was able to use the lessons learned directly in my work for the Katapult network, and continue working to provide (scientific) evidence regarding how to put in place governance that really helps partnerships to develop into long lasting cooperation and achieve meaningful results for students and companies. The photos in this thesis are from various partnerships in the Netherlands, taken by Maarten Noordijk.

I would like to thank Jonathan Zeitlin and Eelke Heemskerk for their excellent guidance and feedback during this process. I did not know what to expect beforehand as an external PhD candidate, but I was constantly surprised by the quality, frequency and level of detailed feedback that they supported me with, which far surpassed my earlier experiences at university. Additionally, the espresso at Jonathan’s house is truly excellent.

Researching whilst also working full-time job can be quite demanding. I would like to thank Hans Corstjens and Beatrice Boots who gave me the opportunity to spend one day a week focusing on my research, and Beatrice for supporting me in the final stages of my research.

In my enthusiasm, I chose to do a large-scale quantitative analysis, without knowing much about how to approach such an analysis. I would like to thank Lars Kalter and Maurits Grievink with all their help with this phase. Lars helped me devise the model in Excel, which up until the last phase worked flawlessly. Maurits helped me to collect the data I needed, even during his travels in Australia. I am really pleased that, after completing his Master’s at Utrecht University, he was able to use these experiences

to help public-private partnerships on a daily basis, much as I was doing a couple years back. I would also like to thank Toby Adams, recommended by Neil Gouw who I used to work with, for his excellent work editing this thesis. Finally, I would like to thank Emiel van der Logt for the beautiful design.

The road towards this dissertation began in the town of Haarlem in 2015, where my wife Chiara and I were discussing the role of the government in education (we like to discuss nearly everything). The idea of writing a thesis first came from her, and the subsequent deadlines for finishing the thesis were also by set by her with precision (as well as the holiday plans and day trips that prevented me from meeting those deadlines), for which I am very grateful.

The puzzle is, of course, not completely solved. And my journey continues, to learn and find the best ways to make education and companies work closely together to educate our (future) workforce.

Pieter Moerman

Summary

This thesis analyzes the extent to which governments are able to use collaborative partnerships between educational institutions and businesses in order to improve the education of the (future) labor force and address issues such as the 'skills gap'. These partnerships claim to be able to improve the skills and knowledge of the workforce while also accommodating today's rapid pace of innovation in technology and society, such as digitalization and the growth in self-employment (the Netherlands Ministry of Education, 2015a, *ibid* 2015b). Educational institutions are often perceived as being too slow to adapt to such rapid developments on their own initiative, and partnerships with companies and non-governmental organizations are seen as a way of increasing their responsiveness (the Netherlands Scientific Council for Government Policy, 2013). Encouraging cooperation between educational institutions and companies through public-private partnerships (PPPs) is becoming increasingly popular, and several initiatives launched across Europe and beyond in recent years seem to favor this strategy (European Training Foundation, 2019).

This study adopts a governance perspective in order to evaluate whether the approach taken by the Dutch government is suited to helping these partnerships to develop and achieve their goals. The Netherlands constitutes an excellent research case, because the Dutch government has used three distinctive governance approaches to regulate over 160 public-private partnerships during the period 2010-2019. Judging by the quantitative results, this approach is successfully helping educational institutions to respond to developments in technology and society, and encouraging them to cooperate with other organizations. By 2019, over 10,000 businesses were participating in these partnerships (Katapult, 2019). These partnerships involve Hogescholen (Universities of Applied Science), MBO-*instellingen* (VET colleges) and a range of businesses. They are often supported by regional governments, and are closely linked to regional economic development and/or regional innovation strategies. Their common aims are to improve the match between education and the labor market, improve education (skills, student numbers, curricular improvements, etc.), promote life-long learning within the participating businesses (courses, training programs, etc.), and facilitate practice-based research and innovation (innovation projects, valorization, start-ups, etc.).

In evaluating these partnerships, the key questions is whether public and private actors are able to jointly develop new products and services in response to rapid developments in technology and society, and share both the benefits and the costs of doing this (Klijn and Teisman, 2003). These partnerships differ fundamentally from the governance frameworks in which educational institutions are accustomed to

operating. The Dutch government is aware of this and has therefore revised its own governance methods in order to support the PPPs on their journey. These governance methods encompass new elements such as accommodating experimentation, 'scope for development', and learning programs. Such innovations provide a unique opportunity to compare these approaches by studying which one is most effective and which elements contribute to the development of the partnerships. The central research question is thus *how well-equipped is the governance framework for PPPs developed for Dutch MBO and HBO to cope with the uncertainty caused by rapid innovation and the increasing need for partnerships between organizations?*

Two key theoretical concepts underlie the research: problem-solving behavior within partnerships and the governance of partnerships, and the interrelationship between the two. Building on the work of Dewey (1902; 1933) and Argyris and Schön (1974), a two-fold distinction is introduced between lower-order trial and error and higher-order reflection. The latter refers to reflective problem solving under circumstances of uncertainty, and the former to applying old routines to new situations. In the context of uncertainty and wicked problems, partnerships need to engage in higher-level reflection in order to succeed. Four key mechanisms are identified which influence problem solving: the decoupling of policy and practice, goal displacement, blueprint thinking, and rule-based implementation.

In relation to the governance of the partnerships, a distinction is made between principal-agent models (PA model) and network models. Under PA models, the principal sets targets and guidelines, and sets the agent the task of achieving these requirements subject to positive and negative incentives (Sabel and Zeitlin, 2012). Network governance, by contrast, sees operationally autonomous actors interacting through negotiation and is self-regulating within the limits imposed by 'external forces', such as laws and regulations (Torfing, 2005). Four ideal types of governance are identified: bureaucracy and new public management (both PA-based models), and network governance and experimentalist governance (an approach used to give structure to the practices of network governance). In bureaucracy, problem solving is carried out by highly-trained civil servants, who implement solutions based on rules and procedures. In NPM, the intended outcome is also imposed top-down, but is achieved using performance indicators; problem solving is left to the agents, who are made responsible for achieving those indicators. In network governance, problem solving is seen as a learning process involving all stakeholders, with trust and cooperation being seen as the key to success and no clear separation between the setting and implementation of goals. And finally in experimentalism, problem solving is devolved to actors within a broader framework of goals which are formulated by multiple stakeholders, with an emphasis on a learning process that involves local

adaptation and the goals of the broader framework.

The aim of the research is to discover whether there is a causal link between the governance regime in place for a specific partnership and problem-solving behavior within that partnership. It also seeks to identify explanatory mechanisms that can explain the causal link in the specific context of public-private partnerships in vocational and higher education. This causal link is investigated using four methods. First, there is a thorough description of the policy context and the governance regimes, which is necessary in order to understand the results of the research methods used. Second, seven semi-structured interviews were carried out with project managers, distributed across the three regimes. These interviews were used to develop an analytical framework to describe the three governance regimes, and to help explain the results of the quantitative analysis. Third, a large-scale quantitative analysis was carried out. This was the most comprehensive stage of the research, and involved monitoring all the activities of 48 partnerships over a period of four to five years and generating 8,301 data points. Fourth, three in-depth case studies are used to provide 'rich' stories which help to explain the results of the large-scale quantitative analysis. The researcher was actively involved in supporting the public-private partnerships on a daily basis in various roles within the three regimes, and this made it possible to explore the partnerships in great detail.

The three governance regimes are compared systematically using an the following framework with six aspects: goal-setting process, allocation of funding, monitoring, auditing and feedback, learning incentives and scope for deviation. Each regime is compared to the ideal types of governance described previously. Two overall conclusions are drawn. First, all regimes featured a significant degree of network governance. This is based on the observation that all three regimes allowed the partnerships to set their own goals and formulate their own activities at the outset, there was no operationalization of the wider policy goals, and there was a strong focus on learning incentives. Second, principal-agent governance was reflected in the requirements for co-funding and the central role played by the educational institutions in applying for and receiving funding, as well as their responsibility to report on and – to a greater extent than the other partners – achieve the goals that had been chosen. Beyond these characteristics, which are common to all three regimes, there are differences between them. The RIF regime, which is active primarily within MBO, has strongly bureaucratic features. The RCHO regime, which is active primarily within HBO, has mainly network features. The PBT regime, which is active within both MBO and HBO, shifted from an NPM approach towards network governance and also has some features of experimentalism. Each of these regimes evolved in the way that they did due to the specific policy context in which they were operating,

which is explained using three different policy angles: education policy, labor market policy, and innovation policy.

The interviews with the project managers revealed the breadth of opinions among them, provided insight into how they dealt with specific aspects of the regimes, and were also helpful in avoiding researcher bias when interpreting various aspects of the regime. Depending on the project manager interviewed, the opinions on the effectiveness of the governance regimes varied, and this was true across all regimes. Two aspects of the governance regimes were viewed unanimously as positive: firstly, the fact that the goals and activities could be chosen freely in order to ensure commitment from all partners; and secondly, the requirement for co-funding, which reduced the chance of free riding and increased the level of commitment from all partners. Most of the formal aspects, especially audits, gave rise to strategic behavior or were seen as an unnecessary administrative burden, echoing familiar routines in which the government and the school are in a bureaucratic relationship. The learning program was praised as helping to loosen up this bureaucratic relationship.

Viewed in the light of the two theoretical approaches, the large-scale quantitative analysis revealed that the network features of the governance regimes were stronger than the principal-agent features, and that this approach was generally successful in guiding partnerships towards a set of mixed activities that were all relevant to the overall policy aims, with a relatively high self-reported success rate of 40%. Both the external evaluation committees and the partners within the partnerships were generally satisfied. However, the dominance of network governance features appears to have led to two problems. First, 49% of all activities focused on improving initial education, which indicates goal displacement on the part of the educational institutions as the dominant partner, an effect which increased over time (with the exception of the PBT regime). Second, this development led to a situation in which activities that were more challenging to implement could easily be dropped or allowed to continue underperforming. This was the case with life-long learning, for instance, although again the PBT regime is an exception in this regard. Finally, both the large-scale analysis and the evaluations of the assessment committees imply that the partners in the partnership would be in the best position to know which activities they should engage in and whether these were actually having the intended effect, even though there is little factual evidence that this is true.

Three case studies – involving the Center for Innovative Craftmanship in Water Technology, the Centre of Expertise in the Biobased Economy, and the High Tech Centre Delft – confirmed the conclusions of the large-scale analysis and shed further light on these results. The governance regimes were able to guide the partnerships

through the first phase of their development: the partnerships engaged in a significant amount of experimentation, achieved a relatively high success rate, engaged in a wide range of activities, and achieved a high satisfaction rate amongst the partners. This was mainly due to the tilt towards network governance and a less dominant principal-agent relationship, with much more scope for experimentation and a focus on learning and developing through the learning program. These elements were particularly important in allowing the educational institutions to engage in problem solving rather than simply following the rules set by the government. However, as one of the case studies shows, this shift was not always made, and formal rules and procedures could easily come to dominate the partnerships' thinking again.

However, lower-order trial and error dominated with regard to questions of structure and governance models. Furthermore, the corollary of a partnership is that other stakeholders may exert strong influence on direction, goals and activities, but this was difficult for the educational institutions to accept. Each partnership struggled with the question of ownership, applying old methods to the new situation that they found themselves in. In all cases, this led to the emergence of a leader-follower partnership. The governance regimes were unable to overcome the engrained institutional characteristics of the educational institutions, which calls into question the long-term suitability of both the governance regimes and the partnerships themselves. Although the regimes were only designed to guide partnerships for a period of four to five years, even in this short period, old patterns reasserted themselves and the educational institutions became overly dominant within the partnerships. In combination with high failure rates in activities that were outside the comfort zone of the educational institutions and the strong focus on the core activities of the educational institutions, this could very well be a suboptimal combination that, in the long run, will cause businesses to take a step back.

This research therefore concludes that the approach taken in the Netherlands has been a partial success story, but will be prone to failure in the longer term if no measures are taken to address the issues highlighted above. On the positive side, the governance framework provided plenty of scope for the partnerships to be responsive and demand-driven, adopting a successful network approach with an emphasis on learning and development. The framework was able to provide freedom for the partnerships to grow and develop, and has led to some impressive quantitative results (Katapult, 2019). On the other hand, the framework has been unable to overcome the fact that the educational institutions have become ever more dominant within the partnerships, prioritizing the area of initial education and directing the majority of funding towards this area. This dominance was reinforced because the principal-agent features of the regime echoed familiar routines in which

the government and the educational institution are in a bureaucratic relationship. Additionally, two of the three governance regimes were unable to promote problem solving in relation to tackling tough but urgent challenges, most notably in the area of life-long learning. The PBT regime, which explicitly combines accountability and learning, proved better able to promote problem solving while also addressing more challenging areas.

In light of these conclusions, there are important lessons to be drawn from the approach taken by the Dutch government. Both at the European and the national levels, the use of partnerships to address the 'skills gap' continues to be a policy priority, and many new grants are still being introduced, so there is some urgency to the lessons highlighted in this research. Implementing a network approach in partnerships, with the freedom to choose goals and the methods applied to achieve them, including the requirement of co-funding from all partners, are the strong points of the Dutch approach, which can be learned from. Implementing the principles of experimentalist governance could provide an opportunity to combine accountability with learning, and to combine a framework with open-ended goals with local implementation by stakeholders. The implementation of such a governance approach could enable a stronger focus on more challenging outcomes and prevent one particular (type of) actor becoming too dominant, while also avoiding heavy-handed, top-down governance methods. Some (small) steps have already been taken in this direction by the Dutch government since the end of data collection, such as stronger steering on urgent challenges and the introduction of peer reviews.

Samenvatting

Deze dissertatie onderzoekt de mate waarin het voor de overheid mogelijk is om samenwerkingsverbanden tussen onderwijsinstellingen en bedrijven te realiseren, om daarmee het onderwijs van de (toekomstige) beroepsbevolking te verbeteren en de 'vaardigheidskloof' aan te pakken. Dit type samenwerkingsverbanden lijkt de vaardigheden en kennis van de beroepsbevolking te kunnen verbeteren en zo tegemoet te kunnen komen aan snelle technologische en maatschappelijke veranderingen, zoals digitalisering en de groei van het aantal zelfstandigen (Ministerie van Onderwijs, 2015a, ibid 2015b). Onderwijsinstellingen worden vaak als te traag beschouwd om zich aan te passen aan dergelijke snelle ontwikkelingen. Samenwerkingsverbanden met bedrijven en non-gouvernementele organisaties worden gezien als een manier om hun reactievermogen te vergroten (Wetenschappelijke Raad voor het Regeringsbeleid, 2013). Het stimuleren van samenwerking tussen onderwijsinstellingen en bedrijven door middel van publiek-private partnerschappen (PPS) wordt steeds populairder. Verschillende initiatieven die de afgelopen jaren in heel Europa en daarbuiten zijn gelanceerd, lijken deze strategie te bevorderen (European Training Foundation, 2019).

In deze studie wordt, vanuit een governance-perspectief, geëvalueerd of de aanpak van de Nederlandse overheid geschikt is gebleken om dit type samenwerkingsverbanden te helpen ontwikkelen en hun doelen te bereiken. Nederland vormt een uitstekende casus, omdat de Nederlandse overheid in de periode 2010-2019 meer dan 160 publiek-private samenwerkingsverbanden heeft geïnitieerd met behulp van drie verschillende governance-benaderingen. Op basis van de kwantitatieve resultaten lijkt deze aanpak succesvol: onderwijsinstellingen werken nauw samen met andere organisaties, en reageren succesvol op de ontwikkelingen in de technologie en de maatschappij. In 2019 namen meer dan 10.000 bedrijven deel aan deze samenwerkingsverbanden (Katapult, 2019). Bij deze samenwerkingsverbanden zijn hogescholen, mbo-instellingen en diverse bedrijven betrokken. Ze worden meestal ondersteund door regionale overheden en zijn nauw verbonden met regionale economische ontwikkeling en/of regionale innovatiestrategieën. Gemeenschappelijke doelstellingen zijn het verbeteren van de aansluiting van het onderwijs op de arbeidsmarkt, het verbeteren van het onderwijs (vaardigheden, aantal studenten, verbetering van de curricula, enz.), het bevorderen van leven lang ontwikkelen binnen de deelnemende bedrijven (cursussen, opleidingsprogramma's, enz.) en het faciliteren van praktijkgericht onderzoek en innovatie (innovatieprojecten, valorisatie, start-ups, enz.).

Bij de evaluatie van deze partnerschappen staat de vraag centraal of publieke en private

actoren in staat zijn om, als reactie op de snelle ontwikkelingen in de technologie en de maatschappij, gezamenlijk nieuwe producten en diensten ontwikkelen en daarbij zowel de voordelen als de kosten hiervan te delen (Klijn en Teisman, 2003). Deze samenwerkingsverbanden verschillen fundamenteel van de governance-kaders waarin onderwijsinstellingen gewend zijn te functioneren. De Nederlandse overheid is zich hiervan bewust en heeft daarom haar eigen governancemethoden herzien om de pps'en te helpen ontwikkelen. Deze methodes omvatten nieuwe elementen zoals het ruimte geven aan experimenten, 'ruimte voor ontwikkeling' en leerprogramma's. Deze innovaties bieden een unieke kans om deze nieuwe benadering te vergelijken en te onderzoeken welke het meest effectief zijn, en welke elementen bijdragen aan de ontwikkeling van de samenwerkingsverbanden. De centrale onderzoeksvraag is dus hoe goed het governancekader voor PPS is toegerust om het Nederlandse mbo en hbo te helpen omgaan met onzekerheid veroorzaakt door snelle innovaties en de toenemende behoefte aan samenwerkingsverbanden tussen organisaties.

Twee belangrijke theoretische concepten liggen ten grondslag aan het onderzoek: probleemoplossend gedrag binnen samenwerkingsverbanden, de governance van samenwerkingsverbanden, én de onderlinge relatie tussen beide. Voortbouwend op het werk van Dewey (1902; 1933) en Argyris en Schön (1974) wordt een tweeledig onderscheid geïntroduceerd tussen 'lower-order trial-and-error' en 'higher-order reflection'. De laatste verwijst naar het reflectief oplossen van problemen onder onzekere omstandigheden, en de eerste naar het toepassen van oude routines op nieuwe situaties. Higher order reflection bij samenwerkingsverbanden is noodzakelijk in de context van onzekerheid en 'wicked' problemen. Er zijn vier belangrijke mechanismen, veroorzaakt door governance-kaders, die van invloed zijn op het oplossen van problemen: de ontkoppeling van beleid en praktijk, doelverschuiving, het denken in blauwdrukken, en implementatie via top-down regels.

Met betrekking tot de governance van de partnerschappen wordt een onderscheid gemaakt tussen principaal-agent modellen (PA-modellen) en netwerkmodellen. Onder PA-modellen stelt de 'principaal' doelen en richtlijnen vast, is de 'agent' verantwoordelijk voor het bereiken van deze doelen, en vindt sturing plaats middels positieve en negatieve prikkels (Sabel en Zeitlin, 2012). Netwerk governance daarentegen gaat uit van autonome actoren die op elkaar inwerken door middel van onderhandelingen, en is zelfregulerend binnen de grenzen die worden opgelegd door 'externe krachten', zoals wet- en regelgeving (Torfing, 2005). In het onderzoek worden vier ideaaltypes van governance geïdentificeerd: bureaucratie en new public management (NPM) (beide op PA gebaseerde modellen), en netwerk governance en experimentalist governance (een benadering die wordt gebruikt om structuur te geven aan fluide netwerken). In een bureaucratie wordt het oplossen van problemen

uitgevoerd door hoogopgeleide ambtenaren, die oplossingen implementeren op basis van regels en procedures. In NPM wordt het beoogde resultaat ook top-down opgelegd, maar wordt het bereikt met behulp van prestatie-indicatoren; het oplossen van problemen wordt overgelaten aan de 'agenten', die verantwoordelijk worden gehouden voor het bereiken van die indicatoren. In netwerk governance wordt het oplossen van problemen gezien als een leerproces waarbij alle belanghebbenden betrokken zijn, en vertrouwen en samenwerking worden gezien als de sleutel tot succes. Er is geen duidelijke scheiding tussen het stellen en uitvoeren van doelen. Tot slot wordt in experimentalist governance het oplossen van problemen gedelegeerd aan actoren binnen een breder kader van doelen die door meerdere stakeholders worden geformuleerd. De nadruk ligt op een leerproces gericht op ruimte voor implementatie en een focus op overkoepelende doelen.

Het doel van het onderzoek is om te ontdekken of er een causaal verband bestaat tussen het governance regime en probleemoplossend gedrag binnen samenwerkingsverbanden. Ook wordt gezocht naar verklarende mechanismen die een causaal verband kunnen verklaren, in de specifieke context van publiek-private partnerschappen in het beroeps- en hoger onderwijs. Dit causaal verband wordt onderzocht met behulp van vier onderzoeksmethoden. Ten eerste is er een grondige beschrijving gegeven van de beleidscontext en de governance regimes, noodzakelijk om de resultaten van de andere drie methodes te begrijpen. Ten tweede zijn er zeven semi-gestructureerde interviews gehouden met projectmanagers, verdeeld over de drie regimes. Deze interviews werden zowel gebruikt om een analytisch kader te ontwikkelen, om de drie governance regimes te beschrijven, en om de resultaten van de kwantitatieve analyse te helpen verklaren. Ten derde is een grootschalige kwantitatieve analyse uitgevoerd. Dit was de meest uitgebreide fase van het onderzoek, waarbij alle activiteiten van 48 partnerschappen over een periode van vier tot vijf jaar werden gevolgd, leidend tot 8.301 datapunten. Ten vierde zijn drie diepgaande casestudies uitgevoerd die de resultaten van de grootschalige kwantitatieve analyse helpen verklaren. De onderzoeker was in de onderzoeksperiode en daarna actief betrokken bij de ondersteuning van de publiek-private samenwerkingsverbanden in verschillende rollen binnen de drie regimes, wat het mogelijk maakte om de samenwerkingsverbanden in detail te verkennen.

De drie governance regimes zijn systematisch vergeleken aan de hand van het volgende kader dat zes aspecten omvat: doelstellingen formuleren, de toewijzing van middelen, de wijze van monitoring, auditing en feedback, leerstimulansen en ruimte voor afwijking van het oorspronkelijke plan. Elk regime is vergeleken met de eerder beschreven ideale vormen van governance. Er zijn twee algemene conclusies getrokken. In de eerste plaats was er bij alle drie regimes sprake van

een aanzienlijke mate van netwerk governance: in alle drie de regimes konden de samenwerkingsverbanden hun eigen doelstellingen bepalen en eigen activiteiten formuleren. Daarbij was er geen (top-down) operationalisering van de bredere beleidsdoelstellingen, en in alle regimes lag een sterke focus op leren en ontwikkelen. Ten tweede was principal-agent governance zichtbaar bij de vooraf geformuleerde eis voor cofinanciering. Tevens speelde de onderwijsinstellingen een centrale rol bij het aanvragen en ontvangen van financiering, en waren zij verantwoordelijkheid om verantwoording af te leggen en waren zij - in grotere mate dan de andere partners - verantwoordelijk om deze te realiseren. Naast deze overeenkomsten tussen de drie regimes waren er ook sterke verschillen. Het RIF-regime, dat binnen het mbo actief was, heeft sterke bureaucratische kenmerken. Het RCHO-regime, dat binnen het hbo actief was, omvatte vooral netwerkkenmerken. Het PBT-regime, dat zowel binnen mbo als hbo actief was, verschoof in de onderzochte periode van een NPM-benadering naar netwerkbesturing en heeft daarbij enkele kenmerken van experimentalist governance geïmplementeerd. Deze reden dat deze regimes op deze manier zijn vormgegeven kan worden verklaard op basis van de specifieke beleidscontext waarin ze opereerden, wat wordt uitgelegd aan de hand van drie verschillende invalshoeken: onderwijsbeleid, arbeidsmarktbeleid en innovatiebeleid.

De interviews met de projectmanagers gaven met name inzicht in de diversiteit van meningen over de governance regimes, en gaven inzicht in de manier waarop zij met specifieke aspecten van de regimes omgingen. De interviews waren tevens van belang om eventuele vooringenomenheid van de onderzoeker te voorkomen bij het interpreteren van verschillende aspecten binnen de regimes. Afhankelijk van de geïnterviewde projectmanager liepen de meningen over de effectiviteit van de governance regimes sterk uiteen. Twee aspecten werden unaniem als positief beschouwd: ten eerste het feit dat de doelstellingen en activiteiten vrij konden worden gekozen zodat betrokkenheid van alle partners werd gewaarborgd; ten tweede de eis van cofinanciering, waardoor de kans op 'free riding' werd verkleind en de betrokkenheid van alle partners werd vergroot. De meeste formele aspecten, en met name audits, gaven aanleiding tot strategisch gedrag of werden gezien als een onnodige administratieve last. Deze formele aspecten reflecteerde met name de traditionele bureaucratische relatie tussen overheid en school. Het leerprogramma, met een focus op experimenteren, werd geprezen omdat hierdoor de bureaucratische relatie tussen overheid en school minder stringent werd ervaren.

Uit de grootschalige kwantitatieve analyse bleek dat dat de netwerkkenmerken van de governance regimes veel sterker waren dan de principal-agent kenmerken. Deze netwerkaanpak bleek over het algemeen succesvol in het begeleiden van samenwerkingsverbanden, leidend tot een reeks gevarieerde activiteiten die allen

relevant waren voor de algemene beleidsdoelstellingen, met een relatief hoog (zelf gerapporteerde) succespercentage van 40%. Zowel externe evaluatiecommissies als de partners binnen samenwerkingsverbanden waren over het algemeen tevreden. De sterke netwerk governance heeft echter tot twee problemen geleid. Ten eerste was 49% van alle activiteiten gericht op het verbeteren van het initieel onderwijs, waaruit blijkt dat er sprake is van doelverschuiving naar de meest dominante partner: de onderwijsinstelling. Dit effect is in de loop van de onderzoeksperiode toegenomen (met uitzondering van het PBT-regime). Ten tweede leidde deze ontwikkeling er tevens toe dat activiteiten die voor de onderwijsinstelling moeilijk waren te realiseren, eenvoudig werden stopgezet of ondermaats bleven presteren. Dit was bijvoorbeeld het geval bij leven lang ontwikkelen, wederom met uitzondering van het PBT-regime. Tot slot is een belangrijke kritische noot dat, zowel bij de kwantitatieve analyse als in evaluaties van diverse beoordelingscommissies, er impliciet wordt aangenomen dat scholen en bedrijven het beste in staat zijn in te schatten welke activiteiten zij zouden moeten ondernemen om het beoogde doel te bereiken, en of deze doelen daadwerkelijk bereikt zijn. Hier is echter weinig feitelijk bewijs voor.

Drie casestudies - het Centrum voor Innovatief Vakmanschap Water, het Centre of Expertise Biobased Economy en het High Tech Centre Delft - bevestigden en duiden de conclusies van de kwantitatieve analyse. De governance regimes hebben de samenwerkingsverbanden door de eerste fase van hun ontwikkeling kunnen loodsen: de partnerschappen hebben veel geëxperimenteerd, een relatief hoog slagingspercentage behaald, een breed scala aan activiteiten is uitgevoerd, en een hoge mate van tevredenheid onder de partners is gerealiseerd. Dit was vooral te danken aan de ervaren vrijheid binnen netwerk governance en de minder dominante principaal-agentrelatie. Mede dankzij het leerprogramma werd veel meer ruimte ervaren voor experimenten, en lag er een focus op leren en ontwikkelen. Deze leerelementen waren met name van belang voor de onderwijsinstellingen, die zich daardoor richtte op 'higher order reflection', in plaats van een focus op het voldoen aan de door de overheid gestelde regels. Maar, zoals een van de casestudies laat zien, werd deze verschuiving niet altijd gemaakt: formele regels en procedures kunnen het denken binnen samenwerkingsverbanden gemakkelijk weer gaan domineren.

Echter, bij de organisatie en governance van het samenwerkingsverband zélf, domineerde 'lower-order trial and error'. Voor onderwijsinstellingen was het moeilijk te accepteren dat bedrijven en non-gouvernementele organisaties een sterke invloed zouden kunnen uitoefenen op de richting, doelen en activiteiten. Elk samenwerkingsverband worstelde met vragen over eigenaarschap, waarbij oude methoden werden toegepast op de nieuwe situatie waarin ze zich bevonden. In alle gevallen leidde dit tot een een leider-volger samenwerkingsverband, met de

onderwijsinstelling als leider. De governance regimes waren niet in staat om deze sterke institutionele eigenschappen van onderwijsinstellingen te overwinnen. Dit roept vragen op over of dit type governance regimes geschikt zijn voor de langere termijn, en ook of deze vorm van leider-volger samenwerkingsverbanden wel geschikt is. Hoewel de governance regimes slechts zijn ontworpen om samenwerkingsverbanden voor een periode van vier tot vijf jaar te begeleiden, werden zelfs in deze korte periode de oude patronen opnieuw bevestigd en werden onderwijsinstellingen steeds dominanter. In combinatie met hoge faalpercentages in activiteiten die buiten de comfortzone van de onderwijsinstellingen vielen, en de sterke focus op de kernactiviteiten van de onderwijsinstellingen zelf, kan dit op de langere termijn ertoe leiden dat bedrijven een stap terug doen.

De conclusie van dit onderzoek is dan ook dat de aanpak in Nederland een gedeeltelijk succesverhaal is, maar op de langere termijn dreigt te mislukken als er geen maatregelen worden genomen om de hierboven geschetste problemen aan te pakken. Positief is dat de governance regimes voldoende ruimte bieden om de samenwerkingsverbanden responsief en vraaggestuurd te maken, waarbij een succesvolle netwerkbenadering werd gehanteerd met een nadruk op leren en ontwikkelen. De regimes hebben de partnerschappen de vrijheid gegeven om te groeien en zich te ontwikkelen, wat heeft geleid tot indrukwekkende kwantitatieve resultaten (Katapult, 2019). Aan de andere kant zijn de regimes er niet in geslaagd om te voorkomen dat onderwijsinstellingen steeds dominanter worden, en werd toenemend prioriteit gegeven aan initieel onderwijs. De dominantie van de onderwijsinstelling werd versterkt door de governance regimes: de principaal-agent karakteristieken versterkten de bekende bureaucratisch routines waarin de overheid en de onderwijsinstelling zich bevinden. Bovendien waren twee van de drie governance regimes niet in staat om de aandacht te richten op moeilijke maar dringende uitdagingen, met name op het gebied van leven lang ontwikkelen. Het PBT-regime, dat verantwoording en leren expliciet combineert, bleek hiertoe beter in staat.

Er zijn belangrijke lessen te trekken uit de aanpak van de Nederlandse overheid. Zowel op Europees als op nationaal niveau blijven samenwerkingsverbanden een beleidsprioriteit bij de aanpak van de 'vaardigheidskloof', en er worden nog steeds veel nieuwe subsidies geïntroduceerd. Het implementeren van een netwerkbenadering bij samenwerkingsverbanden, met de vrijheid om doelen en methodes te kiezen, inclusief de eis van cofinanciering door alle partners, zijn de sterke punten van de Nederlandse aanpak waar lering uit kan worden getrokken. Het implementeren van de principes van experimental governance onderstrepen deze punten, waarbij enerzijds verantwoording wordt gecombineerd met leren, en anderzijds een sterkere

link ontstaat tussen overkoepelende landelijke doelen en de doelen en activiteiten van samenwerkingsverbanden. De implementatie van een dergelijke governance-aanpak legt een sterkere focus op moeilijke maar dringende uitdagingen, en voorkomen dat één bepaalde actor te dominant wordt. Het voorkomt tevens zware top-down governance modellen. Sinds het einde van de dataverzameling voor dit onderzoek heeft de Nederlandse overheid al enkele (kleine) stappen in deze richting gezet, zoals het sterker sturen op urgente uitdagingen en de invoering van peer reviews.

Introduction

This thesis analyzes the extent to which governments are able to promote partnerships between education and business in order to improve the education of the (future) labor force. In many cases, such partnerships are able to improve the skills and knowledge of the workforce while also accommodating today's rapid pace of innovation in technology and society, such as digitalization and the growth in self-employment. These rapid developments in technology and society have been the subject of many European and Dutch policy reports over the past few years, which have highlighted the increasing need for cooperation between public and private partners.

One example is McKinsey's report on the *Future of Work*, which emphasizes that at least 58% percent of the jobs will undergo significant change over the next 10 years (Manyika, 2017; McKinsey & Company, 2018). Analysis of the labor market shows that our workforce is aging quickly and in many countries student numbers will decline over the next few decades (Johnson and Zimmerman, 2008). Additionally, student numbers in disciplines such as science, technology, engineering and math (STEM) are relatively low compared to the level of demand in the labor market, in the Netherlands (Ministry of Economic Affairs, 2016) but also in other EU countries (Caprile et al., 2015).

Education is often seen as the key to addressing these problems. A well-trained labor force with the right skills is – according to various policy reports cited above – one of the most important factors in becoming 'future-proof'. But the changes required would need to go far beyond a simple review of the curriculum to incorporate new technologies. Indeed, depending on which author we listen to, an increase in work-based learning would mean far more flexible education programs, lifelong learning, teaching 21st century skills, or a focus on research and innovation (Zitter and Hoeve, 2012; Nieuwenhuis et al., 2014; Van Laar, 2017). Educational institutions are seen as too slow to adapt to these rapid developments on their own (Van der Meer and Smulders, 2014; WRR, 2013), underscoring the need for cooperation with companies and non-governmental organizations.

Public-private partnerships as a solution to the skills gap

One way of stimulating cooperation between education and companies – which is the focus of this research – is to create public-private partnerships (PPPs). This approach is becoming increasingly popular. Several initiatives undertaken across Europe and beyond in recent years support this strategy (European Training

Foundation, 2019). For example, the European Commission advocates the creation of 'Centres of Vocational Excellence' (CoVE), which play a very important role in the European Skills Agenda (European Commission, 2020). The Commission defines the function of these Centres as to "establish strong and enduring relationships at both local and transnational levels, between the VET community and businesses, in which interactions are reciprocal and mutually beneficial, and integrate activities, build reflexive relationships between the various activities and services, and be firmly anchored into wider frameworks of regional development, innovation and/or smart specialization strategies (...)"¹.

This thesis focuses on one of these initiatives in the Netherlands, which began in 2010 and is described as follows by the European Training Foundation (2019: 14): "In the Netherlands, the Katapult network is a community of 160 centres of vocational innovation defined as 'action-oriented partnerships between educational institutions, companies, governments and other public organizations [which] primarily focus on: creating an excellent link between education and the labour market, educating innovative and skilled professionals, craftsmen or craftswomen, promoting 'life-long learning' and timely re-skilling, accelerating and enhancing the innovation capacity of companies'. It is a highly flexible 'community for development', with individual centres able to organize themselves as local/regional/national needs demand, in terms of sectoral focus, activities and stakeholders. Sharing across the network is an important part of Katapult and includes peer learning, focus meetings, and impact research. The initiative goes beyond 'traditional' high quality VET through the important role of 'knowledge triangle', defined as combination of research and development (R&D), VET and business/industry."

This research will focus specifically on the question of what has been done in the Netherlands to establish these PPPs, and whether these efforts have been successful. Because the Dutch government used three distinctive governance approaches to stimulate these Centres, this creates a very good research opportunity to systematically compare these approaches.

Public-private partnerships in vocational and higher professional education in the Netherlands

The object of this research is a policy project that started in 2010 in which Centers of Expertise, Centers for Innovative Craftsmanship, and PPPs more generally were

1. https://eacea.ec.europa.eu/erasmus-plus/actions/centres-of-vocational-excellence_en, accessed 24-1-2020

established.² These PPPs all involve Hogescholen (Universities of Applied Sciences, see annex for HBO) or MBO-instellingen (VET colleges, see annex for MBO) on the one hand, and a range of businesses on the other, often supported by regional governments. The overall goal of these partnerships is to provide human capital for a specific economic sector. For example, the Center of Expertise for Water Technology aims to ‘strengthen the knowledge economy in water technology’.³ These partnerships often focus on technology-intensive sectors (or cross-sector themes like healthcare and technology), as employers in the Netherlands have difficulty finding personnel with the right background and skills, particularly in these sectors (Schwab ed., 2019: 419; Bakens et al., 2019). The partnership in question aims to improve education (skills, number of students, curricular improvements, etc.), promote lifelong learning at the participating businesses (courses, trainings, etc.), and facilitate practice-based research and innovation (innovation projects, valorization, start-ups, etc.). Education institutions, businesses, and governments establish these partnerships because the partners depend on one another to achieve goals that they could not achieve independently.

An impact study by Katapult (2019) showed that by summer 2019, the total number of public-private partnerships had reached over 324, including nearly 15,000 companies and reaching 82,000 students in MBO and HBO. On average, MBO partnerships reach 400 students and include 22 teachers. In HBO, the average is 600 students and 51 teachers. The sector with the most partnerships is ‘High Tech Systems and Materials’ (nearly 100), followed by the construction sector and ICT. This study focuses specifically on 52 of these partnerships which were established in the period 2012-2014.

The main objective of PPPs is to deliver better, innovative or unique services. In this thesis, PPPs are defined as a “*more or less sustainable cooperation between public and private actors in which joint products and/or services are developed and in which risks, costs and profits are shared*” (Klijn, 2010: 211). Under this definition, the focus is on co-developed (rather than implemented) joint products and services, and this implies that the actors share the benefits and risks of this process.

The characteristics of such partnerships differ from the products and services normally provided by MBO/HBO institutions in two respects, which indicate a fundamental reorientation in the organization of education. First, the partnership comprises both

2. Throughout the thesis, partnerships, public-private partnerships, PPPs or Centres all refer to the same thing.
3. Website Centre of Expertise for Water Technology, accessed 4-5-2016

public and private partners that share responsibility for achieving their goals. This means that partnerships function as a network and may be organized in various forms, from loose informal networks to formalized joint ventures. A regular MBO/HBO institution, by contrast, has sole responsibility for providing education and has a direct relationship with the national government.

Secondly, partnerships are inherently demand-driven, and the government expects PPPs to contribute to a specific economic sector. This means that PPPs are market-focused and coordination between the partners is based on the demands of the participating businesses, students, and teachers/researchers, directly influencing the activities of the partnership. Partnerships need to innovate continuously while renewing their knowledge and practices to reflect sometimes rapid technological and societal changes. By contrast, MBO colleges and Universities of Applied Sciences face are chiefly supply-driven, since their legal task is to offer a range of educational programs and to educate students to achieve clearly defined standards of attainment. In theory, therefore, partnerships can incorporate new technology and be more responsive to market developments and innovations, while the education system is much slower to innovate.

Table 1: Comparison between key characteristics of education institutions and public-private partnerships

	MBO / HBO institution	Public-private partnerships
Goal setting, goal attainment and relationship with government	Sole responsibility for achieving goals set by government; direct relationship.	Network cooperation to reach self-defined goals; goals may be influenced by government.
Type of activities (supply/demand) and relationship to the government	Essentially supply-driven: Provide education for pre-defined attainment levels; rules and procedures set by national government to ensure quality.	Essentially demand-driven: Provide activities that network partners want, which may or may not fall under government rules and procedures.

The first reviews of the partnerships in the Netherlands were very positive, as the program clearly 'meets a need', the participating actors are very enthusiastic (Reviewcommissie Hoger Onderwijs en Onderzoek [RCHO], 2016⁴), and quantitative growth is impressive (Katapult, 2019). However, the evidence also indicates that there is still much work to be done (RCHO, 2016; Van Staaldunin et al., 2014, 2017; Van Casteren et al., 2017). According to the reviews, the shift from an internally oriented MBO/HBO institution towards external PPPs takes time and requires dedicated resources, as the challenges involved are considerable (Van der Touw et al., 2013). The challenges the partnerships face are not unique, as the main challenges identified in various policy reports correspond closely to the reasons cited in the literature regarding why PPPs may fail or struggle (McQuaid, 2000). First, they lack clear aims and goals, which often makes the business case of the PPP unattractive. Second, the power of the partners is unequal, since one institution is often the dominant player (in this case, the educational institution). Third, differences in philosophy among the partners are often irreconcilable, because approaches in the private and public sectors often conflict. And fourth, the organizational difficulties and resource costs involved with this approach also make the business case steadily less attractive. The following policy conclusions relate closely to the problems that have just been outlined (Van der Touw et al., 2013; RCHO, 2016; Van Staaldunin et al., 2014, 2017):

1. Prioritization and sense of urgency: Firstly, most companies are convinced of the potential added value of the partnerships but are still reluctant to invest. Various reasons are given for this, e.g. the return on investment is not high enough, there is a lack of confidence in the MBO/HBO institution, the company expects the government to pay, etc. Within MBO/HBO institutions, some argue that their focus should be on the basic quality of the education, rather than on lifelong learning or innovative projects. Likewise, teachers at these institutions can be reluctant to 'let outsiders in'.
2. Uncertainty about the route to follow: The partnerships can choose their own goals and methods, since the overarching goals are open-ended. There is no blueprint and proven best practices are limited. This means that there is uncertainty about which route to take. For example: should the PPP be a legal entity? What are the priorities for the PPP? How can companies be persuaded to invest, how should 'better' education be defined?
3. Cultural differences: There are major cultural differences between the employees of educational institutions and the employees of the business partners. These differences include focus, aims, and time horizon. For example, educational
4. <https://www.rijksoverheid.nl/documenten/rapporten/2017/01/20/stelselrapportage-2016>, accessed 4-1-2017

institutions work within a yearly cycle, while smaller companies often expect activities to be completed by the end of the month.

4. Legal and fiscal barriers: Prominent examples are VAT (Value Added Tax), internal accounting rules, nationwide qualifications with too little room for regional variation, etc. Many Centers report that there is not enough leeway to experiment because of the existing regulations. Often the interpretation of rules rather than the rules themselves cause this friction. As the Van der Touw Committee stated: *After a thorough analysis of the problem, in close cooperation with all parties involved, the committee comes to the conclusion that the legislation and regulations in themselves do not often constitute an obstacle. The obstacle lies mainly in the lack of clarity about what is and what is not possible within the existing frameworks. This explicitly concerns legislation and regulations in the field of education and finance.* (2013: 9).

The role of the government in partnerships

This thesis focuses specifically on the role of the government in encouraging educational institutions and businesses to establish the types of partnership described. Judging by the quantitative results, the Dutch government is pursuing a successful approach to helping education institutions to connect with technological and social developments and encouraging them to cooperate with other organizations. Since 2010, the government has been encouraging MBO and HBO institutions to establish PPPs in innovative sectors such as the high-tech industry, while also actively encouraging businesses to engage in these partnerships.

This study uses a governance perspective to evaluate whether this approach is suited to helping these partnerships develop and achieve their goals. The research distinguishes two main types of governance (which will be briefly introduced here and further explained in chapter two): *principal-agent* (PA) and *network governance*. In PA models, the principal sets targets or guidelines, and expects the agent to achieve these requirements subject to positive and negative incentives (rewards and punishments) (Sabel and Zeitlin, 2012). Both bureaucracy and new public management styles of governance are characterized strongly by PA. Bureaucracy describes the situation when the principal manages the targets through legislation, prohibitions, and regulations (Weber, 1958), while new public management is based on a strict separation between policymaking and policy implementation, with the government managing this relationship by means of performance contracts (Klijn, 2012).

In contrast to PA, the second type of governance, *network governance*, sees operationally autonomous actors interacting through negotiation and is self-regulating

within the limits set by 'external forces', such as laws and regulations (Torfing, 2005). Klijn (2008: 505) argues that governments "have become more dependent on societal actors to achieve their goals because of the increasing complexity of the challenges they face (...) It is only through collaborative action that societal policy problems can be resolved". Thus, hierarchical government has shifted towards governance through networks (Rhodes, 2012), which have become increasingly important when it comes to solving complex problems. Experimentalist governance, a form of network governance that has been discovered relatively recently, connects the strengths of network governance with a specific form of government steering. This theory acknowledges that "precise policies and methods of achieving them must be discovered in the course of problem solving", but gives structure to often uncoordinated and intangible networks (Sabel and Zeitlin, 2012).

The role of the government in implementing policies is crucial. After Pressman and Wildavsky's *Implementation* (1984) revealed a wide gap between policy and practice, policy analysts turned their attention to the (failing) implementation process and the (failing) role of the government. Since then, however, governments have introduced new and innovative governance models to tackle countless implementation issues (the next chapter will expand upon these), partly redefining the relationship between the government and executive actors, and moving from a PA model towards network governance.

The approach in the Netherlands: three distinctive approaches

Rather than taking the same approach for all the partnerships, the Dutch government has implemented three different approaches (or, as we will refer to them throughout this thesis, three 'governance regimes') to guide partnerships. The Dutch government did not choose these three distinct regimes by design, but they evolved as a result of the changing political context, the organizations managing the grants, and the rules to which these organizations were bound. These governance regimes encompass not only elements of bureaucracy and new public management, but also innovative elements that accommodate the need for experimentation, 'scope for development', learning programs, and network steering in order to guide the evolution of the PPPs. Much like a natural experiment (Leatherdale, 2019), such innovation provides a unique opportunity to compare these approaches by studying which has been the most effective and which elements contributed to the development of partnerships. The fact that within a six-year period, three distinct governance regimes were set up to oversee similar PPPs represents an unique experimental setting in which to systematically compare the influence of those regimes on the partnerships.

These three regimes have one important characteristic in common: the extensive

freedom for partnerships to choose their own goals and methods of achieving them, and a lack of clear, predefined (performance) indicators by which to measure their success. This reflects an acknowledgement of the fact that the PA relationship is not always clear: the principal is unaware of what kind of prohibitions or regulations it should set to ensure that its intended targets are achieved, or how to measure the performance of a partnership.

The three governance regimes in use are:

1. The first wave implemented by the Platform Bèta Techniek (Platform for Science and Technology, PBT), which ran from 2010-2017, encompassing three Centers of Expertise (HBO) and 15 Centers of Vocational Innovation (MBO).

The governance model implemented by the PBT originally began in the tradition of new public management (NPM). Every year, an independent committee monitored each Center that received a grant and signed a performance contract with the PBT. Centers could formulate their own performance indicators, while governments authorized the continuation of grants (on top of the regular lump sum budget received by schools) based on progress on the performance indicators. The performance indicators were mainly quantitative, such as the inflow of students, but there were also process indicators (such as the legal form of the PPP). Additionally, there was a mandatory learning program.

Over the years, the PBT claimed to have changed its governance approach towards a 'collective learning model'. Under this new 'collective learning model', the performance contract was no longer signed between the PBT and the educational institution, but between the partners in the Center. The PBT also shifted from a chiefly individual approach towards more network-oriented activities, most notably through the foundation of an association of Centers focusing on knowledge dissemination (called Katapult, with Centers in the lead and PBT as a supporting actor).

Ideas about network governance strongly influenced the PBT, which had a direct PA relationship with the Ministries of Education and Economic Affairs. On the basis of the description of the PBT itself, it can be labelled as a combination of NPM and network governance, with the second tranche of PPPs closer to network governance than NPM.

2. The second wave implemented by the Review Committee for Higher Education and Research (RCHO), which ran from 2012-2016, encompassing 16 Centers of Expertise (HBO)

Began as part of an experiment with performance agreements in higher education, the RCHO was responsible for reviewing the performance of all universities and HBO institutions against an agreed performance contract (covering 7% of the lump-sum budget). This experiment had strong roots in NPM and worked with a fixed set of indicators. The Centers were part of these performance agreements (1% of the lump-sum budget), although they had a very different approach: there were no fixed indicators, except for co-financing by businesses. Additionally, there was a voluntary learning program.

The difference between the Centers and other aspects of the experiment became apparent from an evaluation committee chaired by Slob (2017). Most notably, the Centers were not required to provide a set of performance criteria, but were able to alter these criteria over the course of their development. Second, although the HBO institution had sole formal responsibility, the partners within the Center were directly involved in the monitoring process.

These contrasting aspects make the RCHO harder to define: the experiment as a whole can be labelled as a New Public Management model, and because Centers were included within this process and were formally bound to similar procedures, the RCHO clearly has NPM aspects. However, since the approach used specifically for Centers did not include quantitative performance indicators and involved an active role for private partners, it also has strong features of network governance.

3. Third wave via an Regional Investment Fund MBO (RIF), implemented by the Agency Responsible for Grants to Educational Institutions (DUS-i), which has been running since 2014, encompassing over 100 public-private partnerships in MBO.

The agency responsible for RIF is part of a large executive agency for grants and performs services for three Ministries: the Ministries of Education, Social Affairs, and Health Care. DUS-i has clear procedures on how to award grants to institutions, which is done on the basis of an approved activity plan, which requires annual reporting. The full budget was awarded in advance, based on the activities specified by the PPP. Each PPP is monitored specifically on whether or not it has carried out the specified activities rather than through performance indicators or agreed goals. The educational institution is also solely responsible for the execution of the activities. Deviation from the pre-specified activities is possible, but must be approved by DUS-i.

DUS-i can be defined as a traditional bureaucratic model, with clear PA features.

However, DUS-i also allows partnerships the freedom to set their own goals and methods at the start. Additionally, in recognition of the fact that PPPs are still developing, the government funds a voluntary learning program, comparable to the one in the RCHO regime. These are network characteristics with a bureaucratic foundation.

Table 2: Summary of governance regimes and number of cases

Name, N=	Keywords
PBT, 17 Centers (two tranches)	Monitoring of performance contracts, moved to 'collective learning', school responsible, active role for partners, additional grant, mandatory participation in learning program
RCHO, 16 Centers (one tranche)	Monitoring of relative progress, school responsible, active role for partners, percentage of lump-sum budget, part of experimental performance agreements, voluntary participation in learning program
RIF, 15 partnerships (only 2014 tranche)	Activity plans, additional grant for specific activities (any deviation needs to be reported), monitoring on progress of activities (not results), voluntary participation in learning program

Problem-solving behavior in partnerships

When evaluating partnerships, the key question is whether public and private actors are able to jointly develop new products and services in response to rapid developments in technology and society, and share both profits and costs – as defined previously. Public and private partners negotiate the goals of the partnership and discuss the best ways of achieving these. This contrasts with an approach whereby the government sets targets that are defined in advance. Public and private organizations face a new situation in which the normal routines or habits are no longer effective (Dewey 1933; Tallman, et al., 1993: 11; Schön and Argyris; 1992). This creates doubt and uncertainty regarding the route to take and enforces both public and private actors to try new behaviors to achieve their goals. In this research, this new behavior is defined as problem-solving behavior: “a non-routine activity oriented towards changing an undesirable state of affairs” (Tallman et al., 1993).

These aspects differ fundamentally from the governance frameworks in which schools currently operate, designed to achieve outcomes that ensure efficiency, quality, or effectiveness. For example the Inspectorate of Education (2020) oversights

the quality of education, focusing on the quality of the Dutch accreditation system, financial legality, efficiency and continuity and compliance with legal requirements (Inspectorate of Education, 2014). This may involve reviewing whether students receive a certain number of hours of teaching at school and whether the content of the education program reflects the relevant qualifications. The most important difference between these two approaches is that it assumes the possibility of separating goals (set by the government or another top-down actor) and methods (adopted by a school or partnership). In the case of the aforementioned partnerships, however, this is not possible because, as Sabel (2004: 181), argues, “in currently complex settings, choices of means routinely influence choices of ends, and vice versa, just as global and local knowledge are mutually corrective, not hierarchically ordered”. This means that both the goals and the methods of achieving those goals cannot be established by the hierarchical actor.

This fundamental difference highlights the need to review the governance frameworks and assess whether these are able to handle this different approach.

Problem statement

A governance regime that is adapted to PPP will be fundamentally different from the existing relationship between schools and the government, but current governance regimes still focus on the latter. For example, the Ministry of Education provides direct funding to the schools to realize the partnerships, while holding them solely responsible for achieving the goals. Additionally, the Ministry requires schools to remain within its rules and procedures, while on the other hand, stimulating the PPP to take a demand-driven approach and giving the latter the freedom to decide on its own goals and methods.

The challenges of rapid innovation, which call for a demand-driven approach, conflict with the supply-driven, fixed and stable approach which schools are accustomed to. The current governance framework seems hard to reconcile with the pace of innovation. The Van der Touw Committee (2013), appointed by the Ministry of Education, investigated the challenges faced by the Centers, emphasizing the problem of uncertainty. The committee argued that Centers should have more ‘room for development’, proposing a governance regime that would allow room for innovations which might not fall within the current legal framework. Although the Minister of Education found this an appealing idea and promised the Dutch Parliament to implement this system (Ministry of Education, 2013), this has yet to happen. On the contrary, the rules on public-private activities in MBO/HBO institutions have recently been tightened up (Ministry of Education, 2015a). From a policy perspective, this is difficult to understand, given the many government policies that encourage

public-private collaboration and the fact that such interactions are considered as the essential ingredient for a 'learning economy' (Leydesdorff, 2003; WRR 2013).

A guiding hypothesis in this research is that there is a connection between the type of governance on the one hand and the extent to which partnerships engage in successful problem-solving. The question is whether or not the various governance regimes involved in guiding the partnerships have adjusted to this new situation, and whether they are equipped to deal with the challenges faced by educational institutions and other partners in the public-private partnership.

These challenges are well-known, with policy reports by the Ministry of Education emphasizing the need for education institutions to be demand-driven and responsive (Ministry of Education, 2015). However, the possibility that there might be an issue with the governance of PPPs continues to be denied: the Ministry argues that existing rules and procedures provide more than enough room to be responsive and demand-driven, and complaints from PPPs stem from the fact that the latter are not proactive enough in using the freedoms provided by the current guidelines (Ministry of Education, 2019). There is merit in this argument: individual partnerships appear to be effective and seem to have enough scope for innovation (Van Casteren et al., 2017).

This research therefore focuses on the causal mechanisms between problem solving in partnerships on the one hand, and governance regimes on the other hand.

Research question

With regard to the problems experienced with partnerships, there are major obstacles that require problem-solving. The government is aware of this and has therefore revised its own governance to support the PPPs in their journey. The question is whether these changes have made PPPs more or less well-equipped to deal with the challenges that they face. This question can be formulated as the following research question:

How well-equipped is the governance framework for PPPs developed in Dutch MBO and HBO to cope with the uncertainty caused by rapid innovation and the increasing need for partnerships between organizations?

The relationship between the various concepts introduced above is as follows. The research question refers to 'coping with uncertainty'. In this research, 'coping' is operationalized as problem-solving behavior. Therefore, the research focuses on the relationship between governance and problem-solving behavior.

This leads to the following sub-questions:

- To what extent is there a relationship between the development of the PPPs in Dutch MBO/HBO education and their governance?

This first sub-question assesses the effect that the governance regime has on the development of PPPs. Is there any relationship, and if so, how does this relationship work in practice? Earlier research on implementation has indicated that there is a connection between the two, emphasizing that this relationship is complex and not rational (Pressman and Wildavsky, 1984).

- To what extent have subsequent developments in the governance of existing and new PPPs moved away from PA models towards a more network and/or experimentalist governance framework?

The second sub-question is a descriptive question, which delves into the specifics of the governance regimes. The three governance regimes are very different from each other. Several aspects have been introduced, such as an emphasis on learning programs, 'critical friend' assessors, phase models, and 'collective learning'. The question here is whether these aspects have really transformed the nature of the PA models that have always been dominant in this field.

- How have shifts in governance affected the operation and performance of the PPPs (both positively and negatively)?

The third sub-question seeks to address a key dimension of the main research question: whether the governance regime has a positive, negative, or neutral effect, specifically focusing on new aspects such as those mentioned above.

- Could a more radical reorganization of the PPPs along experimentalist governance lines be expected to enhance their capacity to cope with rising uncertainty?

The final sub-question builds on the conclusions of the third sub-question to explore whether a more coherent experimentalist governance approach might be expected to lead to better results.

Reading guide

This thesis is structured as follows. Chapters one and two explain the theoretical foundation used in the research. Chapter one focuses on the theory relating to public-private partnerships and problem-solving, as well as the connection between the two. The various aspects of problem solving in public-private partnerships are

explored, and a two-fold distinction is introduced between lower-order trial and error and higher-level reflection, building on the work of Dewey (1902; 1933) and Argyris and Schön (1974). The latter refers to reflective problem solving under circumstances of uncertainty, and the former to applying old routines to new situations. It is argued that in contexts involving uncertainty and wicked problems, partnerships need to engage in higher-level reflection in order to be successful. The chapter provides an overview of four key mechanisms that point towards one of the two types of problem solving: the decoupling of policy and practice, goal displacement, blueprint thinking, and rule-based implementation. Finally, the chapter defines the concept of public-private partnerships within the context of this research, highlighting the differences between the partnerships in this research and other – often more contractual – forms of partnership.

Chapter two focuses on governance and further clarifies the differences between PA models and network models, describing four ideal types of governance: standardized bureaucracy, new public management, network governance and experimentalist governance. These ideal types are then linked to problem solving and public-private partnerships. In bureaucracy, problem solving is done by highly-trained civil servants, who implement the solution to a problem based on rules and procedures. In NPM, the intended outcome is also imposed top-down, but using performance indicators, whilst problem solving is left to the agents responsible for achieving those indicators. In network governance, problem solving is seen as a learning process between stakeholders, whereby trust and cooperation are seen as the key to success and there is no clear separation between the setting and implementation of goals. And finally in experimentalism, problem solving is left to actors within a broader framework of goals which are formulated by multiple stakeholders, with an emphasis on a learning process that involves localized problem solving and the goals of the broader framework.

Chapter three explains the research design. The thesis aims to discover whether there is a causal link between the governance regime that is in place in a partnership and problem solving behavior within that partnership, and it seeks to identify explanatory mechanisms that explain the causal link in the specific context of public-private partnerships in vocational and higher education. This causal link is researched using four methods. The first method includes a thorough description of the policy context and the governance regimes, which clarifies and contextualizes the subsequent research results. The second method, and the most comprehensive stage of the research, includes a large-scale quantitative analysis. A significant part of this phase of the research involved finding a suitable way of measuring problem-solving behavior within partnerships. The chosen method resembles a sequence

analysis, monitoring all activities of 48 partnerships over a period of four to five years, including an analysis of whether or not the activities surpassed, met or failed to meet the partners' own expectations (generating 8,301 data points to analyze). The third method includes seven semi-structured interviews with project managers equally divided between the three regimes, which were used to develop an analytical framework to describe the governance regimes (see method one), and to help explain the results of the quantitative analysis. Fourth, three in-depth case studies are used to provide 'rich' stories that can explain the results of the large scale quantitative analysis. The researcher worked for PBT while collecting data and drafting the thesis, and was actively involved in supporting the public-private partnerships on a daily basis in various roles, which made it possible to explore the partnerships in great level of detail.

Chapter four describes the policy context in which the partnerships operate, explaining why the Centers were set up in the first place and outlining the three different policy angles: education, labor market, and competitiveness, each influencing the direction taken by the public-private partnerships and the evolution of governance in these areas. The chapter also includes a brief introduction of Dutch vocational and higher professional education.

Chapter five explains, in great level of detail, the three governance regimes, using an analytical framework to systematically compare each of the six aspects: the goal-setting process, the allocation of funding, monitoring, auditing and feedback to PPPs, learning incentives and scope for deviation. Each regime is compared to the ideal types of governance as outlined in chapter two. Two overall conclusions are drawn: (1) Since all three regimes allowed partnerships to set their own goals and formulate their own activities at the outset, and since there was no operationalization of the wider goals, and given the focus on learning incentives, all regimes feature a significant degree of network governance. (2) Principal-agent governance was reflected in the requirements for co-funding and the central role of the educational institutions in applying for and receiving funding as well as their responsibility for reporting on and – to a greater extent than the other partners – achieving the goals the partnerships had set. Beyond these characteristics, which are common to all regimes, the RIF regime is categorized more strongly by bureaucratic features, the RCHO regime mainly by network features, and the PBT regime shifted from an NPM orientation towards network governance and two features of experimentalism.

Chapter six describes the results of the interviews with seven randomly selected project managers from across all three regimes regarding the various aspects outlined in the analytical framework. The aim of this chapter is to provide insight

into how project managers dealt with specific aspects of the regimes, and is also helpful in avoiding researcher bias when interpreting various aspects of the regime. The interviews reveal the breadth of opinions among project managers. Depending on the project manager interviewed, opinions on the effectiveness of the governance regimes varied, and these were not linked exclusively to one of the regimes. Two aspects of the governance regimes were unanimously viewed as positive: the fact that goals and activities could be chosen freely to ensure commitment from all partners, and co-funding to reduce the chance of free riding and to increase the degree of commitment from all partners. Most formal aspects, especially the audits, led to strategic behavior or were seen as an unnecessary administrative burden, echoing familiar routines in which the government and school are involved in a bureaucratic relationship. The learning program was praised, as it helped all parties to 'let go' of this bureaucratic relationship.

Chapter seven evaluates the results of the large-scale quantitative analysis. These are considered in the light of two theoretical approaches: the first approach focuses on problem solving (chapter one), the second on governance regimes comparing the effect of PA-models with that of network governance (chapter two). The analysis reveals that network features of the governance regimes were stronger than the principal-agent features, showing that this approach was generally successful in guiding the partnerships towards a set of mixed activities that were all relevant to the overall policy aims, with a relatively high self-reported success rate of 39%. However, the dominance of network features also led to two problems. First, 50% of all activities related to improving initial education, indicating goal displacement on the part of the educational institutions as the dominant partners, an effect which increased over time (with the exception of the PBT regime). Second, this led to a situation in which activities that were more challenging to implement could easily be dropped or allowed to continue underperforming. The PBT regime was, again, an exception in this regard. Finally, both the large-scale analysis and the evaluations of assessment committees implicitly assumed that partners in the partnership would be in the best position to know which activities they should engage in and whether these were actually proving effective. The case studies, however, provide more clarity on whether the partnerships actually engaged in reflective problem solving or made changes on the basis of trial and error.

Chapter eight describes the three case studies of the Center for Innovative Craftmanship in Water Technology, the Centre of expertise in Biobased Economy, and the High Tech Centre Delft. Following the results of the large-scale analysis, it focuses on the randomness or reflectiveness of the choice of goals and activities and decision-making, and evaluates which aspects helped the partners to engage

in reflective problem solving. First, confirming the conclusions of the large-scale analysis, governance regimes were able to guide partnerships through the first phase of development: the partnerships engaged in a significant amount of experimentation, had a relatively high success rate, engaged in a wide range of activities, and achieved a high satisfaction rate amongst the partners. This was mainly caused by the shift towards the features of network governance and a less dominant principal-agent relationship, with much more scope for experimentation and a focus on learning and developing through the learning program. These elements were particularly important in allowing the educational institutions to engage in problem solving rather than following the rules set by the government. But as one of the case studies reveals, this shift was not always made, and the formal rules and procedures could easily become dominant again. Second, lower-order trial-and-error dominated with regard to questions of structure and governance models, and the corollary of partnerships – that other stakeholders may exert strong influence on the partnership’s direction, goals and activities – was difficult for the educational institutions to accept. Each partnership struggled with the question of ownership, applying old methods to the new situation they faced. In all cases, this led to a leader-follower partnership emerging. The governance regimes were not able to overcome the deep-seated institutional characteristics of the educational institutions, which calls their long-term suitability into question. Although the regimes were designed to guide the partnerships for four to five years, even in this short period, the old patterns reasserted themselves and the educational institutions came to dominate. In combination with the high failure rates for activities that were outside the comfort zone of the educational institution and the strong focus on the core activities of the educational institutions, this could very well be a toxic combination that, in the long run, will diminish the involvement of the businesses.

Chapter nine answers the secondary research questions, and concludes that the program in the Netherlands was a partial success story, but could well be prone to failure in the longer run. On the one hand, the governance frameworks provide plenty of scope for the partnerships to be responsive and demand-driven, adopting a successful network approach with an emphasis on learning and development with some principal-agent features. The framework was able to provide freedom for development and led to some impressive results, including up to 10,000 participating businesses (Katapult, 2019). On the other hand, the framework has not been able to overcome the fact that the educational institutions have become ever more dominant, redirecting the majority of funding and energy towards the area of initial education. Additionally, two of the three governance regimes were unable to promote problem solving in the partnerships in relation to tackling tough but urgent challenges, most notably lifelong learning. The PBT regime, which explicitly combines accountability

and learning, was able to perform better and proved more capable of preventing the partners from falling back into old routines, but it was discontinued in 2017. The renewed RIF-regime and a new regime to stimulate partnerships in HBO, however, do include some of the characteristics of the PBT regime, such as peer reviews and stronger steering on urgent challenges.

Following these conclusions, chapter nine discusses ways how to improve the approach taken by the Dutch government. At both at the European and the national levels, the skills problem and partnerships as a means of solving this problem continue to be a policy priority, and many new grants are still being introduced, lessons urgently need to be learned. Implementing a network approach towards partnerships with the freedom to choose goals and methods to achieve them, including the requirement of co-funding from all partners, are strengths of the Dutch approach which can be learned from. Implementing the principles of experimentalist governance could provide an opportunity to combine accountability with learning, and to combine a framework with open-ended goals with local implementation by stakeholders. The implementation of such a governance approach could enable stronger steering on difficult-to-achieve outcomes, avoid the excessive dominance of one of the actors, while also avoiding more heavy-handed, top-down governance methods. Some (small) steps have already been taken in this direction by the Dutch government since the end of data collection, such as stronger steering on urgent challenges and the introduction of peer reviews, but the key issue of dominant educational institutions has not yet been solved.



Chapter 1

Problem-solving behavior in public-private partnerships

1. Problem-solving behavior in public-private partnerships

This chapter describes the theoretical framework that we will use to look at problem-solving behavior in partnerships, and together with chapter two (that focuses on governance of partnerships) explains the theoretical foundation for the research. First, the various aspects of problem solving in public-private partnerships are explored, and a two-fold distinction is introduced between lower-order trial-and-error and higher-level reflection, building on the work of Dewey (1902; 1933) and Argyris and Schön (1974). Second, the context in which problem-solving takes place will be described, introducing the concepts of uncertainty and wicked problems, which the partnerships have to face. Third, the chapter defines the concept of public-private partnerships within the context of this research, highlighting the difference between the partnerships in this research and other – often more contractual – partnerships, and the main characteristics of each will be described. Finally, The chapter provides an overview of four key mechanisms that point towards one of the two types of problem solving: the decoupling of policy and practice, goal displacement, blueprint thinking, and rule-based implementation.

Problem-solving behavior

A key concept in this research is problem-solving behavior in the face of rapid innovation. Innovations such as digitalization typically throw up new challenges, which require problem-solving behavior. For example, digitalization is changing the nature of jobs and also creating new opportunities for teaching. The idea of partnerships between companies and educational institutions is to allow them to take advantage of these opportunities, and realize benefits that alone they would not have been able to achieve (McQuaid, 2000; Hodge and Greve, 2010). But do the people in these partnerships actually change their behavior, or do they simply continue applying the tried and tested methods. And if they do use new methods, how do they ascertain whether their goals have been achieved?

Problem solving occurs when we face situations which we are not familiar with. In the introduction, we defined problem solving as a *non-routine activity oriented towards changing an undesirable state of affairs* (Tallman et al., 1993). There are two types of problem solving that can be distinguished: lower-order trial-and-error and higher-level reflection (Dewey, 1933; Redmond, 2006; Rodgers, 2002). Lower-order trial-and-error involves using existing routines to deal with the new situation. Every person has a set of 'theories-in-use' that they use to cope with any day-to-day problem. Dewey warns about lower order trial-and-error and the comfort and danger

of unreflective routines when facing uncertainty: “familiarity breeds contempt, but it also breeds something like affection. We get used to the chains we wear and miss them when removed ... unpleasant, because meaningless, activities may get agreeable if long enough persisted in” (1902: 481).

The second type of problem solving, higher-level reflective-thinking, occurs when routines or habits fail to work in a new situation. This leads to doubt and uncertainty, and encourages the individual to try new behavior to achieve their goal. This behavior may include—in no particular order: (1) realizing that something is wrong; (2) analyzing the situation; (3) formulating various hypotheses; (4) testing; and (5) reflecting on effectiveness. Dewey emphasized that these aspects do not follow each other in a specific order and cannot be subjected to rules or a specific process (Redmond, 2006; Rodgers 2002; Dewey 1902; *ibid* 1933). This type of problem solving has two important characteristics. First, what constitutes problem solving varies from person to person (Martinez, 1998); whereas some have already overcome a problem, it is still new for others. Second, problem solving is not an advanced process that can only be realized by experts or ‘problem solvers’: “Indeed, people of all ages can and must be solvers of problems. Perhaps young children are the most natural problem solvers. Because they continually face circumstances that are novel, they must adapt” (Martinez, 1998: 606).

Argyris and Schön (1974) (Schön was a student of Dewey) developed this concept further and applied it to organizations and decision making within organizations. They use the concept of ‘theories-in-use’, and refer to the views, insights and explanations of a person which, when combined, form a theory of how people act when faced with new and unfamiliar problems. These theories-of-use must be distinguished from ‘espoused theories’, which refer to how people claim to act. Argyris and Schön operationalize this model to distinguish two types of problem solving, which align closely with the distinction mentioned previously: they see lower-order trial-and-error as *single-loop learning*, and higher-level reflective-thinking as *double-loop learning*. Single-loop learning is aimed at identifying a new course of action: an error is discovered and corrected based on existing theories-in-use, without the underlying value being contended. For example, Argyris (1976) found in experiments that when actors are removed from all rules and procedures, this does not necessarily lead to new solutions to problems, because people remain stuck in their ‘theories in use’. Double-loop learning entails a modification of the underlying rules, such as goals or decision-making rules, based on reflecting on a particular experience. This type of learning can be useful in organizational learning since it can generate new goals and ideas about how to solve problems.

It is not the case that one of these two types of problem solving necessarily precedes the other, and problem solving – whether single or double loop– does not necessarily lead to better results than previously, because new ‘bad habits’ can also be learned (Radaelli, 2012: 165). This depends on the situation in which a person, organization, or partnership finds itself.

Table 3: examples of the two types of problem solving

Problem solving	Example
Lower-order trial and error	The teacher uses familiar methods to deal with a new situation, whether or not these achieve the desired result. “There is no before or after to such experience; no retrospect nor outlook and consequently no meaning” (Dewey, 1916: 140).
Higher-level reflection	The teacher tries new techniques that go beyond their familiar methods, and reflects whether or not these are successful. ‘Old’ assumptions and beliefs of the teacher may be replaced by new ones, creating the possibility for the continuous development of new goals and methods.

The distinction between the two types of problem solving is crucial when it comes to policy implementation and decision making. In essence, in most of the literature on policy making, implementation and more specifically the implementation of public-private partnerships, there is an (implicit) reference to these two types of problem solving, and many scholars believe that in practice, most problem solving is accidental and based on trial-and-error. Although rational steps can be distinguished (i.e. problem definition, hypothesis), problem solving is a complex process and is surrounded by complexity, uncertainty and political games. For example, in studies on decision making, Cohen, March and Olsen (1972) used a ‘garbage can’ model to argue that problems and solutions are both present and are only matched when the situation accidentally happens to be right. Their description of problem solving comes closer to lower-order trial and error. Lindblom (1959) concluded that when it comes to complex problems in public policy, the rational steps are impossible to comprehend fully, thereby leaving lower-order trial and error as the only viable option (which he refers to as ‘muddling through’).

In studies on implementation, it has been found that implementation is not simply a matter of following the policy decisions taken at higher levels, but is a highly complex process that (again) is closer to lower-order trial-and-error problem solving than reflective thinking (Pressman and Wildavsky, 1984). Implementation studies

that focus on the implementing agent (such as the teacher or doctor) show that these agents do not necessarily carry out the policies that have been decided on, but rather they display their own problem-solving behavior and determine de facto the policy (Lipsky, 1980; Sabel, 2010). Whether this behavior is lower-level trial-and-error or higher-level reflection depends on the agent, which explains the high degree of variety in the behavior of such 'street-level bureaucrats'. This observed behavior points towards the limitations of hierarchical bureaucracies, as 'street-level bureaucrats' do not appear when front-line agents are encouraged to question and revise rules (Sabel, 2010). Finally, in the literature on public-private partnerships, Klijn (2010) concludes his literature review on public-private partnerships by saying that these are merely tools that can be used to try to solve a diverse set of complex problems, but also used as rhetoric to cover up the real problems, indicating a form of lower-level problem solving.

Several authors also distinguish 'deutero learning' or even 'triple-loop learning' in organizational learning (see for an overview Tosey et al., 2011). Argyris and Schön (1978: 27) define this as "to learn how to carry out single- and double-loop learning". This 'deutero learning', they argue, is an important kind of double-loop learning. Others suggest that within triple-loop learning, essential principles of the organization are discussed and changed (Swieringa and Wierdsma, 1992; Tosey et al., 2011). The concept of triple-loop learning is not explicitly used in the theoretical framework of this research, as partnerships require double-loop learning from the partners but no essential principles of the organization need to be changed. Argyris and Schön are followed by reflecting on whether or not partnerships are capable of learning to carry out double-loop learning.

The next section will discuss the concept of wicked problems and uncertainty, which require higher-level reflection in order to produce effective problem solving.

Uncertainty and wicked problems

The challenges that public-private partnerships try to tackle typically relate to 'wicked problems', as defined by Rittel and Webber (1973). This is because the problems they try to solve depend on the problem definition, and this definition is part of the problem-solving process (Rittel and Webber, 1973; Turnbull & Hoppe, 2019). Wicked problems are most easily understood by contrasting them with 'tame problems', which can be addressed via problem-solving strategies with a well-defined problem statement, and a solution that can be evaluated (Conklin, 2006). Wicked problems on the other hand are ill-defined, solutions vary depending on the parties involved and their interest in the problem and solution, and the problems change in scope and nature, and are characterized by uncertainty and complexity (Alexander, 2019).

The fact that the challenges faced by PPPs can be seen as wicked problems is evidenced by comparing the views of the Ministry of Education and the Ministry of Economic Affairs on these public-private partnerships. The Ministry of Education presents these partnerships as an instrument by which educational institutions can ensure that innovations find their way into schools, the match between education and the labor market can be bridged, and applied research in universities can be improved (Ministry of Education, 2015; *ibid* 2017). By contrast, the Ministry of Economic Affairs states that these PPPs are meant to help small and medium-sized businesses innovate and ensure that students and employers are trained with the latest skills, especially in sectors where there are skills shortages (Ministry of Economic Affairs, 2018). Whether these partnerships succeed or not will therefore depend on which actors define the problem and the solutions.

Wicked problems can also be observed within the partnerships on a 'street level' (Noordegraaf et al., 2019). The public and private actors have their own problem definitions, frames of reference and approaches, and so they need to define their problems jointly and agree on how to implement their partnership. Importantly, the actors within partnerships can experience wickedness, because "achieving even incremental progress in its normative and factual questions is difficult, frequently because distances between the relative parties remain large and conflictual" (Turnbull and Hoppe, 2018: 10). This context means that there are no easy 'technical' solutions or blueprints for the successful implementation of public-private partnerships (Koppenjan and Klijn, 2004). Their success or failure will depend to a significant extent on how the problem is defined (Rittel and Webber, 1973).

PPPs therefore operate in the context of wicked problems, which leads to uncertainty on which route to take. Uncertainty is defined as "*the inability to anticipate, much less to assign a probability to, future states of the world. The constellation of changes that make contemporary economies more innovative produces uncertainty: As innovations cascade, breakthroughs in one domain become relevant in other, distant ones*" (Sabel and Simon, 2017: 1). In the partnerships that are central to this study, all the governance regimes used to support PPPs have an important similarity: they ask the partnership to develop its own specific objectives within a number of broader policy goals, and there are no (formally established) predefined indicators or targets. This means that the problems are (deliberately) left for the public and private partners within a Centre to define. This, in turn, leads to uncertainty on which route to take, and higher-level reflection is required to set about overcoming these problems.

In the remaining part of this chapter, we will first explore public-private partnerships

and the factors that play a role in their success or failure. In the final section of this chapter, the key implementation concepts that are relevant to partnerships are discussed.

Public-private partnerships

This section deals with public-private partnerships, their definition, previous research on the success or failure of PPPs, and how this research relates to our research questions. PPPs are a nebulous concept, and cannot be captured using a single definition, because their uses are too diverse (Hodge and Greve, 2010a). It is therefore necessary to define what exactly we mean by public-private partnerships in the context of this research.

There are two different forms of relationship between government and private actors within public-private partnerships: a principal-agent relationship and a collaborative relationship. This thesis focuses on the latter, emphasizing the idea that each of the partners is dependent on the other in order to achieve goals they could not achieve alone (see the definition presented in the introduction). This also requires collaborative decision making, rather than a contractual agreement between a public and private actor to deliver a service (Ansell and Gash, 2008). The underlying assumptions are that the whole is greater than the sum of the parts, that new and innovative ideas will be generated, and that the partnership will exclude purely commercial transactions (Ronald W. McQuaid, 2000).

Collaborative partnerships differ significantly from public-private partnerships that operate on the basis of a principal-agent relationship, which is by far the most common and well-known form of PPP. The basic principle here is that private actors are better suited to achieving policy objectives than the government itself because these private actors are assumed to be more effective and efficient (Osborne & Gaebler, 1992; Bovens et al., 2001: 193). The government therefore teams up with private actors in order to get things done. Much has been written on these forms of public-private partnerships (for an overview, see Hodge and Greve, 2000a). This line of reasoning is based strongly on New Public Management, which emphasizes that governments should “use performance indicators, to organize the PPPs at arm’s length and its strong emphasis on efficiency and market mechanism” (Klijn, 2010: 75). For the most part, PPPs are used to mobilize the skills and expertise of the private sector to deliver public infrastructure.

In addition to collaborative and principal-agent relationships, some scholars argue that PPPs should be seen chiefly as a ‘language game’ and a ‘brand’ (Hodge and Greve 2010b; Khanom 2009). The term is even seen as a form of political euphemism,

to avoid less popular terms such as 'privatization' and 'contracting out' (Osborne 2000; Hodge and Greve, 2007). According to this perspective, partnerships are primarily a rhetorical slogan or gimmick in the realm of policy implementation. This is a perspective that needs to be taken into account when investigating PPPs: is there any true 'partnership', or is this actually a form of (policy) rhetoric?

This thesis focuses on the collaborative approach, and the definition and description of public-private partnerships presented in the next section must be viewed in this light.

Relationship between public and private partners

Schaeffer and Loveridge (2001) distinguish four ideal-typical public-private relationships which, in reality, are often mixed, change over time, or certain aspects are diluted. The first is the leader-follower relationship, whereby one partner is dominant (usually the one with the most power and funds). These types of partnerships usually evolve over time into a leader-follower partnership. The followers are often given explicit incentives to participate. The second is an exchange relationship, or seller-buyer relationship, where decisions about buying and selling are coordinated for mutual benefit. These partnerships occur with complex, non-standardized products and services, such as when a company is allowed to locate in a prime location in exchange for creating a certain number of jobs. The third type is a joint venture, where a venture is started between two parties for the purpose of producing one specific service or good, but those parties otherwise remain separate. The fourth type is a full partnership, ideally an "open-ended agreement to work together. In such an arrangement, the partners define the general purpose of the partnership but are open to new developments and opportunities" (Schaeffer and Loveridge, 2001: 20). In a full partnership, the risks are fully shared, while in a limited partnership, some partners take on fewer risks than others.

Partnerships distinguish themselves from (policy) networks because they go beyond horizontal coordination and bargaining between public and private partners that focuses on influencing public policy and political decision making (Torfing, 2005; Isett et al., 2011). Marin and Mayntz (1991) define networks as a "number of public, semi-public and private actors who, on the one hand, are dependent on one another's resources and capacities in order to get things done, and, on the other hand, are operationally autonomous in the sense that they are not commanded by superiors to act in a certain way". Although horizontal coordination is important in the partnerships investigated, they also go beyond coordination because they aim to deliver joint products and services.

One example mentioned the introduction is the Center of Expertise for Water Technology, which aims to 'strengthen the knowledge economy in water technology'. Rather than coordinating the joint efforts of public and private actors, the aim of the partnership is to realize better education (skills, number of students, curricular improvements, etc.), promote life-long learning in the participating businesses (courses, training, etc.), and carry out practice-based research and innovation (innovation projects, valorization, start-ups, etc.) together (Van Staalduinen et al, 2017). In other words, the parties want to go beyond network cooperation and have tried to establish an open-ended agreement for collaboration.

Public-private partnerships – the benefits, drawbacks and success factors

In an extensive literature review of the benefits and pitfalls of partnerships, McQuaid (2000) provides a long list of the potential benefits, problems and limitations (see table 4) that have been identified by various authors. As table 4 shows, the potential benefits of partners are extensive, but partnerships need to engage in serious problem solving in order to overcome the potential problems. Some of these aspects were already mentioned in the introduction to this thesis. When reviewing the problems and limitations, many reflect problems that can arise due to wicked problems (although not exclusively). Conflicts over goals and objectives, differences in philosophy and power relations reflect the wickedness of the problems tackled. They also correspond to an analysis of various policy reviews, as mentioned in the introduction: differences in culture between public and private organizations and uncertainty over which route to take were two of the four main problems.

When reviewing the success factors, many of these have already been identified. For example, O'Toole (1986) identified more than 300 key variables that shape multi-actor implementation. More recently, in the field of partnerships in vocational education, Cremers et al. (2018) provide seven design principles for 'hybrid learning configurations', such as facilitating reflexivity, utilizing diversity and realizing an 'enabling organization'. In the policy programs investigated, a 'phase model' is used that distinguishes several phases in the development of PPPs and tries to identify success factors for what to do during each phase of development, such as realizing prototypes and type of organization (Platform Beta Techniek, 2012/2019).

Table 4, summarized from McQuaid (2010)

Benefits of partnerships	Problems and limitations	Success factors
Flexible and responsive policy solutions	Conflict over goals and objectives	Clear strategic focus
Sharing knowledge, expertise and resources	Resource costs	Strategic leadership and support
Pooling of resources, synergy	Impacts on other services	Importance of trust, organizations and people
Developing a coherent service	Organizational difficulties	Capacity for co-operation and reciprocity?
Improving efficiency and accountability	Capacity building and gaps	Organizational complexity, co-location and coterminosity
Capacity building	Differences in philosophy among partners	Incentives for partners and symbiotic inter-dependency
Gaining legitimization and 'buy-in'	Power relations	Value of action and outcome-oriented procedures

Community Participation

To return to the subject of problem solving, the question is whether: (a) partnerships engage in meaningful dialogue to identify the potential benefits for them specifically; and (b) they are able to engage in reflexive problem solving to deal with the problems and limitations which they actually encounter. However, the success factors mentioned are of little use in this regard: they are neither necessary or sufficient factors, but simply factors that play a role in problem solving. Hence it is extremely difficult and perhaps impossible to turn them into a blueprint, as suggested in the article on hybrid learning configurations (Cremers et al., 2018) or the phase model (Platform Beta Techniek, 2012/2019), for example. The success factor of a 'clear strategic focus' sounds fairly obvious. However, during the process of implementation, as explained in the section on wicked problems, it becomes clear that achieving this is a highly political process between the actors involved in the partnership.

The aspects identified can be used in hindsight to evaluate whether the partnerships were able to overcome their challenges, realize a clear strategic focus, and therefore achieve their goals. In other words, the success factors can be used to evaluate progress in retrospect, but not to plan how to achieve it beforehand. However,

the success or failure of partnerships depends on these definitions and evaluative criteria. In chapter three on methodology, this conclusion is used to provide a bottom-up method of evaluating problem solving, rather than a top-down approach, in order to take into account the consequences of all the actions taken within the partnership (Matland, 1995). In chapter two on governance regimes, it will be clear that some regimes have created entry barriers based on these types of success factors.

Implementation mechanisms

The literature on implementation is very extensive and is only partly relevant to the implementation of public-private partnerships. This section focuses on insights into the (possible) mechanisms that are in play when implementing public-private partnerships, and how these relate to problem solving. Before we turn to these mechanisms however, it is useful to distinguish top-down and bottom-up approaches towards implementation (Matland, 1995). A top-down approach assumes that implementation begins with the adoption of a policy, and that there is a linear process through which this policy is implemented. The bottom-up approach focuses instead on local implementers rather than the government, and is more interested in the motives and actions of the former (Schofield, 2001). In the previous section, the question of how to evaluate partnerships was raised: a top-down scholar in the field of implementation would state that success should be measured in relation to the original policy, while a bottom-up scholar would prefer to take into account the full extent of results of the partnership. In the next chapters, these two approaches will be discussed in further detail, because this distinction plays a key role in both the governance regimes used and in the methodology used in this research.

A frequently observed phenomenon in implementation is the decoupling of policy and practice, whereby a policy is formally adopted and introduced, but is not actually (fully) implemented and effective (Meyer and Rowan, 1977). This is observed by both top-down and bottom-up researchers. There are several reasons why this occurs: it may be deliberate (Meyer and Rowan, 1977), non-deliberate (Sandholtz, 2012) or due to means-end decoupling (Bromley et al., 2012). Taking the deliberate reasons first, the symbolic adoption of a policy can enhance the legitimacy of an organization – for example to obtain ISO certification or a ‘green reputation’. In such cases, formal policies can become, as Meyer and Rowan (1977) argue, more of a myth and a ceremony than actual practice. Second, the decoupling of policy and practice can be non-deliberate, when there is a lack of consensus and coordination within an organization or between the cooperating organizations. Pressman and Wildavsky’s classic study of *Implementation* (1984) provides a detailed account of how well-intended policies can end up not being implemented because of the complex process of implementation itself, whilst Lipsky’s *Street Level Bureaucracy* (1980) describes

how decisions by bureaucrats at 'street level' lead to non-compliance or the selective implementation of policies. Finally, means-end decoupling implies that although some policy measures to realize a policy aim are implemented, these measures become a goal in themselves, regardless of their effectiveness. For example, procedures are narrowly followed, even though they may at some point be contradictory to the overall aims of the organization.

For the purpose of this research, the decoupling of policy and practice can take place at two levels. The first is the decoupling of the government's policy to promote partnerships, which means that in reality this does not (fully) come to pass. The second are the written plans of the partnerships at the start, and their failure to evolve into effective partnerships.

Whatever the reason for decoupling, the result is goal displacement: the original goals are replaced by others, which often strengthen the organization itself rather than helping to achieve the intended policies. Goal displacement is stronger when the overall aim is intangible and based on abstract ideas, as Warner and Havens (1968) hypothesize. In such cases, the goals are often ambiguous and can be interpreted in multiple ways, leaving too much scope for straying away from the overall objective. Decoupling often leads organizations to engage in 'window dressing' when they have to account for their actions. When goals are not achieved because of decoupling, this fact is often covered up by evaluation reports which create a more favorable impression than the reality, for example.

Implementation can also be hindered by blueprint thinking: a prescribed set of solutions to an issue that is applied to all situations, even where these are not suitable (Sutton, 1999). Blueprints help to simplify and clarify situations: they plot a clear route by which to accomplish a certain goal. Different, but similar in approach, is rule-based implementation, whereby the rationalization of both policy-making and implementation occurs through hierarchal order and impersonal rules (Weber et al., 1958). Following a set of pre-described rules and procedures, a similar approach is used for each situation. The main argument for this approach is equality and efficiency: it ensures that every participant gets the same treatment, and because of scale advantages, it is also efficient.⁵

5. In the context of uncertainty, it also provides a good argument for not changing rules and procedures, unless this is valid for all actors.

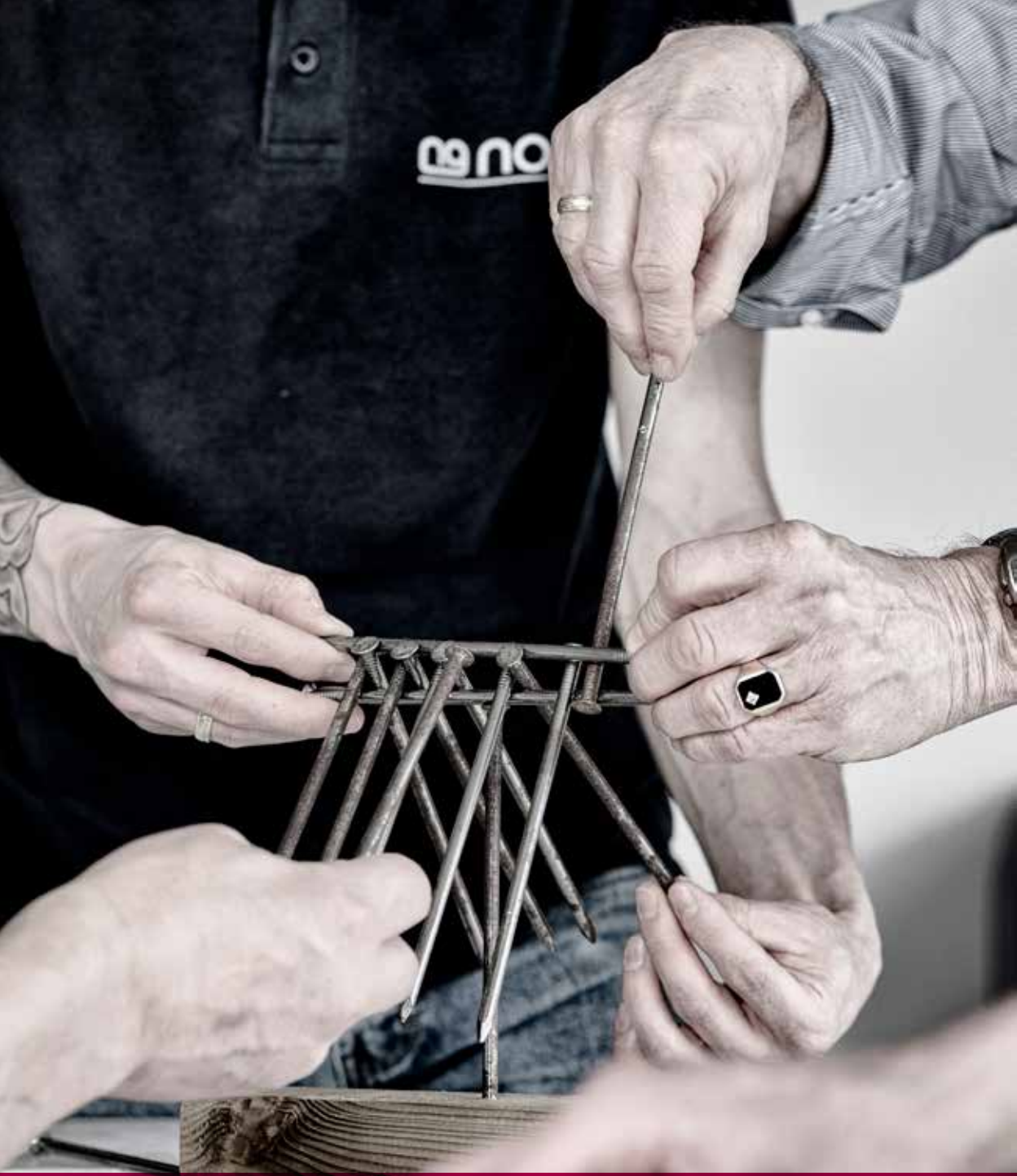
However well-intended, in the context of rapid innovation and uncertainty, blueprint thinking and rule-based implementation fail for three reasons: they destroy diversity, they are unfair, and the establishment of these blueprints or rules is often politically driven and culturally embedded. First, the implementation of policies takes place in regions and organizations with different characteristics. Implementing a blueprint means that these strong characteristics are harder or impossible to make use of during implementation, and not every rule will suit every region (Zeitlin and Kristensen, 2004). Second, because regions and organizations are all different, the blueprint or rules and procedures work out differently and are thus inherently unfair when used as a basis for funding or assessment (Bourgon 2011; Stone 2012; Stone 2002). The third drawback is that blueprint or rules are usually designed around dominant political and cultural assumptions, which often prevents new and innovative solutions from being considered (Sutton, 1999; Roe 1991). A specific form of blueprint thinking is copycat behavior, a situation where one organization copies the goals and methods of another organization.

Connecting decoupling and blueprint thinking to problem solving, the preference for lower-order trial-and-error is apparent. The above mechanisms relate to processes that ensure that things stay as they are. As mentioned at the start of this chapter, aversion to real change and the desire to leave things as they are, are a genuinely strong and deep-seated feature of institutions, and beliefs “are likely to resist, and ultimately to thwart, most efforts at reform” (Sabel and Zeitlin, 2012: 17).

Conclusion: problem solving in partnerships

This chapter has explored the various aspects of problem solving in public-private partnerships in the face of rapid innovation and increasing interconnectedness between organizations. When evaluating these collaborative partnerships, the key question is whether public and private actors are able to collaborate in jointly developing new products and services in response to rapid developments in technology and society, and share both the profits and the costs (Ansel and Gash, 2008; Klijn and Teisman, 2003). In the context of uncertainty and wicked problems, partnerships need to engage in higher-level reflection in order to be successful, rather than applying old routines to new situations. The two-fold distinction that is introduced is thus helpful in distinguishing between lower-order trial and error and higher-level reflection (Dewey, 1902, 1933; Argyris and Schön, 1974), the latter referring to reflective problem solving under circumstances of uncertainty. The much-observed implementation mechanisms discussed point towards the – in the case of uncertainty – undesirable process of ensuring that things stay as they are: lower-order trial and error.

The following chapter will delve into the second main concept of this research, the governance of partnerships. The chapter addresses the question of how various types of governance influence partnerships, in particular their problem-solving behavior.



Chapter 2

Governance of partnerships

2. Governance of partnerships

This chapter focuses on governance and further clarifies the differences between principal-agent models and network models, since these two models constitute a fundamentally different approach to the governance of partnerships. The previous chapter analyzed what is needed to realize successful partnerships, emphasizing the need to engage in reflective problem solving and break free of old routines, in order to overcome the wicked problems and uncertainty that partnerships frequently face. In order to evaluate problem solving, a two-fold distinction was introduced: lower-level trial and error, and higher-order reflection. The question that is central to this chapter is the extent to which different types of governance are able to guide partnerships in the context of uncertainty. Within principal-agent and network models, four ideal types of governance are introduced. We will address the question of how these governance types influence partnerships and in particular their problem-solving behavior. We will focus on existing research on the various governance types and their expected influence on problem solving, giving concrete examples from the Netherlands. The first is the traditional – and most common – pattern derived from public administration, based on the classic principal-agent model. Two variants – standardized bureaucracy and new public management – will be discussed, with a focus on their expected impact on problem solving. Second, we will discuss some critiques of this traditional approach, and we will then discuss an alternative structure, labelled network governance. This strand of literature has highlighted the failure of principal-agent models in the context of uncertainty, but also shows that alternative approaches remain vague and fluid (Koppenjan and Klijn, 2004). Experimentalist governance will be discussed as a way of bringing structure to the mainly highly fluid and abstract concepts of network governance (Sabel and Zeitlin, 2012), including the impact that these types of governance might be expected to have on problem solving. Finally, the possibility of mixed forms of governance will be discussed as a prelude to the chapter about the governance of PPPs.

Government steering or governance of partnerships

The fact that the government has an influence over the behavior of its executive agents is fairly obvious and has been thoroughly documented, and particularly the fact that this influence is not a rational and predictable process. Pressman and Wildavsky (1984), for example, show that despite good intentions and willingness on the part of all the actors involved, the path of implementation from policy to practice is a bumpy ride. For the partnerships in this thesis, it is the government that sets policy (establishing partnerships for particular goals), and assigns schools and their partners responsibility for implementing these partnerships in order to realize the goals. However, these policies often center on wicked problems, as defined in

the previous chapter: vague, abstract ideas, which are ambiguous, complex and may even be interpreted as contradictory (Sabel, 2012). Schools and their partners are uncertain about how to achieve these overall goals beforehand, and the government does not know in advance which targets or guidelines should be set. The question is whether the governance model that is chosen either contributes to or obstructs the 'holy grail' of reflective problem solving.

This chapter makes a distinction between principal-agent models on the one hand, and network governance and experimentalist governance on the other, with the latter deviating from the traditional principal-agent relationship. Principal-agent models (PA models), as defined in the introduction, are based on a strict distinction between the principal, who sets goals and targets, and the agent, who is responsible for achieving them. Some scholars believe that traditional PA models are no longer an appropriate way to describe the interaction between government and its executive agents (Rhodes 2012; Sabel 2004; Sabel and Zeitlin 2012). This has led to the increasing popularity of the word 'governance', which refers not only to the relationship between government and agents, but also takes account of a wider spectrum of top-down, horizontal and bottom-up relationships (Rhodes, 2012). Public policy problems are often complex, and reveal the need "to bring government, citizens and stakeholders together to engage in creative problem solving" (Ansell, 2004: 504), emphasizing the need for collaboration between these actors. In network governance, the government is not seen as the only actor who that can give orders and set rules and procedures; rather, it is just one of multiple actors in a complex arena, each of which has various interests and needs (Koppenjan and Klijn, 2004). In PA models, government steering (rather than governance) is a more appropriate term, because the government remains by far the most important actor, whilst in network governance, the term governance is more appropriate because multiple actors are involved.

Both principal-agent and network models will respond differently to contexts of uncertainty and find different ways of solving problems. These models will now be discussed.

Public administration and principal-agent models

A principal-agent relationship is an arrangement whereby one entity (the principal) appoints another to act on its behalf (the agent). Under this model of governance, the rules and guidelines that the agent should follow are established in a law or through regulations.

Standardized bureaucracy

In a standardized bureaucracy, the government steers by means of legislation, prohibitions, and regulations (Weber, 1958; Olsen, 2004); a 'command-and-control' rationale exists whereby goals are translated into rules by policy makers. The government creates - based on the goals - specialized regulations and legislation to guide its executive agencies. The executive agency is in turn responsible for implementing these rules. Bureaucracy rationalizes policy-making and implementation through a hierarchical order and impersonal rules (Weber, 1958). According to Weber, the ideal-typical bureaucracy has six key characteristics. These characteristics are what define an ideal-typical bureaucracy, and also distinguish it from other interpretations of bureaucracy as a synonym for an inefficient organization, or a description for government agencies in general (Albrow, 1970).

First, there is a clear hierarchy and chain of command. Second, jobs are specialized and allocated according to technical competencies, and employees working in the bureaucracy are experts in their field. Third, there is a division of labor, so that most tasks are broken down into different jobs. Fourth, there are clear, formal rules and procedures according to which jobs are carried out. Fifth, communication is formal, and written communication is favored over face-to-face communication. And the sixth characteristic is impersonality: everyone is treated the same uniform way (Weber, 1958; Hood 1991). Other characteristics, which are less relevant to this these, include the way in which new employees are hired and promoted.

Rationalization and hierarchy in policy making and implementation are the most important features to consider when it comes to the effect of bureaucracies on problem solving. Rationalization implies that problems can be solved by experts in their field, and that in hierarchies, the top-down actor is able to choose the best solution possible. In practice, however, there is much empirical evidence that paints a very different picture of the functioning of bureaucracies. Many of the challenges of implementation mentioned in the previous chapter, such as window dressing and goal displacement, have been identified in standardized bureaucracies, which were the dominant organizational structures for most of the twentieth century. In the following section, the main problems of bureaucracy are discussed.

Lipsky's *Street Level Bureaucracy* (1980) describes how street-level bureaucrats deal with the task of implementing the rules and laws assigned to them at street level. In practice, rules and procedures are inherently hard to apply to real-life situations. Rules do not always fit specific cases, or they may conflict with one another. Additionally, as it is impossible to monitor all the agent's actions and thus impossible to reward or punish the agent based on its compliance to the rules,

so there is significant leeway for street-level bureaucrats (Lipsky, 1980). Another phenomenon observed in bureaucracies is that rules become ends in themselves (Meyer and Rowan, 1977; Merton, 1957). Sub-units within a bureaucracy may frequently pursue independent goals that are not coordinated or even contradictory, leading to competing or contradictory rules and procedures (Selznick, 1957), and bureaucracies are characterized by their resistance to change and their inability to innovate (Burns and Stalker, 1961).

Despite this empirical evidence, bureaucracies remain the dominant form of government organization. Even though insights into wicked problems and the network society are leading to a shift towards network organizations, Olsen (2004) argues that the “bureaucratic organization is part of a repertoire of overlapping, supplementary, and competing forms coexisting in contemporary democracies, and so are market-organization and network-organization” (p. 18). Bureaucracies, Olsen (2004) argues, are important for the creation of order, continuity, and predictability. Rules and guidelines provide comfort and clarity and this, among other things, explains the enduring popularity of bureaucracy.

Problem solving and bureaucracy

In theory, bureaucracies solve problems by tasking expert civil servants with devising a solution and implement this solution by changing the rules and regulations, or by developing new rules and regulations. When there are no clear, stable and agreed-upon goals, and there is uncertainty about how to achieve these goals, and this is the case with the wicked problems faced by public-private partnerships, problem solving in a bureaucracy is difficult.

Additionally, problem solving usually requires rules and procedures to be changed. Rules are easy to oppose before they have been introduced, but once they have become established it is difficult to get rid of them, precisely because they provide comfort and clarity (Dewey, 1933). This is especially true for educational institutions, which often have strongly bureaucratic characteristics. For example, Argyris (1976) found in an experiment that when all the rules and procedures in a school were removed (but with the same staff, students and building), the teachers and students reinstated much of the original model. Similarly, the Van der Touw committee observed that many obstructive rules and guidelines had already been formally removed by the national government. However, these rules were still being implemented by school bureaucracies, and they were therefore still creating obstacles and were not removed, because both schools and the inspectorate were accustomed to them and continued to act in accordance with these non-existent rules (Van der Touw, 2013).

New public management

The second type of principle-agent governance is based on a strict separation of policy-making and policy implementation to improve the effectiveness and efficiency of public services (Osborne and Gaebler, 1992; Klijn 2012; Hood 1991). NPM arose as a response to the shortcomings of bureaucracy. NPM does not call the traditional principal-agent relationship into question, but separates policy and implementation by delegating responsibilities to executive units. The idea behind NPM is to promote a more efficient approach that uses private sector techniques such as performance management (Dunleavy et al., 2006; Klijn, 2012), entrepreneurial management (Osborne and Gaebler, 1992), and commercial methods (Pollitt, 1993). Targets and the corresponding indicators are set out in the form of a contract between agent and principal. Depending on the results, the agent is either rewarded or penalized.

NPM also uses a principal-agent approach, with the principal setting the targets and the agent given responsibility for achieving these targets. In a bureaucracy, the agents are not responsible for reaching targets that are agreed in advance, but simply for implementing the rules and procedures. In NPM on the other hand, the way in which the agent achieves the targets is left up to the agent itself, so the agent is expected to engage in problem solving with respect to achieving the targets.

The main pitfall of NPM has been the fact that many public policy issues are very hard to translate into performance indicators, and it can be difficult to specify goals and definitions in advance (Klijn, 2012; Rhodes, 1997; Sabel and Zeitlin, 2012). This bears some similarity to the criticism levelled at bureaucracy, as described in the previous section. It still assumes that the principal knows which goals and indicators should be chosen. But different indicators can still contradict each other, just as the rules in a bureaucracy can contradict each other. Second, the public sector is different from the private sector, because the problems faced are often wicked and involve multiple aspects – such as political, ethical, constitutional and social dimensions – that have to be taken into account. This makes it hard to translate business principles to the public sector (Pollit, 1993). Third, goal displacement is a frequently reported failure of NPM: the organization focuses on achieving the performance indicators, but overlooks the broader aim of the policy (Warner and Havens, 1968; Klijn, 2012). A final issue with NPM is that, on the one hand, goals that are not specifically targeted receive less attention, and on the other hand so many goals are set that the agent enjoys a significant degree of discretion in practice: *“Since the agent can not possibly do all the things the principle explicitly says or generally implies need doing, it is the agent, not the principal who chooses what goals are actually pursued.”* (Sabel, 2004: 8)

Problem solving and new public management

Much like in bureaucracy, problem solving in NPM is difficult when there are no clear, stable and agreed-upon goals, and implementation is uncertain. New public management governance operates under the assumption that in order to implement public policy, autonomous organizations are the best equipped to provide services and to solve their own problems along the way. Problem solving is thus the primacy of the agent, and the principal only needs to choose the correct indicators and monitor whether progress on these indicators is being made. NPM performs relatively well when it is possible to separate policy formation from implementation: it is possible to specify products and/or services, and also monitor these (Koppenjan and Klijn, 2004; Osborne and Gaebler, 1992). When implementation is not satisfactory, the governance response is usually to establish new indicators for its agents to fulfill, or even to establish a new authority or executive agency to counter the problem (Koppenjan and Klijn, 2004; Sabel 2004). In the context of uncertainty and partnerships, these responses however are inadequate.

Principal-agent governance in the Netherlands

Discussions on principal-agent governance feature prominently in the provision of education in the Netherlands, and hence they are important in this research, with education partners being crucial in these partnerships. Two examples are illustrative for the Netherlands: the implementation of performance indicators in higher education in 2012 (as an example of NPM-inspired policy), and the implementation of obligatory school hours for vocational education in 2011 (as an example of bureaucracy-inspired policy).

In response to the desire to steer on output (Bekkers, 2008) and a report which stated that the Dutch higher education system was not future-proof (Veerman et al., 2010), the Ministry of Education implemented a system of performance agreements with individual educational institutions that encompassed 7% of total budget for higher education (Jongbloed et al., 2008). The idea was that the government would be able to steer institutions of higher education while not affecting their autonomy. Educational institutions were required to focus on a set of obligatory indicators, but also had the freedom to choose their own indicators alongside these. This example shows that NPM techniques are still seen as a way to improve the effectiveness and efficiency of public services. Criticism of this approach has been consistent with the criticisms mentioned above in the section on NPM. First, the committee tasked with evaluating the system observed that the focus was primarily on achieving the quantitative results rather than achieving the overall aims presented in the Veerman report (Evaluatiecommissie Prestatiebesteding Hoger Onderwijs, 2017). Second, some indicators contradicted each other, such as the 'trilemma' faced by universities

of applied science (UAS). In a nutshell, all UAS institutions were expected to increase their levels of education provided, but this had a negative impact on academic success rates, which were also a performance indicator, and especially in areas with a “relatively large number of vocational students, students with a non-Western background and first-generation students”, a demographic group that generally has more difficulty finishing their education (Ministry of Education, 2016). One institution of higher education in Rotterdam was penalized because it did not perform well on the indicator of academic success. However, the institution in Rotterdam claimed that this was due largely to the demographic make-up of the city of Rotterdam, arguing that the rules worked out unfavorably in their specific situation (Scienceguide, 2016). This and other criticisms have since led to a debate about how to steer higher education institutions, and another variant of governance was introduced in 2018.

The second example that reflects a more bureaucratic approach is to be found in the education policy known as *Focus op Vakmanschap (Focus on Craftmanship)* (Ministry of Education, 2011), which was a response to complaints about the frequent cancellation of lessons and exams that did not meet the standards, even though there was no evidence that overall quality was declining (ibid, p.1). One of the measures taken was to increase the minimum required teaching time per student. The policy assumption was that by increasing teaching hours, students would learn more and that quality would therefore increase. A few years later, however, there was criticism that this measure had actually led to a significant increase in the administrative burden (Netherlands Court of Audit, 2013). The Court of Audit concluded that even though the idea of a minimum teaching time was understandable, enforcement was so difficult in practice that it was unworkable. It led to many additional administrative tasks, there was no correlation with the quality of education, and it led to ‘safe’ education practices while innovative practices were disincentivized. In reality, the required teaching times were unworkable in some education programs, whilst in others the required teaching time was easily surpassed. This led to a situation where rules and practice diverged to an excessive degree. The education inspectorate no longer monitors teaching times for students (Ministry of Education, 2018).

Conclusion: principal-agent steering and problem solving

Both standardized bureaucracy and NPM are based on a similar top-down approach when it comes to solving problems in uncertainty: both systems attempt to tackle challenges by applying top-down control (Sabel 2004; Koppenjan and Klijn, 2004). The former does this by specifying regulations and targets to be enforced at ‘street level’, while the latter does it by specifying goals and output indicators and delegating responsibility to decentralized actors. These similar responses to uncertainty are both based on the principal-agent relationship. In both standardized bureaucracy

and NPM, the principal sets the targets or guidelines, while the agent is tasked with carry them out.

The most important shortcoming of these principal-agent relationships is that they assume that it is possible to separate goals and methods, and to separate expert knowledge from local knowledge (Sabel, 2004). However, as Sabel (2004), in uncertainty this separation is not possible, as the choice of methods influences the choice of goals, and vice versa. This conclusion results in a range of problems, as we have outlined in this section. Agents do not know how to achieve the goals set by the principal. The policy goals are complex, contradictory and ambiguous. The principal is not always able to change these goals, and agents may be unwilling to report problems. Guidelines may work out differently for different agents, and agents may engage in window-dressing behavior to make their performance look deceptively favorable.

Network governance and experimentalist governance

Network governance, or the governance of networks, represents a fundamentally different approach to steering than principal-agent steering. This section presents the theory on network governance, including its approach to problem solving. This is followed by a description of experimentalist governance as a way of bringing structure into the fluid practices of network governance. Finally, Dutch examples are given.

Network governance

Network governance, in contrast to principal-agent relationships, sees operationally autonomous actors interacting through negotiations, and is self-regulating within the limits set by 'external forces', such as laws and regulations (Torfing, 2005). Klijn (2008) argues that governments "have become more dependent on societal actors to achieve their goals because of the increasing complexity of the challenges they face (...) It is only through collaborative action that societal policy problems can be resolved" (ibid, p. 201). It is therefore argued that hierarchical government has shifted towards governance through networks (Rhodes 2012), as networks have become increasingly important when solving complex problems. Within network governance, Klijn and Koppenjan (2004) argue, there is an emphasis on learning processes involving multiple parties and goal entanglement between stakeholders. There is no command-and-control structure, as coordination between stakeholders is based on horizontal types of steering.

An important point of criticism when considering network governance as an alternative to principal-agent governance, is that it underestimates the role of hierarchy. While the concept of trust within networks is seen as the main coordinating mechanism within them (Rhodes 2007), Jessop (2011) argues that while the role of the government may change, it always plays the role of 'primus inter pares', and involves 'tangled hierarchies' and 'complex interdependence'. So whilst other actors do play a more significant role in network governance than in principal-agent governance, they still operate 'in the shadow of hierarchy' cast by government, and so network governance is always mixed with some principal-agent features. The notion that networks operate in the shadow of hierarchy does, however, provide a riposte to some of the criticisms described in the previous paragraph: the government can set (normative) boundaries within which networks need to operate, thus inevitably steering outcomes to some extent.

Network governance and problem solving

Networks are very difficult to steer. Problem solving takes place within the networks, and whether first or second order learning occurs is highly dependent on the conditions in these networks, such as trust (Rhodes, 2007). Networks imply cooperative modes of deliberation or decision making among actors within the network (Ansell and Gash, 2008). In theory, networks are able to "promote the development of shared meaning and values and common definitions of problems and solutions" (Börzel and Heard-Lauréote, 2009: 142). The 'steering' of networks focuses mainly on improving the conditions for success, such as good representation for stakeholders and building trust, the use of non-hierarchical instruments to steer networks in the right direction, and leaving the final destination up to the network itself (Provan and Kenis, 2007; Gilardi and Radaelli, 2012). For example, collaborative governance is an explicit strategy to involve multiple stakeholders into a 'consensus-oriented decision-making process' (Ansell and Gash, 2008).

Although network governance is theoretically considered effective and an important way of coordinating multiple actors, in practice it often remains vague, difficult to implement, and prone to failure (Klijn and Koppenjan, 2004; Torfing, 2008). The problem with network governance is its lack of transparency, because problem solving and decision making happens within these networks (Koppenjan and Klijn, 2004: 258), and might mostly benefit "those directly involved in the short run, but are undesirable from a broader context" (p. 258). 'Closed subsystems', 'vested interests', 'blocking of innovative solutions', and 'non-transparent processes' have all been observed within networks (Koppenjan and Klijn, 2004: 41). Since network steering does not focus on steering towards a defined outcome, ploutcomes may be undesirable from a normative standpoint, and "policies can spread regardless of their

actual consequences, and even despite their ineffectiveness” (Gilardi and Radaelli, 2012: 165).

Experimentalist governance

Experimentalist governance (EG) is a coordinated method for learning from diversity, which provides a structure for the fluid practices of network governance. In experimentalism, network principles – such as peer learning – are used in an iterative cycle that also involves central government and key stakeholders. Essentially, EG reframes the role of the principal and agent, whereby the principal is no longer merely responsible for setting standards or targets and monitoring results, but also plays an active role in supporting the executive agents in achieving the goals it sets. Similarly, the learning cycle is completed as executive agents also play an active role in defining standards or targets. This redefines the relationship between the principal and agent, in the sense that policy making and execution are no longer separate processes (Sabel, 2004; Sabel and Simon, 2011; Sabel and Zeitlin, 2012).

The four stages of experimentalism are as follows. The starting point is a group of stakeholders that share a common problem and a goal that they want to achieve, such as better education or better health care, but do not yet know how to achieve this. The first step is that these stakeholders together agree on a framework with open-ended goals. The second step is the implementation of these open-ended goals by local or regional actors. Third, the local or regional actors monitor their progress according to their own indicators, and participate in peer reviews with similar actors. Finally, the goals and practices are evaluated with the stakeholders from the first step, based on the results of the peer review. Experimentalism is often underpinned by a penalty default: a central authority that is in the position to sanction non-cooperation, or which can introduce a regime that is less attractive to all stakeholders (De Búrca et al., 2014; Sabel and Zeitlin 2012). Although the penalty default appears similar, it is different to operating in the shadow of hierarchy: the penalty default obliges the local actor to engage in problem solving to pursue their own goal within the overall framework, whilst the shadow of hierarchy means accepting the functions delegated to the local actor by setting rules and procedures (Ragoni & Zeitlin, 2020).

A central mechanism of experimentalism is peer review. Peer review is designed to be a way of ‘information pooling’ (Dorf and Sabel, 1998), making it possible to benchmark different outcomes, compare between peers, and review tailor-made solutions in the light of local circumstances (Ho, 2017). What is important in this review mechanism is that not only the methods, but also the goals are deliberated upon. Inconsistencies between local actors are discussed, and local actors can deviate from the norm where there is a good reason for doing so. These methods are believed

to improve the responsiveness, flexibility and accountability of the implementing actors (Sabel and Simon, 2011).

Experimentalism and problem solving

Experimentalism has a few crucial elements that make it different from top-down steering or network governance in the approach towards problem solving. First, stakeholders who previously used top-down steering methods acknowledge that they do not know precisely which goals and methods to implement (as in network governance), but they do acknowledge their (democratic) responsibility to establish a shared framework and provide (open-ended) goals in order to steer overall implementation. There is an emphasis on collaborative governance between a wide range of actors (Ansell, 2012; Ansell and Gash, 2008). Second, experimentalism acknowledges that problem solving and implementation takes place at a regional or local level, allowing scope for a diversity of practices to develop. However, instead of leaving these local actors in isolation from each other, which would lead to fragmented institutional settings, experimentalism actively promotes peer learning to improve these practices, and also to correct actors that are not performing well. It thus uses the instruments of accountability to promote learning, a highly distinguishing feature (Ansell, 2012). Third, the output of the peer reviews are used to improve the shared framework, rather than expert committees, performance lists or other instruments used in principal-agent governance.

It is unclear as yet whether local actors will actually use the freedom they are given and engage in collective learning and problem solving, or merely end up copying others (Sabel and Zeitlin, 2012; Börzel, 2012; Fossum, 2012). The distinction between innovating and copying others is similar to the conceptual difference between first-order learning and second-order learning presented in the chapter on problem solving. Whether actors will actually change their behavior is at the core of the criticism of experimentalism. This issue is also acknowledged by the proponents of experimentalism, who fear that this form of governance could turn out to be only a (slightly) improved version of NPM because of its emphasis on performance metrics (Sabel, 2004: 18). A recent successful attempt to find out whether actors do actually use the freedom provided and engage in second-order learning took place in a recent experiment by Ho (2017), which showed that peer reviews in the food safety inspectorate in Washington state did indeed lead to joint problem solving and better outcomes.

Another question to which we do not yet know the answer is whether experimentalism is able to overcome the reluctance of (some) stakeholders to change. EG assumes that stakeholders are willing to change the current state of affairs, but that there are

sometimes structural obstacles to reform. Sabel and Zeitlin (2012: 179) emphasize the existence of these barriers, such as “*hiring policies in firms, admissions policies in schools, sentencing practices in courts—or widespread beliefs—about the kinds of people who are ‘reliable’ or ‘dangerous’*”. Education policy is one of the examples in which these deep-seated obstacles are present, and is thus highly relevant to this thesis. In response, Sabel and Zeitlin (2012) argue that a penalty default has in some cases proved to be an effective way of overcoming these barriers, since the alternative was less attractive.

The response to the uncertainty inherent in experimentalism is comparable with responses to network governance, because EG focuses on improvement through learning. But there are also differences in this respect because the roles of the various actors are clearly described in an iterative process of monitoring and learning. Compared to principal-agent models, experimentalist reforms emphasize the need to create a space for *local innovation*, because the primacy of problem solving is local. The role of the principal does not become less important, however. Instead, the principal becomes responsible for “*providing the infrastructure and services that support frontline efforts*” (Sabel and Zeitlin, 2012: 173).

Network governance and experimentalist governance in the Netherlands

As an example of network governance is the reform of higher education in the Netherlands in the 1990s. This was described by some authors as ‘steering at a distance’ (Kickert, 1995) or ‘state supervision steering’ (Van Vught, 1989), and they emphasize that “*such a network cannot be controlled top-down as it is mainly self-regulatory*” (Kickert, 1995:148). Rather than steering by “*legal prescriptions and regulations*”, it aimed to steer by means of incentives and “*ex-post feedback control through quality assessments*” (1995: 150). As a consequence, the role of the ministry was diminished, and it was unclear how government should take responsibility for coordination. In general, the performance of universities improved in line with their increased autonomy, both in the Netherlands and in other countries where similar reforms were introduced (De Boer et al, 2008). But in 2009, Bekkers observed that there were major questions about network steering in the higher education sector. Whilst the improved effectiveness of more autonomous institutions was acknowledged, the quality mechanisms introduced were unsatisfactory, transparency in terms of outcomes was lacking, and the argument was made for stronger steering on outcomes: “*All this can be seen as a form of control on the output and / or on the outcomes (..) due to the need to give a transparent account of these achievements and to make the quality of the research clearly visible, precisely because of the granted autonomy*” (Ibid, p. 10). As described in the previous section on new public

management, this criticism led to an experiment with performance agreements, in an attempt to steer higher education institutions more forcefully. This experiment ended in 2016, but discussions on accountability, transparency, and outcomes continue.

This example shows the importance of networks and the advantages of network governance, which improved the performance of higher education, but it also reveals its complexity. Hierarchical government does not simply disappear when networks are introduced, and the government has a democratic obligation to expect certain outcomes to be achieved in – in this case – higher education. The example shows that the search for the perfect balance between the reality of networks and the need for network governance on the one hand, and the role of hierarchy and questions over transparency and outcomes on the other hand, is ongoing.

Whereas the other ideal governance types can be illustrated with a concrete example in education in the Netherlands, this is much harder for experimentalism, although there are well-documented examples in the EU context (Sabel and Zeitlin, 2012), as well as in the case of youth care in the Netherlands, where a novel form of 'diagnostic monitoring' has been incorporated (Helderman et al., 2020). The reason for including experimentalism as an ideal governance type in this research is that the governance regimes in place in the partnerships investigated appear to have some characteristics of experimentalism. As in experimentalism, stakeholders have a shared idea regarding which direction partnerships should move in, there is uncertainty over the precise policy goals and methods that are required, and goals and methods are deliberately left open by the principal actors. Additionally, in the governance regimes there is a great emphasis on diversity among the partnerships, which can learn from each other, and on learning cycles. It remains to be seen – and it is the aim of this research to find out – to what extent governance regimes have (elements of) experimentalism, as will be explained in chapter five on the description of the governance regimes in place in the partnerships.

Table 5: summary of governance types, their characteristics and how they respond to uncertainty

Type	Characteristics	Deals with uncertainty by:
Standardized bureaucracy	Command-and-control, regulations, standards and monitoring	Implementing new standards or changing old standards.
New Public Management	Separation between goal setting and goal implementation, performance indicators	Re-visiting performance indicators, introducing new indicators, creating a new agency.
Network governance	Focus on horizontal relationships, goal entanglement	Emphasizes learning between actors, network is designed to increase trust
Experimentalist governance	Setting and revising goals is based on coordinated learning through peer review of decentralized experimentation	Controlled iterative and recursive learning process between actors, based on comparative review of experiences of implementation

Conclusion: governance regimes and problem solving

Our theoretical framework is based on two key aspects: either a principal-agent relationship or a network relationship. For both types, two ideal-types of governance (new public management and bureaucracy on the one hand, and network governance and experimentalist governance on the other) are used to operationalize the possible relationship between government and problem solving within the partnerships. In bureaucracy, problem solving is done by highly-trained civil servants, who implement a solution to problems based on rules and procedures. In NPM, the intended outcome is also imposed top-down, but using performance indicators, whilst the problem solving is left to the agents who are responsible. In network governance, problem solving is seen as a learning process between stakeholders, whereby trust and cooperation are seen as the key to success and there is no clear separation between the setting and implementation of goals. And finally in experimentalism, problem solving is left to local actors within a broader framework of goals which are formulated by multiple stakeholders, with an emphasis on a learning process that involves local problem solving and the goals of the broader framework (see table six).

Table 6: summary of the governance regimes and their approach to problem solving

Type	Problem solving: goal setting and implementation
Standardized bureaucracy	Goal setting and implementation methods are determined by expert civil servants, and operationalized in rules and procedures. Actors are expected to follow these rules and procedures, incentivized both by rewards and punishments.
New Public Management	Top-down goal setting by expert civil servants; the implementing actors are responsible for achieving these goals and finding ways of achieving them. Problem solving thus occurs both top-down, and bottom-up.
Network governance	Goal setting and implementation occurs within the network, of which the government is a part. Problem solving occurs, and can be optimized by managing the key conditions within the network, such as the composition of the network.
Experimentalist governance	Goal setting occurs through a framework of open-ended goals formulated by multiple top-down stakeholders. Precise goal setting and implementation is done by local actors. Emphasis is on a feedback loop between the open-ended goals and the operationalization of local actors.

The effect of the governance types on the actual behavior of agents is not always straightforward or obvious, and multiple examples of this have been given in the previous sections. While bureaucracy and NPM strive for centralized steering and control in order to achieve goals, network governance and experimentalist governance aim to foster a learning process between local actors. In practice, these governance types often work in parallel, and various features can be observed simultaneously.

As discussed in this chapter, the education system already has several features of both principal-agent government and network governance simultaneously. The various actors search for a balance between hierarchy and networks, as both have their own merits and disadvantages (Torfing, 2008). A greater emphasis on learning and network governance does not mean that the role of the national government will

disappear. On the contrary, government is crucial to making networks succeed, and in experimentalism it is argued that it plays a vital role in problem solving. 'Bottom-up' initiatives, established by local actors, need support and – to some extent – guidance to achieve effectiveness. This is a continuous search for the right balance, and so far results are scant; there seems to be a widening gap between networks and hierarchy and the failure of steering mechanisms (Van der Steen et al, 2013; Bourgon, 2011).



Chapter 3
Research design

3. Research design

This thesis concerns the influence of governance regimes on problem solving in public-private partnerships in vocational and higher education. The literature review in the previous chapters showed that problem-solving capacity is a crucial aspect of realizing effective public-private partnerships, and that governance regimes influence (the freedom to or possibility of) engage in problem-solving behavior within partnerships. The question is: what influence do governance regimes have on problem-solving behavior in partnerships? The answer to this question will help us to answer our primary research question of whether governance regimes are well-equipped to guide these partnerships. The independent variable in this research is the governance regime, and the dependent variable is problem-solving capacity of the partnerships. This chapter explains the methodology used to ascertain the relationship between these variables.

Research perspective

This thesis aims to discover whether there is a causal link between the governance regime that is in place in a partnership and problem-solving behavior within that partnership, and it seeks to identify explanatory mechanisms that can explain this causal link in the specific context of public-private partnerships in vocational and higher education. Mechanisms are defined as “unobserved relations or processes that generate outcome” (Mahoney, 2001: 576). As is clear from the previous chapter, governance influences problem solving in various ways, and there are therefore mechanisms at work in governance regimes and partnerships. However, these mechanisms may be hard to identify or context-specific, sometimes not activated, may go unnoticed, or they may be counteracted by other mechanisms (Gerring, 2010). The challenge and aim of this research is to develop valid, generalizable mechanisms that have explanatory power (Gijssels, 2006).

In the previous chapters, several governance types have been described and theorized to have an effect on problem solving. We have already described (some of) the mechanisms that are at work within these governance types (such as goal displacement) and provided a theoretical framework for how governance influences problem solving. This research takes a deductive approach to test whether network governance – and more specifically experimentalist governance – is better equipped to encourage problem solving within partnerships (see the introduction for the secondary research questions). This hypothesis is approached by means of a series of sub-questions, which together answer the main question of whether current governance regimes are “well-equipped to cope with the uncertainty caused by rapid innovation and the increasing need for intertwinement between organizations”.

Many other factors can influence problem-solving behavior, and many contributing and counteracting factors have already been identified in the literature on public-private partnerships. However, this research focuses specifically on the influence of governance regimes on problem solving. Why? Firstly, and the main reason for writing this thesis, the researcher has for many years been involved in observing the influence of governance regimes on problem solving within individual partnerships, including frustrated project managers or civil servants who were disappointed that their regime was not having the effect that they intended. More objectively, during this period, several policy reports have pointed to a lack of scope for innovation, a lack of flexibility, and restrictive bureaucratic rules in partnerships and in the education sector more generally, caused by the governance regimes in place. The literature, too, points towards the need to change governance in order to accommodate networks, uncertainty and wicked problems (see chapter one and two). At the same time, however, both individual case studies and more general reports have reported on the successes of these partnerships, and have argued that this success has been attributable to interventions in the governance regimes. In short, this is a puzzle that needs to be solved.

Second, the researcher had a unique opportunity to compare three distinct governance regimes all with the same goal, budget, and number of partnerships, and in the same time period. This made it possible to compare multiple partnerships under different governance regimes, and made it more likely that generalizable conclusions would be reached. The governance regime alone will never be a sufficient condition for ensuring problem-solving behavior, and is never a necessary condition. However, governance may be an important contributing or impeding factor, and, since it can be adjusted, it may be a very good way of promoting problem-solving behavior, thereby helping to maximize the success of partnerships.

Overview of methods

A multi-method approach is used to address the research question from different perspectives. First, the policy context and a rich description of the three governance regimes is provided to analyze the extent to which these have principal-agent and/or network governance characteristics. A framework was established to compare the regimes in a consistent manner. Second, a large-scale quantitative analysis of 48 partnerships with over 8.000 data points was carried out, monitoring all the activities that these partnerships engaged in over a period of four to five years, including whether these activities went according to plan, based on progress reports produced by the partnerships themselves. Third, seven in-depth interviews were conducted with randomly selected project managers from the partnerships, which were used

to evaluate the experiences of the project managers with the different governance regimes. Fourth, three in-depth best-case studies were carried out, using a total of seven respondents, focusing on the most significant decision-making moments in the partnerships and the (perceived) role of the governance regime in these, in order to explain the results of the quantitative analysis.

Before elaborating on these methods, the next section will explain why a bottom-up approach was chosen for this research, and why some alternative (more top-down) approaches were considered, but rejected.

Research into problem solving in partnerships

Problem-solving behavior is very difficult to measure, especially across a large number of partnerships. Since the goal is to find generalizable mechanisms, however, measuring problem-solving behavior in some way is crucial to this research. The best approach is therefore to measure the outcomes of problem solving. Public-private partnerships depend on the satisfaction of the partners within the partnership. Those partners (are supposed to) negotiate about precise policy goals and the methods by which they will be achieved, a process that develops constantly over time. However, when a partnership consistently fails to achieve the goals that it has set for itself and fails to change its approach, this partnership is obviously failing to solve problems. By contrast, when a partnership demonstrates its ability to change approach or find different ways to achieve its goals, then problem solving has occurred.

The actual activities and their development within partnerships are thus the starting point in identifying problem solving behaviors, rather than the extent to which partnerships are able to achieve their goals within a particular governance regime. A bottom-up approach was therefore chosen: examining what the partnerships actually did – rather than what they were supposed to do - and evaluating whether the chosen activities were successful in the partnership's own terms. This approach is also implied in the research question itself: the question is 'whether the governance is well-equipped to guide partnerships', rather than 'whether partnerships serve the goals within the governance regime well'. This is a logical approach, because under each regime, the goals and methods are deliberately left up to the partnerships themselves. Another reason for choosing this approach was that most implementation studies conclude that the complexity of implementation means that a 'hierarchical' research approach (from plan to implementation) has strong limitations because it will fail to take account of many unexpected results.

For the purpose of this research, however, it is important to relate the development of partnerships to the subsequent governance regimes. Considering the first

examples from the introduction to this chapter, it could be that some partnerships were not allowed to change their approach because of rules and regulations within a governance regime, which could explain why a partnership did not engage in problem solving. Or, looking at the second example, when the partnership was actively encouraged within the regime to change its approach, this could explain why it ultimately succeeded in solving problems. Additionally, strong policy steering within a governance regime may significantly influence the goals and activities chosen by a partnership. Of course, it is also possible that there is no relationship at all, and that there are other mechanisms at play that influence problem-solving behavior.

Thus, we need to consider the relationship between the overarching policy goals and the individual goals of a partnership. The government funds these PPPs because they are expected to contribute to some overarching policy objective, and so the government will aim to influence these partnerships and their activities, at least to some extent. This makes the governance of partnerships complex, since the overarching goals (set by the government) and the partnership's own goals (set by the public and private partners themselves) will not necessarily coincide.

On the face of it, since all governance regimes ask PPPs explicitly to formulate their own goals and methods, there seems to be a great deal of leeway for partnerships to choose their own path. However, each regime does have an overall goal, and various ways of steering are possible within regimes, for example using rules, regulations, but also monitoring and auditing, or by means of learning programs. The question is to what extent this steering actually takes place and to what extent the regimes influence the problem-solving behavior of partnerships, and how we can measure this.

Before we turn to the methods used in order to analyze this relationship, we will briefly discuss two other possible approaches, and explain why these approaches were not used.

Alternative, rejected research approaches

The first of these is a top-down approach, which would start out with a model based on a set of objective indicators to assess performance of each partnership. This approach would determine the best-performing and worst-performing PPPs using an set of indicators, which could be cross-referenced against the governance regime. This cross-referencing would prove or disprove the effect of governance on the performance of the partnership, and the regime with the most successful partnerships would be the most suitable for encouraging problem-solving behavior. If no correlation were to be found, it would be concluded that the relevant governance

regime had not influenced problem-solving behavior.

Although this method appears elegant and was attempted for the purpose of this research, it also has major flaws. Most importantly, it fails to take account of the wide variety of activities within partnerships, due to the fact that the translation of the problem into goals and methods is an integral part of those partnerships. When defining these objective indicators, this would automatically influence the outcome. As a result, partnerships that are assessed negatively using these indicators may well have performed very effectively in the eyes of their partners, although not on the indicators chosen. This top-down logic would automatically value certain indicators over others, thereby favoring PPPs in regimes that focus on the goals chosen by the researcher. This approach matches closely with the top-down NPM-approach described in chapter three, but would be unsuitable because of the devolved nature of partnerships.

A second approach would be to identify the common characteristics of successful PPPs and to derive the required characteristics on this basis. These characteristics could then be compared to the extent to which the governance regimes support or promote these conditions. For example, supposing that 'co-ownership' is a key condition for a successful partnership, the researcher would then ask whether the governance regime requires this characteristic when assessing the PPPs? Although tempting, this approach also has a major methodological flaw. The literature on implementation makes it clear that identifying necessary or sufficient conditions for government steering and predicting the outcome of steering on these conditions is simply impossible, because the implementation process is too complex. No necessary and/or sufficient characteristics have been identified after years of implementation research. This method would imply the existence of a particular 'standard' or blueprint for success. But the existence of such a fail-safe approach would exclude novel ways of achieving policy goals, and could never be applied to all partnerships in every different region or sector, otherwise the formulated conditions would be far too general to be useful (e.g. a nebulous concept such as 'fostering ownership'). This method – like the previous one – would imply a top-down approach, where the researcher has decided in advance which characteristics are the best in theory, and would echo the bureaucratic approach described in chapter three.

Table 7: inadequate methods for assessing problem solving in relation to governance

	Necessary and sufficient conditions for partnerships	Performance indicators cross-referenced against regimes
How does it work?	Identify necessary and sufficient conditions for successful PPPs and review to what extent the governance regime supports these.	Measure all PPPs against an objective set of KPIs and see in which governance regime the most PPPs are successful.
Why might it work?	Steering on the basis of necessary and sufficient conditions would increase the chance of successful PPPs. The regime that does that best would be the answer to the research question.	The method shows which PPPs perform best, and shows which governance regime leads to the most successful PPPs. This would answer the research question.
Why might it fail?	There are no necessary or sufficient conditions for partnerships and implementation. It does not take into account novel ways of achieving goals (diversity). It would not apply to PPPs in different regions or sectors, or would too vague to be meaningful.	The method incorrectly values certain indicators over others, and does not take into account partner satisfaction.
Why the approach was not chosen.	It incorrectly identifies the interaction between agent and principal, as it assumes a 'bureaucratic' perspective, whereby the principal guides the agent.	The method incorrectly identifies the interaction between agent and principal, as it assumes a 'NPM' perspective whereby success is measured against the KPIs defined by the researcher.

In the next section, the four methods introduced at the beginning of this chapter are described.

Method 1: Policy context and governance regimes

The empirical chapters begin by describing the policy context in which these partnerships were established, in order to understand their existence better (chapter four). This is followed by an in-depth description of the three governance regimes, explaining their similarities and differences (chapter five). The framework for describing the various aspects of the regimes was developed through an iterative process while also exploring the specifics of the regimes and conducting the seven in-depth interviews (see method 3). The framework consists of all the aspects of the governance regime, so all possible influences were explored, such as the goal-setting process, the allocation of grants, monitoring and auditing, scope for deviation, learning programs, and so on. At the end of these chapters, each governance regime is classified, based on the ideal types defined in chapter three. This context is necessary in order to understand the results generated by the quantitative and qualitative methods.

Method 2: Quantitative analysis: problem solving in partnerships

The most comprehensive stage of the research is a quantitative method that traces the development of 48 partnerships, evenly distributed across the three regimes, based on their own progress reports. The method includes the monitoring of all the activities of all partnerships in the three governance regimes which were set up between 2011 and 2014, with monitoring continuing over a period of four to five years (depending on the regime). As well as monitoring every activity, the analysis also includes whether or not the activities surpassed, met or failed to meet the partners' own expectations. This method is used to analyze the development of partnerships over the years, and led to a total of 8301 data points. The method is also used to assess whether or not the partnerships developed according to plan based on their own assessments, by looking at whether the partners were satisfied. It also gives an insight into the development of the partnerships over the years: which activities were dropped, which were started up again, which activities went according to plan, and which activities underperformed. The technical implementation of this method is described in chapter seven.

The progress reports on the partnerships were analyzed in close detail in order to cut through potential window dressing. Although the introduction and conclusions of these reports were generally fairly positive regarding the partnership's overall progress, when it came to the details of their activities (with 18 activities per partnership, on average), the partnerships appeared to present an honest picture of their actual progress. The conclusion of honesty in self-reporting needs a more detailed explanation, since it is crucial to the value of our analysis. If all the reports were mere

window dressing or even actively misleading, the analysis would have limited value. However, when analyzing the initial results of the analysis, only 20% of all activities were reported as having met or surpassed expectations, even in partnerships that claimed they had been highly successful. The second observation that points to the accuracy of the reports came during the interviews with the project managers. At the interviews, the project managers appeared to admit to engaging in window dressing when describing their overall progress and summarizing their results. However, when reporting on progress at the activity level, they stated that they had generally given an accurate picture of progress and not sought to misrepresent the results actually achieved. The reasons they gave for this are explained in more detail in the chapter on governance regimes, but can be summarized as follows: (a) the PPPs were new, so there was room for mistakes and to admit mistakes; (b) the feedback provided in the regime needed to be useful, and therefore information provided needed to be accurate; (c) features of the governance regime prevented window dressing; and (d) the results were presented accurately to get things done by partners within the partnership.

In conclusion, although assessment by means of self-reporting has certain limitations, which will be discussed below, the progress reports did prove useful when analyzing whether the partnerships were engaging in effective problem-solving behavior. Because of the wide scope of this method (it included all partnerships that started between 2011 and 2014 across all three governance regimes), it resulted in a highly detailed picture of the development of the partnerships. Analyzing the differences and similarities between the three regimes reveals the usually hard-to-observe mechanisms that are at work in the interaction between the governance regimes and the partnerships. Indeed, the progress reports appeared far more useful and accurate than the reports available from the assessment committees. The latter reports were used to evaluate the results of the quantitative analysis, but could not be used systematically because they diverged too much depending on the regime and were not comparable: assessments in the first regime would only report on whether the predefined activities were being carried out, the second regime reported at a very abstract level, whilst the third regime would use a so-called phase model to assess which 'level' the partnership had reached.

The method outlined above has an important weakness, which is that there is no way of knowing whether the partnerships were really successful by any objective standards, only that the partners themselves were satisfied with the results achieved. Internal and external reviews of the partnerships, whether conducted through the governance regimes or individually, concluded that the partnership(s) were a success and were meeting a need. However, in practically every case this conclusion was

based on self-reporting and questionnaires involving the same respondents. Even within this research, even though the researcher had access to most of the information available about the partnerships, there was still no way of evaluating whether and to what extent the activities within the partnerships really were contributing to the overall goals (which were, in any case, somewhat vague), a problem that also became relevant in the formal evaluation of one of the regimes (Van Casteren et al., 2007).

To some extent, this point may seem somewhat arcane. If all the partners within a partnership and the external reviewers were positive, then surely the activities must have produced the intended results? The emergence of good practices represented breakthroughs in the public-private partnerships, as both the partners and the external reviewers acknowledged. However, the lack of objective indicators also highlights the weakness of network governance, whereby autonomous actors are given the freedom to achieve their goals and activities through negotiation, but these goals are, from a normative standpoint, not necessarily beneficial. This weakness and its implications will be discussed in the concluding chapter.

Method 3: Qualitative analysis of interviews with project managers

Interviews with the project managers were carried out after the quantitative analysis, and were initially intended to establish a direct connection between the quantitative analysis and the choices made by the project manager during the four or five-year monitoring period. However, this approach turned out to be unworkable: the project managers could not remember all the details of the decisions they had made during the project period and were only able to reflect on developments in more general terms. For this reason, three case studies were also carried out, to provide a better understanding of the choices made within the partnerships (see method 4). However, the interviews did prove useful when it came to developing the analytical framework for the regimes (see method 1) and they also provided an insight into how project managers perceived the governance regimes. Specifically, the interviews were used to find out whether the project managers, as key players in the partnerships' problem solving, believed the governance regimes had been helpful or unhelpful in supporting problem-solving behavior. The framework used to describe the governance regimes is used to report the results of these interviews.

This method helps to explain the results from the quantitative analysis. The project managers were selected at random but distributed across all three regimes. Initially, nine interviews were planned. One of the interviews turned out to be with the wrong project manager, and the last interview had to be cancelled because it became clear that the interviews could not be used to draw any causal connection. These interviews

were not rescheduled, leaving seven interviews across three regimes (respectively, two, two and three for each regime).

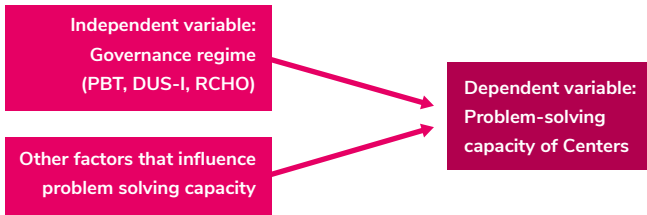
Method 4: Three case studies to trace problem solving in partnerships

The case studies function as 'rich' stories that explain the outcomes of the quantitative process tracing. As explained above, the results of the quantitative analysis point towards (un)observable mechanisms by which the governance regimes affect problem solving. For example, (implicit) steering towards a particular goal in a particular governance regime can lead to the overrepresentation of certain activities. More easily observable mechanisms may also be visible, such as when a governance regime does not allow for deviations from the plan, which could be reflected in the number of changes in a partnership's activities. This method allows us to get a better sense of how the results of the quantitative method relate to problem solving within the partnership. In other words, can we get a better understanding of the mechanisms at work? For example, why are certain activities developed (or not)? What is the influence of the governance regime? How did the partnership cope with disappointing results? And which factors helped the partnership to engage in problem solving?

The case studies focused on what is actually happening during the process of problem solving. Each case study focused specifically on three questions: how did the partnership choose its focus? How was the partnership organized? And (how) did the partnerships manage to become self-sustaining? Additionally, they answer the question of how partnerships – in the view of the interviewees – learned and engaged in problem solving. The interviews conducted for the case studies focused specifically on the three questions above. When reflecting on each case study, a link is made with the results of the quantitative analysis, and also with the theoretical framework. The interviews were conducted partly by the researcher in 2018, and also using interview reports made to conduct a SWOT analysis of the partnerships in the period 2012-2016. As well as these interviews, several documents were used to trace the progress of the partnerships. A technical description of how the case studies are approached is provided at the start of chapter eight.

The case studies are important in order to establish a (valid) connection between the dependent and independent variables, and other factors that may influence problem solving. But although the quantitative analysis may find a correlation between the regimes and problem solving, this does not necessarily mean a causal relationship. The case studies ensure that this mistake is not made.

Figure 1: visual representation of independent and dependent variable



The main weakness of this method is that it only includes three of a larger number of partnerships, which makes it hard to generalize, since each partnership is unique. Combined with the quantitative analysis and interviews with project managers, however, the case studies do provide enough validity to generalize some of the mechanisms observed, as is made clear in the concluding chapter. A second weakness is that, in addition to the interviews carried out by the researcher, interview reports from secondary sources are also used. These interviews were conducted by other interviewers for the purposes of a SWOT analysis. The advantage of this method is that it provides 'snapshots' throughout the years, rather than just a 'hindsight' perspective. The weakness, however, is that each interview was conducted with a different purpose in mind, and a different interviewer transcribed or summarized the main results. This is however also a strength, because including reports from different interviewer helps to offset possible sources of (unconscious) bias and can be considered a form of triangulation.

Availability of data and position of researcher

The researcher worked for *Platform Bèta Techniek* (PBT) while collecting data and drafting the thesis, and was actively involved in supporting public-private partnerships on a daily basis in various roles. During the data collection period and since, he managed the learning program available for all partnerships, and thus had an interest in helping partnerships to engage in problem solving. In 2014, he co-initiated the Katapult network and plays a leading role in this network. The Katapult network is an inclusive network, consisting over 350 public-private partnerships in vocational and higher education in 2020, primarily aimed at preventing partnerships to 'reinvent the wheel'. Between 2010 and 2016, he assisted in drafting the policy report and implementing the first Centers of Expertise and Centers of Innovative Craftmanship, since PBT was responsible for managing the grant and the learning program. Between January 2013 and December 2017, he was a member of the Review Committee Secretariat chaired by Frans van Vught in the RCHO regime, prepared work for the Review Committee on Centers of Expertise, and oversaw the voluntary learning program. Finally, during the implementation of the RIF grant, he worked closely with the Ministry of Education and DUS-i to draft and implement the grant regulations and implement the voluntary learning program.

These various roles allowed the researcher to closely observe the influence of the governance regimes on partnerships, and vice versa. He became interested in this question when he observed how easily governance regimes were argued to limit problem solving behavior, on the one hand, and on the other hand witnessed partnerships that became very successful or failed entirely with no apparent connection with the governance regime. The question of how to stimulate problem solving within networks was also the reason for launching the Katapult network, as he observed many partnerships were having to 'reinvent the wheel' over and over again. He realized that governance regimes have the unique opportunity to help problem solving behavior, as the regimes are taken very seriously by partnerships, but at the same time (scientific) evidence for how to design such a regime was still lacking.

The researcher has a formal arrangement with PBT which states that research can be conducted independently of the organization's interests. A quantitative analysis was deliberately chosen in order to help make the researcher's perspective on the partnerships more objective.

The following sources were made available for this research. First, the progress reports of all PPPs were made available for use in the quantitative analysis. Individual PPPs are not traceable based on the analysis, and all (former) project managers were asked for their permission to use the progress report for learning purposes, and in addition to this research, several other analyses were carried out using these reports⁶. Second, in-depth SWOT analyses (including interviews with students, teachers, etc.) were available for 75% of the partnerships. Many of these SWOT analyses were already available within the learning program, as each partnership is asked to share its results and insights in the learning program and within the Katapult network. Three of these SWOT analyses were used for the case studies, and all interview respondents were anonymized.

Third, various publicly available policy reports and overall progress reports produced by the various agencies (PBT, RCHO, DUS-i) were available. For several of these reports, the researcher was (co-)secretary of the committee responsible for the report, notably in the PBT and RCHO regimes. Fourth, the researcher kept field

6. For example: Verduurzaming RIF initiatieven 2017 (Sustainability of PPS-initiatives 2017, accessed 30-4-2019, available at: <https://www.wijzijkatapult.nl/verduurzaming-pps-rif-initiatieven-2017/>), and PPS-ontwikkeling Noord-Brabant in beeld (PPS-development in North-Brabant, accessed 30-4-2019, available at: <https://www.wijzijkatapult.nl/pps-ontwikkeling-in-brabant-in-kaart/>)

notes starting on 1-1-2016, reporting conversations with partnerships, notes from committee meetings, and so on. These field notes helped to understand the mechanisms at work better, but none of the field notes were formally used in the research. Fifth, and finally, twelve interviews were conducted by the researcher, and seven interviews were conducted by a research assistant. All these interviews were transcribed and coded in Nvivo, and anonymized for the purpose of this thesis.



Chapter 4
Policy context

4. Policy context

This chapter addresses the question of how public-private partnerships fit into the wider landscape of vocational and higher education in the Netherlands, and why these partnerships were introduced. The chapter starts with an introduction to the launch of the partnerships that are central to this research, after which we will turn to three distinct policy perspectives which have lent legitimacy to the introduction and expansion of these partnerships. These three perspectives are described in detail, including a short introduction to the vocational and higher education sector in the Netherlands. The chapter concludes with a more detailed description of how the three governance regimes began and how the first partnerships developed.

Policy perspectives

The concept of Centers was first mentioned in a report called *Kiezen voor Kennis* ('Choosing for Knowledge'), commissioned by the PBT and chaired by Hans Kamps (2009), a prominent member of the center-left *Partij van de Arbeid* (Dutch Labor Party) with an interest in the business community. The PBT was established by the Ministries of Education, Economic Affairs and Social Affairs in 2004 and, on their behalf, it carried out programs that aimed to increase the number of students studying science, technology, engineering, and mathematics (collectively known as 'STEM' subjects). The report by Hans Kamps was a way for the PBT to explore a new direction for the STEM agenda from 2010 onwards. The ideas outlined in *Kiezen voor Kennis* evolved into two separate types of Centers: Centers of Expertise (HBO) and Centers of Vocational Excellence (MBO), as described in the introduction of this thesis. The Centers of Expertise were conceptualized by a committee headed by Hans de Boer (De Boer et al., 2009), a prominent member of the center-right Christian Democratic Party (CDA) with an interest in the business community, commissioned by the *HBO-Raad* (Association for Universities of Applied Sciences) and the PBT. The Centers of Vocational Excellence, meanwhile, were conceptualized by a committee chaired by Loek Hermans (Hermans et al., 2010), a prominent member of the center-right Liberal Party (VVD) with an interest in the business community, and commissioned by the *MBO-Raad* (Association for Vocational Education) and the PBT.

These policy recommendations did not come out of nowhere, but, as Van der Meer et al. (2016) observed, they can be seen as the confluence of three distinct developments in education policy, the labor market, and innovation policy. In the period 2010-2012, a window of opportunity arose to change government policy in favor of the development of public-private partnerships, although the dominant actors within education, the labor market and innovation policy all aimed to steer the PPPs in the direction of their own priorities and perspectives. These three distinct

perspectives are briefly introduced below.

The key perspective within education policy is the prioritization of learning outcomes, constant improvements in the quality of education, and the functioning of schools in general. As such, the student forms the main object of policy, and the added value of cooperation between schools and businesses is seen primarily from the perspective of students. Other benefits, such as the increased circulation of knowledge between businesses and schools, are also seen in the light of how they will benefit students. For example, schools and businesses view the innovation projects that students contribute to – such as improving a company’s product – in the light of learning outcomes rather than their contribution to the performance of the business concerned. One illustration of this is a report by the *Expertisecentrum Beroepsonderwijs* (Center for Expertise in Vocational Education and Training, ECBO), which identified the need for cooperation between businesses and schools because of the latter’s key role in education (Smulders et al., 2013). It stated that cooperation was necessary in order to ensure that education keeps pace with professional practice. The ECBO also identified a second reason for cooperation, knowledge sharing, but it linked this directly to educational outcomes: ‘[...] the aspect of knowledge circulation [...] can in turn benefit the school in its primary role in education’ (ibid, 2013: 13)⁷.

The key perspective in labor market policy is businesses’ need for human capital and a labor market that functions effectively. From this perspective, schools need to produce enough well-skilled workers to meet the demands of businesses. Schools are therefore seen as ‘economic tools’ in an efficient labor market. For example, in vocational education this perspective is prominently represented in the form of national cooperation between representatives from organized labor, capital, and education, who decide on matters such as school curricula, internships, and examinations in vocational education (Van der Meer et al, 2016). When the PBT was founded, this labor market perspective was dominant, and it also played a key role in the development of the partnerships. This is illustrated in the subtitle of the first report on Centers of Expertise: ‘Towards more innovative professionals in the tech sector’ (De Boer et al., 2009).

7. From this perspective, the report distinguishes four types of PPP: (a) a school within the company; (b) schools and businesses form a new entity; (c) the company is based within the school; and (d) temporary projects set up by a business and a company. Every model is analyzed from the perspective of the students’ learning outcomes. In higher education, the Education Council of The Netherlands (2005; 2014) has published similar reports.

The key perspective in innovation policy is the competitiveness and innovative capacity of a region (or country), which is viewed as the sum of overlapping (regional) triple helix ecosystems (Van den Toren and Lie, 2014). Under this approach - building upon the cluster theory of Porter - businesses, schools, and (regional) government comprise an interconnected network (an 'ecosystem') and all influence one another. Cross-sectoral knowledge circulation is important, because the focus is the geographic region rather than one specific sector. Whether or not an ecosystem is competitive will depend on the extent to which the different actors coordinate their activities and are able to share and create knowledge. An influential report by the *Wetenschappelijke Raad voor Regeringsbeleid* (The Netherlands Scientific Council on Government Policy, WRR, 2013) entitled *Naar een lerende economie* (Towards a Learning Economy) emphasizes this approach and considers schools and businesses, as well as the cooperation between them, as vital tools in building a learning economy.

The goals and objectives of the PPPs are the subject of continuous debate, depending on which of these three perspectives is taken. The development of the activities of PPPs, and whether those activities are seen as valuable, depends to a significant extent on which perspective predominates, and this also plays a major role on the question of how to steer PPPs in the right direction. Five types of activities can be identified within the partnerships: activities aimed at (a) improving the match between the labor market and education; (b) improving the quality of education and/or research; (c) contributing to the innovative capacity of businesses; (d) life-long learning; and (e) establishing labs and facilities (Van Staalduinen, 2016). Examples of these activities include the introduction of blended learning or massive online open courses (MOOCs), the reformulation of existing curricula, re-skilling companies' existing workers, practical research for regional companies, and hybrid learning environments.

From the perspective of the education sector, it seems self-evident that all activities should, above all, benefit the education process. Governance should therefore be based on the premise that the educational institution has primary responsibility, and the aim of the partnerships should be to improve the quality of education. Accordingly, the business sector is seen primarily as a supplier (of knowledge) as well as a client (receiving students who have completed their education). From this perspective, measuring the output of schools is the most useful approach (e.g. the added value of diplomas, comparing incoming students with outgoing students, the number of associate degrees awarded, and so on). Discussions on lifelong learning, an increasing priority as the number of younger students declines due to demographic reasons, focus on the introduction of part-time education for adults, the possibility of awarding certificates, and so on – in other words, aspects that are closely related to

the education process.

From the perspective of the labor market, a steering role for businesses is more straightforward. For example, decisions about school curricula and how many students should receive training to work in a certain sector should be taken by businesses or their representatives. Public-private partnerships should focus mainly on ensuring that the requirements of the labor market are met. This perspective focuses mainly on ensuring that businesses and the education sector are incentivized – or obliged – to coordinate their activities, and schools should prioritize the needs of business.

From the perspective of competitiveness, educational institutions are seen as knowledge institutions which actively disseminate existing knowledge among businesses and other actors, and actively strive to generate new knowledge. In order to do this, actors should be encouraged to operate in networks, since balance and coordination between different goals and motivations are necessary. Some form of network governance is therefore assumed to be required, and regional actors – such as economic or strategy boards – play an increasingly important role in coordinating the other actors.

These three different perspectives have all influenced the direction taken by public-private partnerships in vocational and higher education in the Netherlands, as well as the evolution of governance in this area. The following sections will briefly discuss the wider context in which this debate has taken place. The aim of these sections is to describe the wider context of vocational and higher professional education, its governance, and the other types of governance instruments that are used. It is not meant to provide an exhaustive description of the Netherlands' system of vocational and higher professional education.

Vocational education and higher professional education

Over 500,000 students are enrolled in vocational education in the Netherlands, and it represents the largest secondary education sector in the country. Within the European Qualification Framework, four different EQF levels are taught (2, 3 and 4), with a strong and consistent emphasis on educating students to work in a particular occupation or sector (a point of contrast with general education at the same levels). There are two main learning routes: one is full-time school combined with internships at companies (BOL); the second is four days learning on the job and one day at school (BBL). The *Wet Educatie Beroepsonderwijs* (Vocational Education Act, WEB) sets out the overall aims of vocational education (Ministry of Education,

1995): to educate students to work in a particular profession, participate in society, and move on to higher education. Following criticisms of the quality of vocational education in the 2000s, which led the Ministry of Education to focus mainly on basic quality of education (Van Bijsterveldt-Vliegenthart, 2011), the vocational sector is now performing well according to the Inspectorate of Education in their recent report on the State of Education (Inspectorate of Education, 2019). The main challenges include the match between the education and the labor market (especially programs involving STEM subjects), the below average performance of ethnic minority groups (who are less likely to complete educational programs), and the flexibility of the system (Inspectorate of Education, 2019). A thorough overview of the development of vocational education in the Netherlands and public-private cooperation in this sector is provided by – amongst others – Van der Meer (eds., 2017), Delies (2009), and De Bruijn (2017). The current system of vocational education has remained largely unchanged since the enactment of the *Wet Educatie Beroepsonderwijs*.

Recent developments in this sector include three major changes, as summarized in the State of Education report (Inspectorate of Education, 2019). The first is flexibility of education, with educational programs being criticized as too rigid. Experiments such as 'minors' in vocational education have therefore recently been introduced. The second change has been in lifelong learning and the role played by the vocational education sector in this. Here, too, trials are ongoing, such as translating the 'minors' mentioned previously into courses for those already in employment and the introduction of highly flexible educational programs for workers (referred to in the Netherlands as the 'third way of learning', alongside BOL and BBL). The third change is improving the match between the education and the labor market. Here, an important policy instrument is the Regional Investment Fund, which occupies a central position in this thesis, and which the government extended for a further four years in 2019 (giving a total budget of €225 million over a period of 9 years).

Governance in the vocational sector includes an important role for business organizations and labor representatives: *"Social partners (employers' associations and trade unions) are together with the VET schools involved in the description of the qualifications and examination criteria. They are also jointly responsible for the recognition and quality assurance of the overall 230,000 companies where apprentices fulfil their obligations of learning on the job."* (Van der Meer, 2017: 59). These activities are coordinated by the *Stichting Beroepsonderwijs & Bedrijfsleven* (Association for Education and Businesses, SBB). The Inspectorate for Education carries out quality checks by assessing individual programs of education. Cooperation between the business sector and the vocational education sector does not have a prominent role in these assessments, although the relevance of education from the

employer's perspective is assessed⁸.

The most recent steering instruments to be put in place are quality agreements between the government and individual VET schools. These agreements are between individual VET schools and the Ministry of Education, and collectively they relate to a total of €1.6 billion in funding. Based on their own strategic plans and the regional context, schools may choose their own goals, although the Ministry does require them to include the following three themes (albeit without setting quantifiable goals): vulnerable young people, equal opportunities in education, and education that prepares students for the labor market of the future (Ministry of Education, 2020).

There were several earlier attempts to promote partnerships between businesses and educational institutions. Between 2006 and 2014, the Ministry of Education provided a grant known as the *Innovatiearrangement* (Innovation Scheme). This grant was aimed at improving the quality of education (Ministry of Education, 2005)⁹, which was evaluated primarily from the perspective of the education sector (Van de Venne et al., 2010). Another similar grant provided by the Ministry of Economic Affairs was known as *Beroepsonderwijs in bedrijf* (Vocational Education in Business), which lasted until 2009, and focused on improving cooperation between businesses and education through learning on the job (Ministry of Economic Affairs, 2007). For this grant, the focus was on the match between education and businesses and promoting practice-based forms of learning¹⁰ (Boer et al., 2010).

Reflecting on the three approaches described above (education, labor market, and competitiveness), the focus of governance in the vocational sector alternates between achieving 'quality' as defined within the education sector and an emphasis on the needs of the labor market. It is also worth mentioning that recently an attempt was made to introduce *practoraten*, a new concept that seeks to ensure that the latest

8. See for example the supervisory framework of the Inspectorate for Education, <https://www.onderwijsinspectie.nl/onderwerpen/toezichtkaders>, translated: "There is a working dialogue at an appropriate organizational level with the business community. This dialogue is at the least about the development of education and examination, the assessment of its quality as well as the training portfolio."
9. The aim of the grant is described as the promotion of *Innovatiearrangementen*: "a regional or sectoral project to improve the innovative capacity of vocational education, in the context of strengthening the relationship between education and business, for the improvement of the career of the learner / participant throughout vocational education" (translated from Dutch)
10. The aim of the grant is described as: "program that aims to jointly renew the form, content and process or division of tasks around practical learning by entrepreneurs and vocational education institutions" (translated from Dutch)

developments in the relevant sector of the economy reach educational institutions through practice-based research¹¹. Compared to the other two perspectives however, this is still a relatively minor development.

Higher education

The Dutch higher education system, of which HBO forms a part, has been relatively stable since 1992, when the *Wet op het hoger onderwijs en wetenschappelijk onderzoek* (Higher Education and Research Act, WHW) entered into force. Higher education in the Netherlands is split into two sub-sectors with university education on the one hand, and higher professional education on the other. Universities educate students to levels 6 (Bachelor's degree level), 7 (Master's degree level) and 8 (doctorate level) of the European qualification framework. HBO focuses on professional education at level 6 (Bachelor's degree level). Since the beginning of this century, the *hogescholen* (also known as universities of applied science) which provide HBO education have also been able to educate students for professional Master's degrees (level 7) and associate degrees (level 5), although to date not many HBO students study at these levels (in 2018 5,414 students and 6,442 students, respectively, compared to 98,451 students at Bachelor's level). The primary method of quality assurance is the accreditation of educational programs, which is carried out by the *Nederlands-Vlaamse Accreditatieorganisatie* (Accreditation Organization of the Netherlands and Flanders, NVAO). Additionally, all new educational programs are assessed by the *Commissie Doelmatigheid Hoger Onderwijs* (Committee for Effectiveness in Higher Education, CDHO) which considers whether there is a societal need for the educational new program in question. A thorough description of these processes is given by – amongst others – the Centre for Higher Education Policy Studies (Huisman, 2008), Van Bemmel (2006). Authors who focus specifically on governance include Kickert (1998), Bekkers (2009), Jongbloed (2018), and Hooghe (2013).

In 1999, a system of lectureships (*lectoraten*) was introduced in HBO. These lectureships are headed by 'Professors of Applied Science' who have links with and focus on professional practice and oversee practice-oriented research at the universities of applied science. Practice-oriented research can be defined as

11. The definition of a practor according to the foundation of practoraten is: "the development, exploration of new professional practices embedded in education through practice-oriented research, in which (qualitative) added value is created for the professional field (professional practice), the students (better professional skills and a better professional perspective) and teachers (professionalization within the field and promoting an inquisitive attitude), which improves the final quality of education." Translated from Dutch from practoraten.nl.

research in which the research question is prompted by professional practice and which aims to generate knowledge which directly contributes to that professional practice (Andriessen, 2014). In 2018, there were a little over 600 lectureships (with 400 employees, FTE)¹², which is still a small number compared to the number of equivalent positions in academic universities. However, this shift has been seen as important for the universities of applied sciences and as a step towards becoming knowledge institutions that have closer links with businesses and professional practice, students and the region (Van Bommel, 2006), thus reflecting the third perspective of innovation and competitiveness.

Kickert describes the steering philosophy in higher education as 'steering at a distance' (1995), while for Van Vught it is 'state supervision steering' (Vught, 1989). There is a focus on the autonomy and responsibility of the individual educational institution. The involvement of (organized) business is limited compared to vocational education. In the intervening period, the 'state supervision steering model' has slowly shifted towards an "emerging governance approach [whereby] higher education institutions negotiate with their local network consisting of stakeholders (including students, local stakeholders, government authorities, and so on) about the services they will provide" (Jongbloed et al., 2018: 444). The authoritative policy report, which has played a role in education policy since it was first published, is a good example (Veerman et al., 2010). In the report, institutions of higher education are advised to differentiate their portfolios and specialize in certain areas in order to improve quality, based on the strengths of their region. In 2015, the Ministry of Education presented a strategic agenda for higher education 2015-2025. This agenda included the central theme of connecting education, business, and society. Partnerships, such as the Centers of Expertise, are seen as an important tool by which to achieve this (Ministry of Education, 2015: 15, 65, 67).

As discussed in chapter two as an example of NPM governance, debates within the Ministry of Education in the 2000s focused on the question of whether the challenges facing educational institutions required more involvement of the Ministry, or if the autonomy of institutions should be the priority (Bekkers, 2008). In 2012, the Veerman Report was used by the then Secretary of Education Halbe Zijlstra (Liberal Party) as an argument to implement a system of performance agreements, enhancing the ability of the Ministry of Education to steer individual institutions. The experiment ended in 2016 and was not repeated. In 2018, the higher education

12. <https://www.rathenau.nl/nl/wetenschap-cijfers/geld/inkomsten-uitgaven-van-universiteiten-en-hogescholen/praktijkgericht>, accessed 1-6-2018

sector and the Ministry of Education agreed that the Accreditation Agency of the Netherlands and Flanders (NVAO) should be asked to monitor individual quality agreements between educational institutions and government, in addition to their primary task of accrediting individual educational programs. This set-up is similar to the one found in VET, whereby each school can choose its own targets, but there are also six obligatory themes that focus mainly on improving quality of educational programs¹³. Since this policy has only recently been introduced, there is no experience with this system as yet. However, the Raad van State (Council of State, 2018) has criticized the effectiveness of this policy, since 96% of the available budget is awarded based on the plans that the institutions publish, and only 4% based on the actual implementation of that plan. The development of Centers of Expertise was excluded from this approach and lump-sum budgets were reintroduced, earmarked as 'Centers of Expertise and a stronger profile of educational institutions'. The initial effects of this new policy will be discussed in the concluding chapter.

Reflecting on the three approaches described above (education, labor market, and competitiveness), the governance of HBO focuses mainly on the quality of education and increasing the innovation and competitiveness of the relevant region. Autonomy of institutions – rather than close government supervision – is a key aspect in this debate. The perspective of the labor market has a minor role in governance.

13. (1) More intensive and small-scale education (educational intensity). This can for example be done by hiring additional teachers. (2) Educational differentiation, including talent development within and outside the study. This is possible, for example, by developing additional talent programs. (3) Further professionalization of teachers (teacher quality). This is possible, for example, by offering teachers extra training. (4) Appropriate and good educational facilities. This is possible, for example, by investing in extra study places in the library. (5) More and better student guidance. This is possible, for example, by employing additional student counsellors. (6) Study success, including transfer, accessibility and equal opportunities. This can be done by paying extra attention to the first 100 days of new students. <https://www.rijksoverheid.nl/onderwerpen/hoger-onderwijs/kwaliteitsafspraken-hoger-onderwijs>, accessed 1-6-2018

Table 8: summary of policy perspectives and their influence in MBO and HBO

	Quality of education	Match between labor market and education	Innovation and competitiveness
MBO	Strong, focus on Inspectorate.	Strong, via SBB and the RIF grant.	Weak, via recently introduced practoren.
HBO	Strong, focus on accreditation.	Minor, via CDHO	Strong, lectoraten and emphasis on becoming 'knowledge institutions'

The labor market

This section focuses on interventions by the government in the education sector in order to address mismatches between education and the labor market. Intervention is often deemed necessary due to the persistent shortage of employees who have studied STEM subjects, but more recently also because of shortages in healthcare workers and teachers, whilst the number of students studying economics and business has continued to rise. One important government intervention is the *Techniekpact* (Technology Pact), which focuses on combatting STEM shortages from primary education right the way through to higher education. This agreement was made in 2013 and extended in 2016, and involves national government, regional governments, educational institutions (represented by their associations), and businesses (represented by their associations). In 2015, a similar *Zorgpact* (Care Pact) was also introduced in relation to the healthcare sector. These pacts include regional plans to improve the number of students studying STEM subjects or healthcare-related subjects, respectively. In vocational and higher professional education, these plans often involve developing public-private partnerships in order to achieve these targets. Life-long learning is becoming an increasingly prominent part of the *Techniekpact* (Ministry of Economic Affairs, 2018).

There are also several initiatives, initiated outside of MBO or HBO policies, which aim to increase the focus on lifelong learning and combat shortages on the labor market. These initiatives were launched after the new government was installed in 2017 (and thus after the data collection ended). First, *MKB Idee* (ideas for small and medium-sized businesses), implemented by the Ministry of Economic Affairs with a total budget of €10 million, challenges entrepreneurs to “propose ideas focused on removing the obstacles encountered by SME entrepreneurs when investing in training

and development of their current and future workers. SME Idea has an experimental focus: learning what works is one of the main goals”.¹⁴ Second, a program known as SLIM provides structural financial support, is implemented by the Ministry of Social Affairs and has an annual budget of €42 million. This grant aims to encourage SMEs to invest (more) in strengthening their learning culture. For example, employers can receive a grant to establish a company school, career or development advice service for their employees, and a training and development plan for their company. There is a co-funding requirement of 40%.

Competitiveness and innovation policy

Since the launch of the Centers in 2011, several policy reports on competitiveness and innovation have pointed in roughly the same direction. The most authoritative report stems from the report *Naar een lerende economie* (Towards a learning economy, WRR, 2013), mentioned previously. The report argues that knowledge circulation between institutions is crucial in order to maintain economic competitiveness and prosperity in the Netherlands. It also offers far-reaching recommendations for educational institutions: “Universities of Applied Science have, to date, been seen too much as regular schools. They need to become knowledge institutions, and to find a new balance between the transfer of knowledge and contributing to solutions for societal problems” (WRR, 2013: 255).

Following this report, several other government advisory boards, such as the *Adviesraad voor Wetenschap, Technologie en Innovatie* (Advisory Board for Science, Technology and Innovation, AWTI, 2015) and the *Rathenau Instituut* (Rathenau Institute, 2019) also addressed this subject. In general, the role of vocational and, especially, higher professional education is the subject of increasing debate regarding competitiveness and innovation. The AWTI recommends that the government should “emphasize the Centers of Expertise as a platform for promoting cooperation between universities of applied sciences, other public institutes of knowledge and SMEs” (2015: 4, English summary). In 2019, in its evaluation of the ‘Top Sector’ program in the Netherlands, which is designed to promote competitiveness and innovation, the Rathenau Institute recommended that in order to solve major challenges such as the energy transition, Centers of Expertise and similar initiatives should be encouraged, rather than using fiscal instruments to encourage innovation as is currently the case. Under the new innovation policy of the Ministry of Economic Affairs, known as Multi-Year Mission-Driven Innovation Programs (MMIPs), there is more focus on the participation of vocational and higher education in these innovation programs.

14. <https://www.permanentrepresentations.nl/documents/publications/2020/06/30/an-updated-eu-skills-agenda> (P.4), accessed 25-8-2020

The launch of public-private partnerships in three waves

The PBT regime

The 'PBT regime', instigated by the *Platform Beta Techniek* (Platform for Science and Technology, PBT) got underway in 2011, after the publication of the reports on Centers of Expertise and Centers of Innovative Craftmanship. The PBT launched two calls for proposals, as requested by the Ministries of Education and Economic Affairs – the first in 2010 and the second in 2012. Initially, the calls focused on the shortage of people with qualifications in the STEM subjects. Since 2009 was in the middle of the economic crisis, these shortages were less prominent but still present in specific sectors that had been identified as important for the Dutch economy (known collectively as the 'Top Sectors'). The call therefore focused on these Top Sectors, and focused specifically on three of them: automotive, chemistry, and water technology. These sectors were chosen because the relevant businesses had a high degree of organization, something which was assumed to be important when establishing the PPPs. For the first call, €27 million was made available, €15 million for three Centers of Expertise and €12 million for six Centers of Vocational Education. For each Center, co-funding was required: 25% from companies and 25% from regional governments or the educational institutions themselves.

The PBT published its 'call for proposals' in the summer of 2010. Since Hans de Boer and his committee had focused on the need for a business-driven approach rather than a school-driven approach, the PBT based its call on this premise. First, potential PPPs were asked to submit a business case of a few pages in length, after which these were assessed and feedback provided. This round was added to avoid an excessive number of proposals. The PPPs were assessed specifically on the following requirements, and scored as 'very promising', 'promising', or 'not promising'.

1. The PPP focuses on the Top Sector.
2. There is equal involvement of relevant (innovative) companies, educational institutions and other partners, as shown in the cost and benefit analysis.
3. 50% co-financing is available from the consortium, at least half of which comes from the business community. Co-financing may also be 'in kind', which means, for example, accommodation costs or personnel costs.
4. The Center has access to and input from (scientific) knowledge (university or scientific equivalent) (PBT, 2011: 25).

For the second round, the PPPs were asked to prepare a business plan and present this to the assessment committee, headed by Hans de Boer. PBT employees formed the secretariat of this committee. The committee assessed the requirements

outlined above, as well as the following criteria: ambition, partners, feasibility and sustainability (PBT: 2011: 25). Amongst the Centers of Expertise, there was a particularly fierce competition between six applicants, after which the assessment committee awarded three grants. In vocational education, on the other hand, there were only four candidates for the six grants available, as not all of the applicants' plans had been satisfactory. The Secretary of State for Education, Halbe Zijlstra, announced in February 2011 that seven PPPs would receive government funding through the PBT.

A budget of €4 million remained unused, as the assessment committee had only funded four Centers for Innovative Craftmanship. Two years later, the Ministry of Education asked the PBT to initiate another call, this time combined with a call that focused specifically on preparatory vocational education. The PBT prepared the second call, consisting of two program lines: one focusing on preparatory vocational education, the other on Centers for Innovative Craftmanship. This call followed the same process, with a subsequent business case and business plan. A total of €13 million was available, €1.9 million per PPP. Five PPPs received funding, but this time, there were more satisfactory applicants than there were grants available, and the PBT discussed the possibility of extra funding with the Ministry of Education, so that more applicants could be accepted. After some deliberation, the Ministry of Education made €1.1 million per PPP available to four other PPPs, but only if they were able to acquire an additional €0.8 million in co-funding from regional governments (on top of the co-funding from businesses already secured in the original plan). All four managed to secure this additional co-funding, meaning that nine more PPPs joined the program in 2012.

In total, 16 PPPs were launched under the PBT regime, all of which are included in the quantitative analysis¹⁵. No formal links in the governance regime were made to any of the existing governance instruments, such as the SBB or quality agreements. No other partnerships have been launched under this regime, and the regime was cancelled of 2016. The regime can be considered as a pilot for the PPP approach in the Netherlands. Subsequent partnerships were encouraged to join the RCHO regime or RIF regime, that had a very different approach.

15. In the quantitative analysis, 15 PPPs are included in the PBT regime. This is because a Center of Expertise and Center for Innovative Craftmanship merged and combined their reported (Chemelot Innovation and Learning Labs)

The RCHO regime

The second regime began in 2012 and was part of the performance agreements, an experiment to enhance the ability of the Ministry of Education to steer individual institutions (as discussed in chapter four). The funding made available to establish a Center of Expertise was 1% of the macro-budget for HBO, with a fixed annual budget of €1 million. Co-funding of 50% was required from partnerships, with at least 25% from companies. It is important to emphasize that, in contrast with the PBT and RIF regimes, the funds were part of the macro-budget, did not include additional funds, and were perceived as such.

The Centers needed to focus on the nine national Top Sectors, as well as healthcare and education: “the aim is to have at least one Centre of Expertise established in the “healthcare” and “education” sectors and one in each Top Sector, as required by the “Human Capital Agenda”. There are already CoEs in the chemicals, water, automotive, agri-food and horticultural & propagation materials sectors” (RCHO, 2012).

In May 2012, each educational institution was asked to submit a plan to be assessed by a committee chaired by Professor Van Vught. The PBT participated in the secretariat of the committee for the Centers of Expertise, given their experience with the pilots. It was not known in advance how many educational institutions would apply to become a Center, but in the end the committee received no less than 44 proposals. As the Centers focused on public-private partnerships, committee member Jan Kamminga, the former head of two large employers' associations, was assigned the task of assessing these Centers. He established a sub-committee consisting of the chairpersons of the Top Sectors and experts on Centers, including two members of the PBT committee. Kamminga and the sub-committee based their assessments on whether the school's particular region was important for the relevant Top Sector (e.g. the high tech sector in Eindhoven) and the existing track record of the school. “For a Center, the Center must fit the profile of the institution and there must be co-financing and public-private partnerships. In view of the short period within which the proposals must be submitted, these should be finalized in 2013” (RCHO, 2012, translated).

The sub-committee, which was chaired by Kamminga, proposed the selection of 17 of the 44 applicants, which the committee accepted. In November 2012, the committee advised the Ministry of Education on the performance agreements with institutions, which included a section on Centers of Expertise. In 2013, 17 institutions established their own Centers of Expertise, of which 16 are included in the quantitative analysis¹⁶.

16. One of the partnerships was cancelled after two years of development

In the subsequent years, several other Centers were established, especially in the field of agriculture. Finally, in 2019, plans were made for an additional 20 Centers that would be funded from the lump sum budget. These Centers are not included in the quantitative analysis.

The RIF regime

The Regional Investment Fund for vocational education was announced by the Ministry of Education in November 2013 in a letter to Parliament: “The aim of the Regional Investment Fund is to improve the match between education and the needs of the labor market by promoting sustainable public-private partnerships” (Ministry of Education, 2013: 2). The fund was framed within the broader National Technology Pact, which focused on the need for education to keep up with the rapid pace of technological innovation. The same letter seems to imply, however, that any sector could apply for funding. One objective of the fund was to involve regional government, with the regions required to provide one-third in co-funding. Finally, the fund permits educational institutions to develop a distinctive profile, which was also one of the aims of the RCHO regime (Ministry of Education, 2013).

Funding under the RIF regime was to take the form of a grant from the Ministry of Education, and recipients would also be required to stay within the rules and procedures of the grant regulations. This contrasts with the other two regimes. In spring 2014, the *Staatscourant* (Government Gazette) announced the details, and the deadline for the first plans was June 2014. The Ministry established a committee chaired by Arie Kraaijenveld, another former chairperson of a large employers’ association. DUS-i, the executive agency for grants for the Ministry, oversaw the administration of the grants. Since the fund was to run for four years and provide €25 million in funding every year, the Ministry of Education drew up a detailed plan on how to allocate funds. The committee awarded grants to plans that were assessed as satisfactory using a system of assessment: if the funds ran short, only the best plans would receive a grant. This system of assessment included several main criteria: (a) improving the match between education and the labor market; (b) cooperation between partners; (c) practicality and feasibility; (d) the sustainability of the partnership; and (e) funding and financing of the partnership (Ministry of Education, 2014).

In the first round of 2014, seventeen partnerships were allocated a grant. These partnerships are all included in the quantitative analysis. In the subsequent years, the Ministry organized further rounds of proposals, ultimately leading to a total of over 100 partnerships. The PPPs funded after the initial round are not included in this study.

Conclusion

Three policy perspectives on partnerships have been introduced in this chapter: the education perspective, the labor market perspective and innovation policy perspective. These policy perspectives are clearly evident in the formation and overall aims of the three regimes governing the partnerships: the PBT focuses mainly on the labor market perspective (the shortage of STEM students) and to a lesser degree on innovation policy (via the link with Top Sector policy). The RIF focuses primarily on the labor market perspective by defining the match between education and the needs of the labor market as the main goal. The RCHO focuses mainly on innovation policy through the link with Top Sector policy. The education perspective played a minor role in the formation and overall aims of these regimes. However, the education perspective is dominant in most governance of the vocational and higher education sector, through the Inspectorate of Education and the Accreditation Agency. Following these policy perspectives, the next chapter will focus in more detail on the three governance regimes and their design, such as the goal-setting process, the allocation of funds, and monitoring.



Chapter 5
Governance regimes

5. Governance regimes

This chapter describes and compares the formal aspects of the three different governance regimes that aimed to promote the formation and development of public-private partnerships. In chapter two, four ideal governance types were presented, with a broader distinction between principal-agent governance on the one and network governance on the other. Since policy makers often 'shop around' between various governance types, we would expect each regime to have features of multiple governance types, as we will discuss in greater detail in the conclusion. This chapter describes the design of the governance framework in relation to six specific aspects, including any changes that occurred and the reasons why certain choices were made by the policy makers.

The key aims of this chapter are to identify which variables in the regimes might be expected to affect the partnerships, and to identify the relevant (causal) mechanisms, thus helping to open up the 'black box' of these governance regimes. First, the analytical framework is presented, followed by a description of each of the variables listed in the framework. The framework was developed during the analysis of the regimes and while carrying out seven interviews with project managers. After the framework has been presented, each of the variables will be described in more detail. The chapter concludes by describing the regimes in relation to the ideal types.

Framework for comparing governance regimes

Four ideal types of governance were presented in chapter three. This section discusses the dimensions that can be used to identify which governance type was dominant in each of the regimes, if any. For example, the use of performance indicators in order to assess progress would be a clear sign of NPM governance. The various key variables in which the regimes could differ are described below; these variables were identified by analyzing the governance regimes and conducting the interviews with project managers (see chapter six).

1. **Goal-setting process:** the first variable concerns the formal way in which goals were set. Under the regime, were the partnerships required to work towards goals that have been specified in advance? Were there other strong incentives to focus on particular goals? Which assessment criteria were applied? For example, was there a link between the goals and activities on the one hand and the funding of activities on the other? Was there a significant barrier to participation or could any institution participate? Who participated in the goal-setting process?

2. **Allocation of funding:** the second variable concerns the way in which the grant was allocated. Was the grant given to the educational institution, the company, the partnership itself, or provided in some other way? Were there any requirements regarding how the funding needed to be distributed, and was there any way to withhold funding? Which formal requirements applied to the way in which the grant was spent?
3. **Monitoring:** the third variable relates to the monitoring and auditing that accompanied the grant. What were the PPPs required to report on? Was an assessment carried out on the basis of these monitoring procedures? And if so, what did that assessment focus on? Did it focus on whether or not the planned activities had been carried out, on specific indicators or on the results achieved with respect to broader policy goals? Did monitoring take the wider policy framework into account? Were both public and private partners involved in monitoring? Was monitoring the only source of information that was used for assessment, or were other sources used too?
4. **Auditing and feedback to PPPs:** the fourth variable relates to the extent to which the governing agency provided feedback to the partnership, and the way in which this was done. How were the partnerships assessed? What was the nature of the rules and guidelines, and what were the penalties for non-compliance? Did the governing agency give feedback to the PPP based on their assessment, and what did it report on? How much feedback was given, what type of feedback and how was this provided?
5. **Learning incentives:** the fifth variable relates to the incentives for learning within the regimes. This aspect covers the extent to which the governance framework included an explicit incentive to learn, given the fact that it was unclear how to achieve the goals set. Was there an incentive for partnerships to learn from each other, and how was blue-print thinking prevented? Were the partnerships required to participate in learning mechanisms or was this voluntary? And was there any relationship between the learning incentives and other formal aspects?
6. **Scope for deviation:** the sixth variable concerns the extent to which the partnerships were permitted to deviate from the plans presented, and how the regime dealt with errors. Could the PPPs deviate from their stated plans (goals or activities) without permission from the governing body? If so, were there any repercussions for doing so? What happened if a partnership admitted that errors had been made or goals had not been achieved?

The variables presented above would differ significantly under the bureaucratic, NPM, network, and experimentalist approaches, because these governance types adopt very different philosophies. Under NPM, for example, rankings and score boards would typically be used to compare the PPPs, while under a bureaucratic regime, the primary concern would be that every PPP that receives funding stays within a specified framework of rules and regulations. Based on the theoretical framework, it is possible to describe the differences that we would expect to see between the ideal governance types with respect to each of the variables presented above.

Table 9: governance types and aspects of governance

Variable	Bureaucracy	NPM	Network	Experimentalism
Goal-setting process	Steering on specific activities	Steering on output indicators	Focus on network conditions	Focus on achieving on (open-ended) goals
Allocation of grant	Actor with closest relationship to the principal	The executive agency (PPP) responsible for achieving targets	Not determined, most suitable partner in partnership	Not determined, most suitable partner in partnership
Monitoring	On activities, compliance with rules and guidelines	On achieving prespecified output indicators	On process indicators such as trust and ownership	Achieving own goals, linked to overarching goals
Auditing and feedback	Based on implementing agreed activities and compliance with rules and guidelines	Based on achieving performance indicators, feedback on results at output level	No audit, peer learning or specific focus on learning and increasing trust within networks	Peer learning, learning from diversity, (non-binding) best practices, improvement plans in case of underperformance

Incentive to learn	Focus on staying within rules and guidelines (i.e. Q&As, activity report examples, blueprints, etc.)	Focus on increasing overall output (i.e. scoreboard, naming and shaming)	Focus on process, how to improve cooperation (i.e. best practices to promote ownership)	Focus on effective methods that contribute to overarching goals (i.e. rankings of most effective methods)
Scope for deviation	Yes, but within the rules and guidelines of the regime	Yes, but only if it increases output	Always, as this is the primacy of the agent	Yes, if this can lead to more effective methods

Goal-setting processes

Goal setting is a key dimension in PPPs, because various different interests have to be reconciled. Under the three governance regimes, no formal requirements were specified in advance regarding which goals and activities the PPPs should choose. All three regimes aimed to establish sustainable PPPs, with very broad overall goal (see table 10). In addition to this overarching goal, each PPP had to meet three requirements in order to participate, and these were similar across all three regimes. The partnerships had to (a) be public-private partnerships, (b) secure co-funding from all participating partners (the percentage required varied from 50% to 66% in co-funding), and (c) form a sustainable partnership over a four to five-year period. This meant that partners in the PPP had to commit to working with one another, decide on their goals and methods, decide which funds they required, apply for funding, and then move to the implementation phase.

Table 10: overall policy goals of the three regimes

Regime	Overall policy goal
PBT (VET + UAS)	Improve quantity and quality of students in STEM
RCHO (UAS)	Improve priority area formation for education and research
RIF (VET)	Improve the match between education and the labor market

Bargaining and negotiating play an important role in goal setting. Many partnerships fail because of an imbalance between their partners: not every partner benefits equally, and not every partner has equal influence (Hodge and Greve, 2010). A PPP is meant to create added value for every partner, but risks failure if one or more partners do not feel they are benefiting enough; their own cost-benefit analysis is then

negative. This means that in a successful PPP, the goals and methods for achieving them should be as closely matched as possible. In chapter two, the factors that can influence partnerships positively and negatively were discussed, emphasizing that there is no fail-safe method for structuring PPPs in relation to goal setting.

There were, however, entry requirements before partnerships were allowed to take part in the programs and receive funding. The procedure for selecting the partnerships is described in chapter four on policy context. Within this procedure, a different assessment framework was used under each regime. The RCHO regime had the most limited framework and specified only two assessment criteria: (1) The Center of Excellence had to match the profile of the institution; it had to relate to priority area formation in education and research, based on the (economic) strengths in its region; and (2) co-financing was required and the partnerships had to be public-private partnerships (RCHO, 2012).

The PBT regime used a document that included both the procedure, assessment criteria and guidelines on how to draft a business case and a business plan (PBT, 2010). The PBT specified several prerequisites for entry, as described in the previous chapter. If the partnership did not meet these criteria, they could be not be included. The criteria that partnerships were assessed on included 'ambition', 'partners', 'feasibility' and 'durability', with each criteria being detailed in a couple of lines.

The assessment framework of the RIF regime was the most detailed of all, and consisted of several main criteria as described in the previous chapter. These criteria were further specified using sub-criteria, with a minimum standard being specified for each sub-criterion. The way in which the assessment committee was to allocate points was therefore prescribed in some detail.

Allocation of grants

Under all three regimes, the educational institution received the funds made available by the government. The grant could only be awarded to an educational institution, which was then given responsibility for spending that funding according to the plan already published. Two arguments were advanced in this regard: first, the grants were funded from the budget of the Ministry of Education, which wanted those funds to be remain in the control of the educational institutions. Second, giving these grants to the partnership directly or to companies would mean breaking rules regarding state aid for businesses.

There was significant divergence in the methods of allocating the grants under the three regimes. Under the PBT, the funds were framed explicitly as an investment,

underpinned by performance contracts and business plans. The PBT paid out the funding over a five-year period, which allowed for interventions during this process. The letter from the PBT to the school stated specifically that the grant would be withdrawn if the PPP did not achieve the targets in the performance contract. This reflects an NPM approach. Under the RIF, the funds resembled a typical funding grant, with monthly payments to the school. The RIF's letter to schools stipulated that the school would receive all the funds if they carried out the activities as described in their activity plan. This reflects a bureaucratic approach. The letter also set out a notification requirement if the school did not carry out certain activities; the RIF could withhold the payments of funds if activities were not carried out.

The RCHO used a different set-up. Since the funds for the PPP were part of the schools' macro budget, they were paid out to the schools in a lump sum from the Ministry, with the budget for the PPPs earmarked. This funding structure included one possibility for withholding the grant following the interim review two years after launch, based on whether the goals had been achieved and co-funding had been secured. This reflects elements of a network approach combined with NPM.

Alderliesten (2017) hypothesizes that because only the educational institutions were able to receive the funds, this could have created an imbalance within the partnerships. Based on his seven case studies, however, he concludes that this imbalance only occurred when the interests of the partners were not in balance from the outset.

Monitoring

After the PBT awarded funding, each partnership under this regime signed a performance contract. Every year, the PBT awarded the subsequent tranche of funding. The first six PPPs (hereafter referred to as the 'pilot PPPs') signed a performance contract between the educational institutional and the PBT. For the second cohort of PPPs (nine in total), this system was changed and a contract was signed between the partners, which the PBT would then monitor. This change was made because of criticisms from the educational institutions that the PBT was holding the educational institution solely accountable for the performance of the partnerships, rather than all the partners collectively (see the next section for more details on this change in policy). Every year, the PBT asked for a progress report including an update on the performance indicators. The partnerships were free to use a format of their own choice for this report.

Most of the PPPs under the RCHO regime had no activity plan when the grant was awarded. After one year, the PPPs were required to present a business plan and to

report on their results so far. In the second year a progress report was written. In the third year there were no reporting requirements, and in the final year a reflection report on the whole period was written. There was no limit on the number of pages for the business plan, the second-year progress report had to be 15 pages or fewer, and the final year report had a limit of five pages. There were no other requirements for the format of these reports.

Under the RIF regime, the PPPs had to submit a progress report every year using a format provided by DUS-i and based on the specific activities that had been specified in the activity plan. The PPPs only had to report on activities that were being funded. There were no reporting requirements regarding other activities or overall results.

Auditing and feedback

This section concerns the auditing and feedback requirements under the three regimes. Because this is a lengthy section, it has been divided into three subsections relating to each regime.

The PBT regime

Under the PBT regime, an audit committee audited the PPPs on the basis of their performance contract and using a 'phase model' (PBT, 2012). The phase model was based on the Bell startup model, which is used by large corporations to determine when a startup is ready to proceed to the next phase, such as market introduction. The PBT adapted this model to assess which phase the PPPs were in. Combined with the performance indicators, an audit committee used these instruments to assess their progress. The progress reports and audit reports were shared with other partnerships.

The committee conducted an initial audit of the pilot PPPs around 10 months after they had received funding, and in every subsequent year in the autumn. The committee's assessment focused on whether each PPP was on track to achieve the performance indicators that had been agreed. However, evidence quickly mounted that this method was not working at all. Its auditing of the pilot PPPs led to discussions regarding the performance contracts. After the second audit, the board members of the vocational educational institutions arranged a meeting with the PBT to complain about these audits. They argued that the audit committee had been too strict, that the performance contracts were unfair, and that they needed more freedom to experiment rather than face a strict assessment every year. They appealed to the PBT for a more constructive approach, asking for greater comprehension of the challenges inherent in launching a PPP, and also for more interaction with the business partners. The educational institutions, which had often drafted the plans themselves, had found it

difficult to involve the business partners and hoped that the PBT could help them to achieve this.

The PBT reflected on this period as follows: Initially, the aim of the monitoring and auditing process was to assess progress using the predetermined performance indicators (...). Failure to achieve the required performance could have repercussions for subsequent funding. (...) However, the progress reports and audit interviews were initially introduced because it was thought to be important to show that the plans drawn up in advance were actually being implemented, but the openness to (necessary) changes was limited. (...) After around six months it became obvious that this was unrealistic. Several Centers raised this issue and wanted to deviate from the planned activities and objectives. It was clear that it would not be useful to assess the partnerships' progress in a static way, because this was a process of innovation and experimentation." (PBTVan Staalduinen, 2015: 33, translated).

As a result, the PBT changed its approach. It promised that there would only be financial repercussions after three years, and also gave the audit committee instructions to be more constructive, re-labeling their role in the process as that of 'critical friends'. Or, in the words of the PBT: *"After all, the challenge at each Center is how to deal with rapid innovations and increasing interdependence between education and private organizations; experimenting and innovating is necessary for this and it is not possible to determine in advance which direction should be taken"* (Van Staalduinen, 2015, translated from Dutch). This led to the following changes: first, rather than signing the performance contract with the PBT, the PBT asked all partners to sign a contract between them, which the PBT would then use to monitor progress. This would involve the business partners in the auditing and feedback process. Second, a typology of partnerships was introduced, allowing scope for various types of partnerships, rather than the fixed phase model used initially. Third, the PBT added interviews with key stakeholders to the auditing process, including students, teachers and companies. Finally, the PBT introduced an investment meeting which was attended by all partners, instead of meetings between the PBT and the educational institution alone.

The audit committee described the progress made and compared this with previous years, made recommendations (as a 'critical friend'), and assessed the development phase of the PPP based on the phase model. Of the three regimes, the PBT gave the most extensive feedback on its assessment. Based on the monitoring and auditing process, it formulated a report of five to eight pages, using the categories in the phase model. The first section of the report relates to the observations made by the committee, the progress made on performance indicators, and the growth and

development of the PPP. The second section took the form of an assessment: what was the committee's assessment of this progress? This also included an estimation of which phase of the phase model the PPP was in. The third section consisted of recommendations for the development of the PPP in the coming years. Finally, in an appendix, there was a visual representation of the PPP's overall progress.

The advice provided by the committee under the PBT regime was fairly detailed, with the committee publishing progress reports, holding interviews with key stakeholders, conducting a two-hour meeting with the PPP, building in opportunities for dialogue regarding the report, and making recommendations before issuing their final advice. The PBT gave the most extensive advice of any of the regimes by far. This included examples such as: *"The committee thinks that operating with one voice to the market is crucial to realizing an independent knowledge center in the field of technology in healthcare"*; or *"Include the application center as a part of the regional labor market policy and economic policy. The benefits will then extend beyond companies and students to the economy and the labor market as a whole"*.

The investment meeting between the partners was the most important under the PBT regime. At this meeting, the PBT asked whether all partners were willing to continue to invest in the PPP, after which the PBT would also make its funding available. This was to avoid the investment meeting becoming a repetition of the audit meeting, at which the partners gave an account of their performance. The audit committee reflected on the decision to involve all investment partners as follows: *"If the lead party receives the funds and is consistently asked first about the progress made, there is a risk that the educational institution is held responsible for both the successes and the failures, which means that the other partners are less involved"* (Van Staalduinen, 2015, translated from Dutch).

On four occasions, funding was withheld from a PPP for various reasons. Firstly, one PPP said they wanted to end their investment period because they planned to run a completely different course that required less funding. This decision was made after several consecutive critical audit reports. The same situation occurred with a PPP in Nijmegen which, after a failed re-start, scaled back its activities significantly. Third, the grant for a PPP was frozen for almost a year because the audit committee did not see any progress. Another school took over the running of the partnership and drew up a new business plan, after which the remaining funding installments were released by the PBT. On the fourth occasion, a PPP received only half of the final tranche of funding because they had decided to limit the number of activities they were engaging in.

The RCHO regime

Under the RCHO regime, the Centers of Expertise were audited three times during the four-year period of the project. In the first year, the Review Committee assessed the initial business plans and evaluated progress to date; there was no possibility of financial repercussions at this point. In the second year there was a mid-term review, during which the PPPs had to demonstrate significant progress. If they were unable to do this, the RCHO could advise the Ministry of Education to discontinue funding. This occurred in the case of one partnership and funding was withdrawn. After four years, the committee conducted a final review, which had no financial repercussions but was aimed at reviewing the results of all the PPPs collectively (RCHO, 2012). The assessment reports were confidential and were not shared with other partnerships.

The Review Committee assessed progress based on general assessment criteria; in contrast to the PPPs under the PBT, no performance indicators were agreed beforehand. The assessment criteria were the same criteria as the entrance criteria, but these were operationalized differently at each round of assessment¹⁷. Assisted by a secretariat, the Review Committee assessed the progress reports and held a meeting with high-level key stakeholders from the Center. The committee asked the PPP to invite at least one business partner, the project manager, and a member of the board of the educational institution to these meetings between the committee and the PPP. The meeting would last for around one hour, significantly shorter than in the PBT regime, and there were no supporting interviews with other stakeholders.

Both the report and the meeting were used to assess progress. In the first year, the committee introduced three categories of PPPs, namely (1) partnerships that were making good progress, (2) partnerships that were making sufficient progress, and (3) partnerships that were making insufficient progress. The PPPs in the third category knew that they had to deliver results in the subsequent year or their funding would be discontinued. The assessment was based on the criteria mentioned above, and aimed to assess whether the Center made enough progress to “provide a realistic prospect of a sustainable financial and substantively independent public-private (or public-public) cooperation in 2016 and beyond” (RCHO, 2012, translated).

In the final year, the committee used the same criteria as before, but also introduced the phase model from the PBT regime. Since there were no formal repercussions, the committee used the phases to differentiate the progress made by the various PPPs. This progress was also published by RCHO, so that PPPs and educational institutions could see how they were performing relative to each other (RCHO, 2016).

Feedback under the RCHO regime was the least extensive and involved reporting back both in the form of a memorandum documenting the meeting and a one-page assessment. The memorandum was a summary of what had been said during the meeting, including the recommendations made by the committee during the meeting. The assessment consisted of two paragraphs outlining the main criteria (see assessment criteria above) and a concluding section summarizing overall progress. If the PPP did not score in the best category (see above), the paragraphs describing progress on the main criteria would provide a general recommendation (e.g. the PPP should be seek to involve the business partners more actively).

The RCHO's advice was rather abstract in nature and was based on the progress report and a one-hour meeting with the PPP. Advice was provided in both in the report on the meeting and in the audit report. In the meeting report, the advice was given in a generally conversational style, while in the audit report, the text was more formal in style. An example from the conversation report: *"The committee points out that there are other funding options and thinks only focusing on the government is too easy. Why doesn't the Centre become part of the school, funded by lump sum funding for education?"* (Meeting report from RCHO to a PPP). An example from an audit report: *"The committee concludes that on these criteria, the Center has completed the validation phase and is ready for the expansion phase. Attention should be focused on scaling up the business model"* (Audit report from RCHO to a PPP).

The RIF regime

Auditing and feedback under the RIF regime was different to both the PBT and the RCHO in that there was no assessment committee which assessed progress, only a committee that assessed the original plan. On the other hand, the PPPs had to submit a progress report every year according to a format provided by the RIF, based on the specific activities that had been agreed in the activity plan. The RIF therefore focused specifically on checking the activities set out in the plan. In practice, the partnerships that had been approved by the committee sometimes had to remove some of their proposed activities (and thus forego part of their funding grant), because they did not meet the requirements of the grant. For example, strict rules were made concerning activities on life-long learning. The PPPs only had to report on the activities that were being funded, and not on any other unfunded activities that they were engaged in (although some also reported on these activities).

Every year, the same assessment was carried out by the DUS-i, checking each PPP on the progress they were making progress on each activity specified in the plan. Since an extensive activity plan had been submitted beforehand, this was primarily

a 'tick-box' exercise concerning progress on each activity. The PPPs could also make changes to these activities during the research period, in which case they needed to report these changes to the DUS-I and the DUS-i had to formally agree to them. The assessments were confidential and not shared with any other partnerships. In addition to this assessment, the DUS-i required a separate accountant's statement, specifically to verify whether funding from other partners had been received.

The DUS-i sent every partnership a letter regarding their overall progress. This letter stated either that the PPP was making satisfactory progress, or that the PPP was not performing below expectations on certain activities. The letters were two to three pages long, starting with a summary of overall progress. There were then recommendations and questions regarding certain activities, such as asking for more information about this activity next year, or advising more focus on particular activities. The letters ended by recommending participation in the learning program if the PPP required further support (see section on incentives for learning). The following categories were possible:

- (a) satisfactory progress (in relation to the activity plan); confidence that the PPP would achieve all the activities;
- (b) unsatisfactory in some areas (in relation to the activity plan), but with an adequate explanation of why progress had not been made;
- (c) progress inconsistent with the activity plan in some areas, including an explanation of which areas, with a requirement to report more extensively on these areas.

The format of the progress report also explicitly included overall development by asking the following four questions: (a) Are you satisfied with overall the overall project? (b) What are you most satisfied with? (c) What has gone less well? (d) How have you addressed these problems? (e) What insights and knowledge has the project generated so far? Finally, the report also explicitly asked which steps the PPP was taking to ensure that it could continue after the grant ended. One PPP was terminated by the educational institution itself because it never started work on the agreed activities. All the other PPPs reached the end of the project period.

The advice provided under the RIF regime focused on the implementation of the activity plan and the way in which the PPPs intended to go forward after the grant ended. Advice was given by employees of the DUS-i on the basis of the original plan and the subsequent progress reports. The DUS-i was able to ask the PPP to explain progress (verbally) if there were ambiguities and, conversely, the PPPs were also able to visit the DUS-i to ask questions. Examples of feedback provided include: *"There was insufficient participation by the companies in the first year. I would like to ask you to indicate in the next report what progress has been made in this regard*

and what management measures have been taken to that end”; or “In the following progress report you will need to provide more insight into the financial progress of the project. What are the financial effects of the unplanned hiring that has been required? I also request that you provide details of the co-financing” (excerpts from letters sent from the DUS-i to a PPP).

Learning incentives

Under all three governance regimes, a learning program was available for the partnerships, and this was widely used by all partnerships. The learning program focused on helping the partnerships to grow and develop, and adapted its methods to the relevant governance regime. The learning program dovetailed with the formal governance regimes: although it had no direct connection with the formal aspects of each governance regime, such as assessment and monitoring, the learning program covered all aspects. This section evaluates the effects of this learning program and specifically its effect on problem-solving behavior.

During the research period, the learning program was called ‘Learning Program for Public-Private Partnerships’, and was organized by the PBT. The Ministry of Education and the Ministry of Economic Affairs funded the learning program for the PBT regime, while for the RIF and RCHO regimes it was funded by the Ministry of Education. The program described its activities as follows: “[the program] initially focused primarily on improving individual Centers own practices by encouraging them to reflect on their own activities, and then providing tailor-made advice (‘individual learning’). However, the tools were gradually expanded to include peer review, strength and weak analyses and specific advice. The knowledge generated was shared with other participating partnerships and added to the ‘collective knowledge base’ of the PPS development” (Van Staaldin, 2015, translated from Dutch).

In 2016, the program was renamed *Wij zijn Katapult* (‘We are Katapult’) and expanded to include all public-private partnerships in vocational and higher education, partly at the initiative of the leading PPPs which wanted to ensure that the program would continue after the funding finished and felt that there was still a need for this program. The Minister of Education described this in a letter to parliament as follows: “An admirable development is that the existing (...) centers have formed their own network, called *Katapult*. *Katapult* is a network of the 149 partnerships between institutions of vocational education and businesses. *Katapult*’s objective is to improve cooperation between the education and business sectors. It is an open network that focuses on knowledge sharing and connecting education, practice-oriented research and entrepreneurship” (Ministry of Education, 2018: 4).

The key characteristics within the learning program included a strong focus on the needs of the business community, a focus on innovation and experimentation, and a focus on learning from one another. Regarding the first of these characteristics, the focus was on a demand-driven approach. Since goals and activities could be chosen freely, the emphasis was placed on the goals and activities that the business partners saw as necessary rather than the priorities of the participating school. The program frequently encouraged the use of a business model canvas (an open source tool) and based its training sessions using this model. The program focused on the demand side of the partnership because persuading businesses to participate had been one of the most common challenges among the partnerships.

Second, the program challenged PPPs to identify new ways of achieving their goals, to experiment and to break loose from the activities that were already up and running. It also explicitly challenged them to pursue activities in the field of competitiveness and innovation policy, as described in chapter four. In the program, it was argued that in order to persuade businesses to participate, the PPPs should have a proposition for businesses that was based on innovative practices that the companies could learn from.

Finally, the learning program referred increasingly and explicitly to learning from others. Multiple activities were undertaken to encourage the partnerships to learn from each other. These included a biennial meeting for all the PPPs, several annual meetings with PPPs concerning specific themes, a common knowledge base containing publications that described good practices from PPPs, and a network map of all the PPPs, including project managers' contact details¹⁷. In addition to these general activities, the PBT also integrated the element of peer learning into their individual activities for PPPs, as the following excerpt from a SWOT analysis report illustrates: *"House of Logistics is looking for models to make collaboration and the network of companies more sustainable. Which forms are conceivable and what are good practices in this regard? Are there examples of PPP constructions outside education that could be of interest? The PBT is looking for examples and will report back."*

The learning program was voluntary for PPPs under the RCHO and RIF, and obligatory for PPPs operating under the PBT. The program consisted of three elements. First, there was individual expert advice, such as a SWOT analyses (looking at strengths, weaknesses, opportunities and threats) or advice on specific

17. Currently to be found at netwerk.wijzinkatapult.nl

activities. Under the RCHO and RIF regimes, this analysis was carried out in addition to the formal monitoring and audit, whilst under the PBT regime the SWOT analysis and the formal monitoring and audit were the same. Second, the program focused on the sharing of knowledge and expertise between PPPs through meetings and online documentation. Third, shared issues and problems that a PPP could not solve on its own were explored with the staff who ran the learning program, knowledge about these themes was generated, and where necessary issues and problems were reported back to the relevant government ministries to address. An example of this latter activity was the Van der Touw Committee, established after the PBT reported a lack of progress due to legal and fiscal constraints. The Ministry asked a high level committee chaired by the CEO of Siemens to look into the conditions that were necessary for the partnerships to thrive. The findings of this committee were presented to parliament, and included a document from the Ministry of Economic Affairs on how to deal with VAT issues.

Table 11: Characteristics of the learning program

Characteristics	Activities
Business-driven	Individual advice
Focus on new methods	Sharing knowledge
Peer learning	Solving shared problems

Reach of learning program and connection to governance regimes

The learning program was used extensively by all partnerships, partly because of its strong connection with the governance regimes. Appendix two provides an overview of every partnership and its engagement in the learning program. Generally speaking, each PPP used between three and six individual services (such as the SWOT analysis, individual advice, and so on, mentioned previously). Participation in overall events (such as the annual meeting) was not monitored for every PPP, but it is estimated that at least 80% of PPPs participated in them.

The extent to which this learning program related to the governance regime differed. First, the PBT integrated the learning program into its governance regime comprehensively. This meant that participation in the learning program was obligatory, and also that the tools developed through the learning program – such as the phase model and typology model – were given a formal place in the governance regime, being used to audit the PPPs, thus combining the learning and auditing processes. The PBT also stated at the start and during investment meetings that learning was a key aspect of the development of PPPs. The PBT asked PPPs to report anything

that was not going as planned voluntarily, so that the PBT and the PPP could work on a solution together, thus attempting to create a learning environment. The PBT even stated that if they were informed about progress within a PPP, they would take a more lenient approach at the investment meetings, because the PBT would understand why certain areas were going well and others were going less well. Learning was therefore designed as an integrated aspect of governance under the PBT, and was framed as “collective learning”.

The RCHO based its assessment criteria on the phase model of PBT: “These criteria have been further operationalized in this document. The Committee builds on the evaluation model for public-private cooperation in vocational education, as elaborated in the audit report Centers of Expertise 2012. This evaluation model comprises five phases that make up the transition to a sustainable public-private cooperation” (RCHO, 2012). The governance model did not formally incorporate any other part of the learning program, but the PPPs under the RCHO were free to participate in the learning program. Notably, a SWOT analysis was conducted by the PBT every two years. Most PPPs underwent this process around six months before they were due to be assessed by the RCHO. Additionally, to begin with, there was a training program for project managers on how to start a PPP, and documentation was also provided to all PPPs. As the secretariat of the RCHO was made up of employees from the PBT, they were able to implement learning activities based on the recommendations of the committee. Similarly, they were able to inform the committee regarding developments that occurred during the learning activities.

Finally, the RIF did not formally use any aspect of the learning program in their governance, but PBT employees cooperated closely on the formulation of grant regulations and their implementation. Additionally, the RIF encouraged the PPPs to participate in the learning program: “there are now dozens of partnerships in vocational education. The Platform for Science and Technology supports these partnerships through tailor-made development towards sustainable cooperation between vocational education, labor market organizations and the government” (RIF, 2015). In earlier letters to Parliament, the Ministry of Education had explicitly stated that participation was not obligatory, and that the PPPs were also free to use other organizations to support their development, because the Ministry did not want to oblige partnership to use the learning program (partly to avoid a closed shop system): “During the implementation phase, it is possible to make use of support provided by the PBT (knowledge program) or another organization” (Ministry of Education, 2013: 4). Employees of the RIF and the PBT frequently discussed the general progress together, although there was an intentional and strict separation between informal guidance and assessment. In some cases, this separation led to

problems. For example, in the learning program, life-long learning was encouraged because this was something that many businesses had expressed a desire to see; however, this ran counter to the possibility of financing life-long learning under the RIF regime.

Table 12: organization of learning program in the three governance regimes

	PBT	RCHO	RIF
Obligatory or voluntary?	PPPs obliged to participate in learning program	Voluntary participation in program	Voluntary participation in program
Part of governance or separate?	Part of governance. SWOT analysis and peer reviews were part of the formal regime and used by PBT	Separate. PPPs used information from learning program in monitoring	Separate. PPPs used information from learning program in monitoring
Contact between learning program and regime?	The same organization and employees	Member of secretariat of review committee was also involved in the learning program	Frequent contact between employees

Scope for deviation

This section is about the formal scope for deviation that the PPPs enjoyed. ‘Formal’ refers to the scope that was formally permitted, rather than the scope that was perceived to be allowed, since perceptions can vary. The scope for deviation means whether the PPP was permitted to change its goals and activities freely, or whether such changes required prior approval. This relates closely to the scope for errors, the difference being that ‘error’ implies that things did not go as expected. The scope for implementing new activities and allowing for the possibility that these may fail is one of the key conditions for problem-solving behavior, and this is the reason we describe this explicitly in this section. All three governance regimes focused on the end goal of the PPP: a sustainable partnership that adds value for its partners. However, there was a fair degree of divergence between the three regimes regarding how they envisaged PPPs doing this and the degree of tolerance for errors.

The PBT prioritized performance by using performance indicator contracts to monitor

progress and the activities undertaken to achieve the stated objectives. Informally, they used the phrase; *'if the PPP thinks it is useful to buy an air balloon to achieve its objectives, they should do so'*. They left the route by which objectives should be achieved completely up to the PPP itself, which is a characteristic of NPM. However, there was a difference in approach between the pilot cohort and the second tranche of PPPs (pilot: six PPPs, second tranche 12 PPPs), as explained in the section on monitoring and auditing, whereby the approach became less strict in relation to the performance indicators. Nevertheless, the performance indicators still predominated, and the PPPs were not free to change these at will. If a PPP wished to deviate from the performance indicators, a discussion would usually take place with the PBT. The activities themselves could be changed; during previous years, the audit committee encouraged the PPPs to try out new methods of achieving the goals, particularly in cases where these had not yet been achieved. However, the freedom of the PPPs to deviate was not always perceived in the way the PBT intended. The 2015 audit report reflected on this: *"The Centers do not feel there is much scope for deviation, even though this is set out in the formal documentation. Asking permission to do so has proven difficult, because once granted, a Center is stuck with the new agreements. This should be a process of continuous adaptation rather than a one-off change"*. (Audit report 2015).

Under the RCHO regime, the funding of the PPP was underpinned by a contract between the Ministry of Education and the respective educational institution for – among other things – the establishment of a 'Center of Expertise' (the PPP). Responsibility for the PPP therefore lay with the educational institution rather than the public-private partnership itself, thus diminishing the role of the other partners in the PPP in advance. The RCHO awarded funding to the PPP based on criteria other than indicators or activities, and most of the PPPs formulated their own performance indicators after the funding had been awarded. Since these were not used as a formal steering mechanism under the RCHO regime, they played a smaller role. The RCHO looked primarily at the broader goals and the extent to which progress towards achieving them was being made; during the monitoring phase, little attention was paid to specific activities. The RCHO did use previous monitoring reports to assess whether the PPP was on track and was still pursuing the intended goals, but if a PPP decided to change its goals, this was not a problem since doing so was their own responsibility.

Under the RCHO, there was significant scope for deviation, since there were no performance indicators or activity plans at the outset. This meant that PPPs were free to choose their own goals and methods. The review committee reviewed progress, but also encouraged the PPPs to aim to ensure that the partnership would

be sustainable over the longer term – without specifying which format it should take. The review committee concluded in its mid-term review that: *“It is important to recognize that Centers are developing at their own pace and in their own way. Depending on the needs of companies, different approaches are possible”* (Mid-term review RCHO, 2014: 7).

The RIF regime emphasized the activities, focusing on the implementation of the activities formulated by the partners in the PPP, and verifying whether these were being carried out properly or not, a clear feature of bureaucracy. Additionally, the schools had sole responsibility for the activities and were required to report on these. Failure to complete the agreed activities meant that the school would receive less funding for the partnership. The other partners had no role in monitoring. This approach can be traced back to the grant regulations¹⁸, which focus on whether the organization receiving the funds used them to implement the activities agreed. This was to ensure accountability (Ministry of Education, Ministry of Health, Ministry of Social affairs, 2016). These regulations applied to all grants provided by the Ministries of Education, Health and Social Affairs, and were put in place to ensure that government funding was spent in the correct way.

The mid-term external evaluation by ResearchNed (2016) reported that: *“Among the schools and companies, it has been observed that the strict criteria and assessment methods lead to a more conservative approach”* (P. 53). On the other hand, the assessment committee also noted that *“the partnerships did not include fixed plans and targets, but were mainly criticized for the activities that had not been developed at all.”* The RIF did not formally allow changes in activities without prior approval. For example, new partners in the PPP need to be reported, and if additional funding was secured, the grant needed to be paid back to the RIF (because the net budget of the PPP had to remain unchanged). Changes in activities also needed to be reported, as well as any changes to the way in which the PPP planned to spend the funds: *“For the sake of completeness, I would like to point out that you have a general obligation to report to us in accordance with the Grant Regulations of the Ministry of Education, Culture and Science. In all cases, you are required to notify the grant provider if it is likely that: a) the activities for which a grant has been provided have not been carried out, have not been carried out on schedule or have not been carried out in full, and; b) the grant requirements are not met, will not be met on schedule or will not be met in full”* (Letter from DUS-i to all partnerships, translated).

18. Kaderregeling subsidies SZW, OCW en VWS, 2016 (accessed januari 2019)

Table 13: possibility for PPS to deviate from plan in the three governance regimes

Governance regime	Possibility for deviation during implementation of the plan
PBT	Deviation within activities is possible at all times, but within the performance indicators formulated by the PPP itself. Permission to change indicators was required.
RCHO	Deviation from goals and activities possible within the broad final goal of realizing a sustainable partnership.
RIF	Draft activity plan drawn up in advance and strict monitoring of whether the activities were being carried out. Approval required for any deviation from activities.

The RCHO therefore allowed the most scope for deviation and errors, followed by the PBT, with the RIF providing the least. The RIF monitored activities the most strictly, and when those activities failed, the PPPs were required to report this and submit a proposal to change the activity to the RIF. Under the RIF, there was no relationship with the broader goals and the activities, meaning that a PPP could be rewarded for carrying out the relevant activities, even if those activity did not contribute to the end goal. This would appear to place a limit on problem-solving behavior: the PPPs were not incentivized to monitor whether the activities were contributing to the desired end goal, and the PPP were not free to try out new activities that they believe could contribute to the end goal without prior permission from the RIF. In practice, the RIF was generous in allowing the partnerships to change their goals.

The approach of the PBT during the pilots could also be said to discourage experimentation: it made the school solely responsible within the partnership for achieving the targets, which meant that the school would be punished for not achieving targets. Other partners were not involved in interactions with the PBT. Since the school would 'carry the can' for mistakes made by other partners, this could have discouraged the schools from trying out riskier approaches. A different approach was introduced for the second cohort, with a performance contract between the partners rather than with PBT. This approach allowed for errors to be made within the activities, since the PBT regime encouraged the PPPs to change their approach if the aims were not being achieved. However, the PBT did limit the scope for changing the broader goals, requiring prior permission for this. This could have had two effects: one the one hand, it may have limited the potential for problem solving, with a focus on the performance indicators specified, reflecting one of the drawbacks of new public management (see chapter 2). On the other hand, the focus on achieving the broader goals may have helped the PPP to maintain a focus on the

broader goals, helping to balance the various interests of the partners within the PPP. The PBT could point out a goal that was not being achieved, thereby helping to shift the focus onto areas that were not going well and encouraging the PPP to prioritize these. This also gave the PBT the opportunity to steer the PPPs towards achieving the wider goals.

The RCHO regime allowed the most scope for errors, with no performance indicators or activity monitoring that could have had direct repercussions for the PPP. The RCHO also focused the most on achieving the end goal – a sustainable PPP – rather than on specific targets. This meant that the PPPs were more likely to focus on those activities that were going well in the view of the partners within the PPP. However, this did limit the opportunity for RCHO to steer specific PPPs towards achieving the broader goals. The RCHO was able to proffer advice, but not to oblige the PPP focus on specific goals that were important within the RCHO regime.

In summary, we can sum up all the formal aspects of the governance regimes as follows:

Table 14: summary of formal aspects of the three governance regimes

	PBT	RCHO	RIF
Goal setting	Freedom to set goals, strong competition for entry	Freedom to set goals, low entry requirements	Freedom to set goals, high entry requirements
Distribution of grant	To the educational institution, yearly intervention possible	To the educational institution, mid-term review with intervention	To the educational institution, intervention possible
Monitoring	Extensive reporting based on performance indicators	Limited progress report, free format with page limitation	Pre-formatted progress report based on activities
Auditing and feedback to partnerships	Audit based on own indicators and phase model. Interviews and committee meeting. Extensive feedback.	Audit based on relative progress, limited, broad-brush feedback	Audit based on achievement of activities, limited feedback on achieving activities.

Learning incentives	Obligatory, via learning program	Voluntary, via learning program	Voluntary, via learning program
Room for deviation	Yes, but changes to performance indicators needed approval by PBT	Yes, complete freedom, no checks because no indicators were agreed	Limited: changes to activities need to be reported and approved; approval was usually given

Conclusion: governance regimes and governance types

When we compare the ideal governance types as described in chapter two with the three governance regimes described above, the following general conclusions can be drawn. All three governance regimes were originally set up based on principal-agent logic: PST originated from a new public management philosophy, the RCHO regime as a whole had strong principal-agent features that were reflected in the guidance of partnerships, and the RIF regime was built on grant regulations with strong bureaucratic governance features. Strong principal-agent features were reflected in the requirements for and strict monitoring of co-funding from partners as a condition for acquiring funding. Additionally, the educational institution needed to apply for and receive funding, and was responsible for reporting on and – to a greater extent than the other partners – achieving the goals¹⁹. This principal-agent logic however was not pursued dogmatically: principal-agent features such as auditing were weakly enforced, leading to significant freedom for the partnerships.

This freedom was strengthened because all three regimes allowed the partnerships to set their own goals and formulate their own activities at the outset, and since there was no operationalization of the wider goals, all regimes featured a significant degree of network governance. In addition, all the regimes included a learning program which was used extensively, and through which the partnerships could share information, receive confidential feedback, and learn from different approaches. This also reflects a feature of network governance.

Beyond these characteristics that were common to all the regimes, they differed strongly in other aspects of governance. The RIF regime had strong bureaucratic features. The regime was created to oversee a large number of partnerships, and focused on ensuring that the activities within the partnerships stayed within the

19. With the exception of the second tranche partnerships in the PBT regime

rules and guidelines of the funding grant. The RCHO regime, on the other hand, demonstrates mainly network features. The regime emphasized the different starting points of each PPP, progress indicators progress were mainly process-based, and within the regime, general recommendations were provided to strengthen the partnership. In the final year, though, the PPPs were assessed using a phase model, introducing a ranking of the best-performing PPPs. This latter aspect is usually seen in NPM governance models.

The PBT regime started off with an NPM orientation, focusing on achieving prespecified performance indicators and using the phase model, even if the indicators used could be chosen freely. However, the PBT later changed its approach in the face of opposition, introducing stronger features of network governance (such as the typologies of PPPs) and scaling back the role of the performance indicators. The PBT regime also had two features of experimentalism. First, the regime sought to use accountability instruments for learning purposes, a characteristic feature of experimentalism (Ansell, 2012: 504). However, it did not implement aspects such as structured peer learning and used external assessment committees instead. Second, both the PPPs and the PBT regime itself were able to adapt their approach rapidly and to learn from previous experiences, an aspect that is emphasized in experimentalism.

All the PPPs engaged with the learning program to a significant extent, and the PPPs often learned about details of the grant and the formal requirements through this program (through meetings and online information, for example), emphasizing the close relationship between the learning program and the formal governance regimes. In general, the interaction between partnerships and the learning program was more frequent than between the PPPs and the formal governance regime. The learning program therefore had a significant influence on the direction that the PPPs took, because there was not always a clear distinction between the formal governance procedures and the learning program. The partnerships under the RCHO and RIF regimes saw the learning program as a resource to help them meet the formal requirements of the respective governance regimes. The learning program also played a role in interpreting the funding regulations, and the PPPs would often ask for advice on how to interpret these regulations. Consequently, the learning program can be seen as an integral part of the governance regimes.

Table 15: three governance regimes and their aspects of ideal governance types

	PBT	RCHO	RIF
Bureaucracy	Weak, due to strong connection between regime and school	Weak, due to strong connection between regime and school	Strong, due to activity-based regulations and monitoring
New public management	Strong in first tranche, steering on output indicators	Average, some steering on output indicators	Weak, no steering on output indicators
Network governance	Strong in second tranche, focus on ownership and cooperation between partners. Learning program formal part of governance. Freedom to set own goals and methods.	Average, freedom to set own goals and methods. Acknowledgement of learning process leading to weak enforcement, voluntary learning program.	Average, freedom to set own goals and methods. Acknowledgement of learning process leading to weak enforcement, voluntary learning program.
Experimentalist governance	Weak, using accountability for learning purposes and adaptability of regime itself.	None	None



Chapter 6
**Actors' views on
governance regimes**

6. Actors' views on governance regimes

This chapter describes the results of interviews with seven randomly selected project managers from across all three regimes, regarding the way in which various aspects of the regimes were perceived (see chapter three on methodology for details on selection). Each interview was structured using (a preliminary version of) the analytical framework, as presented in the previous chapter, in order to systematically review each aspect of the regimes. The aim of this chapter is to provide an insight into how project managers dealt with specific aspects of the respective regime, and also to demonstrate the differing experiences of and views on those regime. This chapter is also helpful in avoiding researcher bias when interpreting various aspects of the regimes, based on the researcher's own experiences or assumptions derived from the rich description in chapter five: even though some aspects may appear helpful or unhelpful, the more important question is how these aspects were perceived by those who worked in them.

Influence of goal setting

When discussing the goal-setting process in relation to the development of the partnership, three types of responses were given during the interviews.

The first response (given by four respondents) was that (future) partners were important in selecting the targets, but that the initiative came from the school: *"At the pre-partner meeting, all the partners had the chance to say what they found to be most important. These items were listed and the top three were chosen as goals" and "as with most of these types of processes, this was done through many meetings and brainstorming sessions with our partners"*. The second type of response (given by two respondents) was that the grant was the most important aspect: *"there was the possibility of a grant. We asked a writer to draft a plan. They did some research on what types of goals and activities were common, and they drafted the plan accordingly. After this, we asked some major companies to sign the agreement"*. The third type of response (given by one respondent) was that the initiative lay with the companies. *"In this case, the initiative came from the companies. They prepared an initial draft together with a project manager from the school. This was put before a steering committee made up of representatives of both the school and the companies"*.

Asked about the effectiveness of these approaches, the first and third approach were considered effective, while the second type of response was seen as running counter to the development of the PPP. Under this approach, the grant was used as a way to secure funding and prestige, not as an opportunity to achieve the targets that all the

partners wanted. In these cases, the project manager had to repeat the goal-setting process after the grant had been awarded, which was perceived as difficult because the goals and activities were key to reporting on progress: “As a project manager, you need to achieve these goals and try to make them work, especially when the project is reviewed. But at the same time, I felt that this was not the way the PPP should work.” Although it was a struggle for this project manager, in the end he did manage to engage with his partners and make his partnership a success.

Asked about the influence of the governance regime, all respondents were positive about the fact that goals and activities had not been prescribed in advance, and were very positive regarding the requirement for co-funding, since this reduced free-riding by companies. On a negative note, two respondents in the RIF regime emphasized that this regime required a high degree of specificity, which impeded activities in the area of life-long learning. The two respondents in the PBT regime emphasized the competition between the PPPs, which led to an overemphasis on the targets and resulted in unrealistic expectations.

With respect to the theory of public-private partnerships, the first phase of collaboration with the school is the phase in which the leading partners embark on an incipient leader-follower relationship, whilst the latter corresponds to a full partnership. Both of these types may turn out to be effective partnerships. The second approach, whereby the grant is the primary goal, reflects a ‘language game’ within the public-private partnership, where a public-partnership is realized in name only, and has little to do with actual problem solving by the partners. In all cases though, it is clear that the goal-setting process is only the start, and the manner in which the PPPs will go on to develop in the future is not prescribed at the outset. For example, the project manager who described the second approach later explained how his partnership had been able to overcome this inauspicious start.

Distribution of grants

Asked about the way in which the grant would be distributed within the partnership, two types of answers were given. The first (given by three respondents) included answers such as the following: “At the beginning, we agreed on how the grant would be distributed. This was fixed”, and “beforehand, we agreed how much of the grant each partner would get, depending on their contribution. This was fixed.” In this scenario, an agreement was made in advance on how to distribute the grant, in order to avoid any disagreements later. This was the case when the partnership was a full partnership, and not a follower-leader partnership. In the second type of answer (given by four respondents), the grant was assigned to activities that needed the funding and in which it could be used flexibly. This was mainly the case in leader-

following partnerships, or in partnerships where there was a neutral project manager who acted as an intermediary between the schools and the companies. “From the second year on, we just looked at the plan, adapted it and assigned funds to it”, and “it was important was to assign a separate budget, rather than to make it part of the budget of a college. Otherwise, the funds would disappear and I would not be able to assign the grant.”

Regarding the first type of answers, some undesirable effects also occurred, such as the grant being spent for other purposes (in one partnership, for example, the grant was used to fill a shortfall in the budget of the education institution). This approach also limited the flexibility of the PPP. However, two project managers argued that this approach was very beneficial because there would be no arguments about the budget. In the second type of answer, three respondents considered this approach desirable because it would enable the budget to be directed to where it was really needed. However, it was criticized by one respondent as slowing down the speed of development, because the budget sometimes had to be re-negotiated within the partnership.

When asked about the influence of the governance regime on the development of the PPP, the two respondents from the RIF regime were critical primarily of the strict rules governing where the grant could be spent, and the need for a separate accounting agreement. This often led to delays or a greater administrative burden. The two respondents in the RCHO mentioned the fact that the grant did not include additional funds but was part of the macro-budget (as explained on page 81 in chapter four), which led some school directors to believe that the funds could be redirected to other goals. In practice, there were some cases where the whole grant was not directed to the partnership. Finally, all three respondents from PBT highlighted the idea of an investment rather than a grant, and they were very positive about the fact that there were no additional rules or procedures regarding how to spend the grant.

Monitoring

Monitoring was the subject of much discussion, and opinions varied strongly. At one end of the spectrum, some respondents complained about the administrative burden associated with monitoring. Three respondents described the difficulty of reporting on the partnerships, and the various reporting requirements: “I had several reports to write for the municipality, the regional government and the national government, and each asked for a different way of reporting”. At the other end of the spectrum, two respondents thought that monitoring was important to ensure progress in the PPP and that monitoring could also be used to their own advantage: “When there are reporting demands and deadlines, it is easier to get things done. As soon as

the demands and deadlines disappear, energy is refocused on other activities. So an external monitor really helped in achieving my goals". In the middle of the spectrum, the final two respondents argued that although monitoring was sometimes a burden, it also helped to generate a better understanding of their own progress and facilitated communication with their partners: "At the beginning, the reporting was a burden. But at a certain point, it really helped us to get a better insight into the progress made, which we could also communicate to our partners."

Regarding window dressing, six of the seven respondents argued that although the report naturally presented their activities in the most positive light, successes and failures were reported. The progress reports reflected the reality, even though the failures may only have been evident to more careful readers and were usually presented as 'lessons learned'. Various arguments were made regarding why the respondents had been honest in their reporting, as outlined in the methodology section on why the progress reports are usable. First, this was because the PPPs were an experiment, and respondents argued that, as such, there should be room for error and therefore also for reporting on approaches tried that had proven less successful. Second, there was the hope and expectation that the partnerships would receive valuable feedback, as promised within the regimes. Third, the features of the governance regimes sometimes directly excluded the possibility of window dressing, as will be explained in the next section. Fourth, admitting to targets missed was sometimes a way for the project manager to get things done by applying pressure on the other partners: "The school did not fulfill its promises, whilst the companies did. That's why I was only able to achieve 60 to 70% of my targets. (...) The audit committee really understood this problem. After this, the school had to increase the number of staff assigned to the project." One respondent argued that the progress reports were made up mainly of window dressing, as his report was a basically a summary of several sub-reports. This was due to the fact that his partnership was the only partnership in the sample that was essentially made up of six smaller partnerships brought together in one Center.

Auditing

The auditing process was perceived differently in each governance regime. First, the two respondents in the RIF regime emphasized the fact that they missed face-to-face contact and were disappointed with the way in which points for improvement were communicated. "I really missed face-to-face contact. We missed the conversation about our progress, to really communicate about how we were doing. You cannot do that on paper", and "in the letter we got, we were given some points for improvement, but we just did not understand these. So I really had to ask for a meeting to clarify."

The three respondents in the PBT regime talked mainly about the audit committee, which had a significant impact on the project managers, since future funding depended on the committee: *“The targets defined beforehand did put some pressure on us to perform, we knew we would be reviewed on those targets. However, as we had formulated these ourselves, this felt quite natural.”* The need for both a visit and an extensive report was sometimes seen as excessive: *“During the audit meeting where we showed our working location, the committee said that they were able to visualize how we were cooperating with companies. But afterwards, we had to write down how our cooperation with the companies was going. This felt like the committee did not really trust us.”* Most importantly, respondents perceived a tension between the learning process and the assessment process: *“there was some tension between being honest on the one hand, and presenting yourself in the best light possible to secure future funding.”*

The two respondents in the RCHO regime observed that the review committee included high-level representatives, which led respondents to take the committee’s feedback seriously. *“The review committee always had some advice, which we felt obliged to act on. However, some of their advice was really hard to put into practice.”* Respondents also felt there was not enough time for the audit and that the review was somewhat superficial. *“There were so many topics that were reviewed, it did not really go into much depth.”* Finally, as in the PBT regime, respondents also felt pressurized by this process and did not feel like the review was a learning environment: *“we really had to account for our actions. The committee said we had to see them as critical friends, but there is too much at stake to be really honest.”*

Asked about the influence of the audit on the goals and activities of the PPP and its overall development, respondents argued that it did not play a very influential role. While the reporting requirements helped respondents, the audit process was seen primarily as something that just ‘had to be done’ and did not really contribute to their learning process. The feedback they received was taken seriously and was sometimes useful, but there was no dialogue involved: *“We were not able to be open. We could not say: ‘Well these are the issues that we experience, could you help us think of a solution to these issues?’”*

Scope for deviation

There was a split between the two RIF respondents and five other respondents when asked about the scope for deviation from the original plan. The RIF respondents talked extensively about the obligation to report any changes to their activities or their partnership. They praised RIF for its flexibility on changing targets, but also criticized the fact that these changes had to be reported in the first place. *“Sometimes*

we had to be really creative and push the boundaries of what was formally permitted. That was really worth it, because we were caught by other developments and really had to change some of our activities". The PBT and RCHO respondents answered that there was plenty of scope for changing goals and activities. "Of course, if you do not achieve any of the goals and activities, you have a problem. But when you achieve some of the goals, while others did not go as intended and you change your approach, this was encouraged."

Learning incentives

The tone of the respondents was very positive when they were asked about these activities. One respondent argued: "The monitoring and audit process was mainly contemplative. The activities by PBT, on the other hand, gave us some really useful tips and tricks." Another respondent explained why the learning program was useful: "PPPs are an experiment. You try certain things, and some things will fail, and others succeed. It is more important that you know why things failed."

Respondents emphasized the importance of being able to learn from colleagues: "There was a regional peer meeting which all of our PPPs in the region attended to share lessons learned. That was really useful as an inspiration and to see how others were doing." Two experts who worked for PBT were often mentioned, as they provided informal sessions – without any formal repercussions – where PPPs could present their problems and ask for assistance: "We had a visit from a representative of PBT, which helped us to carry out an analysis. She did not use the standard model, as she said that we did not need this. She made an analysis on how we could move forward, how we could expand our activities. She did this really well."

Asked about the weaknesses of the learning activities, three respondents mentioned that the lessons that were shared were often difficult to implement directly. "The lessons were very inspiring, but I could not always put them into practice them directly, because my goals and activities had already been fixed. These lessons are more useful when you are first starting a PPP." The most valuable of the learning activities, in the opinion of four of the seven respondents, was the opportunity to meet people that were facing similar difficulties and to reflect on these shared issues. Activities within the learning program were evaluated particularly positively when the learning activities met the following criteria: (a) they involved intensive interaction with people that were in the same situation; (b) were free of formal consequences, so that honesty and openness was possible; and (c) provided enough time for a detailed discussion, because the challenges faced by the project managers were often complex and not easy to solve. Learning incentives that did not meet these three requirements were found to be too superficial and more contemplative in nature.

In situations where there could have been formal implications, such as in the audits, respondents felt there was not a safe learning environment: “it’s not that we hide the truth, we are honest. But it is not a safe learning environment, we are defending our progress.”

When asked about other learning activities besides the learning program, most respondents referred to learning activities within the PPP or within the school, such as between two partnerships within the same school. Also, PPPs with a similar focus would sometimes visit each other to learn from each other’s practices and experiences. Generally, however, most of the learning activities that the respondents participated in were organized by PBT. Asked about whether they would have engaged in these learning activities without the learning program, the respondents replied they would not, because organizing and setting up these activities would have been too time-consuming.

Conclusion: opinions on governance regimes

The interviews reveal the breadth of opinions among project managers on the effect of various aspects of the governance regimes and their effects on the partnerships. Depending on the project manager asked, opinions on the effectiveness of the governance regime varied. Their responses can be categorized into the following three types, which are not linked exclusively to one of the three regimes.

First, there were two respondents who actively made use of the governance regime to realize their goals. For example, they used the audit process to put pressure on the partners in the PPP. In the interviews, these were experienced project managers who understood how these processes work. Second, there were two respondents who saw the governance regime primarily as a (bureaucratic) burden, and would have preferred all these activities to be removed. Their opinion was that the government should have more faith in them and leave them to get on with it. Third, there were three respondents who accepted that these regimes had a purpose, were not always happy with the extra, sometimes bureaucratic, demands, but tried to make the best of it. These were the project managers who, over the course of the project, became accustomed to the requirements and used the requirements where they could.

We can observe some underlying patterns in the interviews. First, all respondents acknowledged that realizing a partnership was something new and would inevitably require some experimentation and innovation. They emphasized that there needed to be scope for things to go wrong and for deviation from the original plans. All the project managers – and their project groups – were facing a new situation, which required them to develop new strategies and routines. The extent to which they were

able to do this depended to a large extent on the project manager and his team, which explains the often crucial role attributed to the project manager. It is relatively easy for project managers to fall back on first-order problem solving, for example, by blaming the governance regime for its bureaucracy.

Second, two specific aspects of the governance regime were unanimously viewed as positive by the project managers, and as contributing to the development of partnerships. First, there was the fact that goals and activities could be chosen freely. This aspect was crucial in ensuring commitment from all partners. Second, co-funding was praised by the respondents as this reduced the chance of free riders and increased the degree of commitment from all partners as it meant they had to take the project seriously. However, when asked about how much co-funding there should be, whether it should be monitored or whether it could also be in-kind, opinions diverged sharply, depending on the situation of the respondent.

The two basic characteristics (freedom in goal setting and co-funding) were thought to be helpful in the development of the PPPs. The monitoring requirement was also viewed positively by most respondents, as it promoted non-committal behavior. The formal aspects, however, especially the audits, led to strategic behavior or were seen as an unnecessary administrative burden, especially when funding was on the line. They were fairly traditional and echoed familiar routines in which the government and the school are in a bureaucratic relationship. Finally, all project managers emphasized the contribution of the learning program, which helped to loosen up this bureaucratic relationship.



Chapter 7

**Problem solving in partnerships:
a large-scale quantitative analysis**

7. Problem solving in partnerships: a large-scale quantitative analysis

The previous chapters have set out the basis on which we can interpret the results of the large-scale quantitative analysis of public-private partnerships in vocational and higher education in the Netherlands. The aim is to evaluate whether in the context of uncertainty and wicked problems, partnerships are engaging in higher-level reflection in order to succeed, rather than applying old routines to new situations. Are public and private actors able to jointly develop new products and services in response to rapid developments in technology and society, and share both the costs and the benefits of doing this.

Thus far, three distinct policy perspectives have been distinguished that can be used to give meaning to the value of partnerships. We have found that the overall aims of the three governance regimes are mainly focused on either labor market policy and/or innovation policy. Additionally, we have observed that all three governance regimes were originally based on principal-agent logic. However, the combination of weak monitoring enforcement, the partnership's freedom to set goals and methods, and a strong emphasis on learning provide evidence of many features of network governance. There are also distinct differences between the three regimes: the RIF has strong bureaucratic features, RCHO has mainly network governance features, and PBT shifted from new public management towards network governance with some elements of experimentalism. The Interviews with project managers revealed that opinions on the effectiveness of the governance regime varied, with a strong emphasis on the need for experimentation and learning, and a general sense of the ineffectiveness of the formal principal-agent aspects of the regimes, which reinforced familiar routines between government and the school.

The large-scale analysis presented in this chapter takes a bottom-up approach, and a tailor-made methodology is used to evaluate whether the chosen activities of partnerships were successful in the partnership's own terms. Based on the progress reported by the partnerships themselves, these results show the development of 48 partnerships over a period of four to five years, providing an in-depth insight into the development of each partnership and whether the partners evaluated that development as positive (15 partnerships in RIF, 17 in PBT, and 16 in RCHO, leading to 8.301 data points). The chapter also reflects on the question of to what extent the goals of the overall governance regimes were achieved. This is achieved by categorizing all activities into five broad policy goals that are matched with the three policy perspectives.

This chapter starts with a description of how the analysis was carried out. It will then continue with observations regarding the entire population (n=48), and focus on the specific regimes, goals, and activities to complete our analysis. Six overall observations could be drawn from the data and form the outline of this chapter. Each observation is considered in the light of two theoretical approaches. The first approach focuses on problem solving, including the literature on the successes and failures of PPPs in general, and the literature on implementation. The second approach focuses on governance regimes, and compares the effect of principal-agent models (i.e. bureaucracy and new public management) with that of network governance (including experimentalist governance). The chapter will conclude by summarizing the main conclusions and the questions that arise from the quantitative analysis, which will be addressed in the case studies.

Implementation of large-scale quantitative analysis

The quantitative analysis was carried out using the following steps. First, based on the plans, each specific activity that the PPP intended to engage in was listed. A total of 50 activities were identified, averaging 18 activities per partnership. These 50 activities were identified after analyzing only five partnerships. In other words, even though the PPPs were free to choose which activities they engaged in, they invariably limited their activities to this set of 50 activities (although naturally the precise design of these activities varied between partnerships). Sometimes, a PPP integrated several individual activities into one overall activity, by, for example, combining conducting research for businesses with internships for students. This activity was included both as 'research for business' and 'internships for students' (thus, in some cases, one activity counts as two activities).

Second, each specific activity was tracked over a period of four or five years (depending on the regime) and coded in Nvivo. For each activity, one of the following categories was applied:

- a) The results were in line with expectations;
- b) The results were (well) below expectations;
- c) The results were (well) above expectations;
- d) There is no mention of the activity at all in the reports;
- e) The activity has started and has not yet been mentioned in the reports;
- f) The activity was changed radically compared to its original approach.

The analysis takes the expectations of the partnership as its starting point, and is based on the plan that was originally used to secure funding for the partnership. Some reports adopted a positive overall tone, making it harder to identify activities that were not actually meeting expectations, whilst other reports were written in a neutral tone, making it harder to identify activities that were surpassing expectations. The

analysis was carried out by the researcher and a research assistant. The assessment was calibrated – to ensure that all reports were assessed in a similar way – after each year of the analysis.

The third step was to categorize these activities into five broad policy goals. These five categories are shown in Table X, along with some example activities, and the full list of activities can be found in appendix three. The five categories can be matched with the three policy perspectives: (1) the contribution of activities to the innovative capacity of companies matches the innovation policy perspective; (2) improving initial education matches the education policy perspective; (3) the match between labor market & education and (4) lifelong learning both match labor market perspective; and (5) production and research facilities match the perspectives of both innovation policy and education policy.

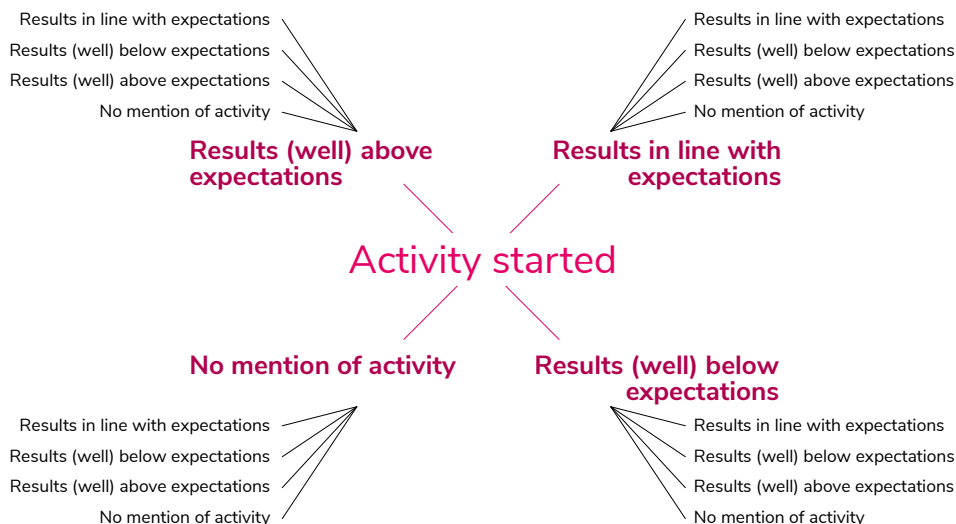
Table 16: goals and examples methods regarding how to achieve these goals

Goals	Example of methods to achieve goals (activities)
Contribute to innovative capacity	Facilitating start-ups Research and development for companies Sharing knowledge through meetings
Improve initial education	Update curricula Teacher training Student teamwork
Lifelong learning	Customized courses for a business Masterclasses for businesses Re-training for unemployed persons
Match between labor market & education	Develop a continuous learning route in secondary education towards vocational education Increase number of students in sectors with a shortage
Production and research facilities	Sharing of facilities by school and businesses Bring state of the art facilities within the school Use facilities of businesses

This method allowed us to trace the development of each activity and led to a tree of possible options (see figure 2). Of course, some options were more likely than others. For example, it was unlikely that an activity that exceeded expectations would

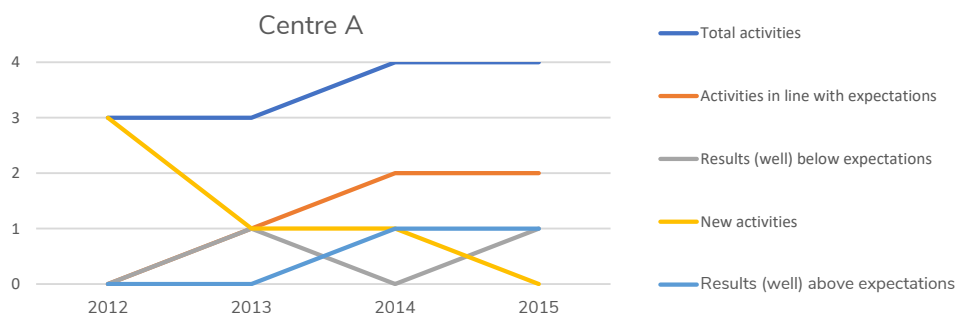
suddenly start to perform below expectations. However, every possibility was taken into account, and indeed some strange results can be observed. The most frequent series is where activities are begun, but never heard about again (“activity started”, “no mention of activity”, “no mention of activity”, etc.).

Figure 2: tree of possible options



Graph one provides a hypothetical example, showing that the partnership started out with three activities, which increased to four activities in 2014. The partnership then switched to three activities that were successful or highly successful, whilst one activity was unsuccessful and was dropped.

Graph 1: development of a hypothetical Centre A



Below, another hypothetical examples show how to interpret the various results.

Table 17: Explaining what coded series mean in the development of a Center

Series (2012, 2013, 2014)	Indicates:
5x the following series, within the goal of improving initial education: <ul style="list-style-type: none"> • 2012 Activity started • 2013 In line with expectations • 2014 In line with expectations • 2015 In line with expectations 	This Center started in 2012 with 10 activities (5 in the category of improving initial education and 5 in innovative capacity).
5x the following series, within the goal of innovative strength: <ul style="list-style-type: none"> • 2012 Activity started • 2013 No mention of activity • 2014 Below expectations • 2015 No mention of activity 	The activities on improving initial education all met expectations in 2013-2015, whilst the activities on innovative strength were either not reported on (2013 and 2015) or performed below expectations (2014).
4x the following series, within the goal of lifelong learning: <ul style="list-style-type: none"> • 2012 No mention of activity • 2013 No mention of activity • 2014 Activity started • 2015 In line with expectations 	In 2014, four new activities were started in lifelong learning, which indicates a policy shift. It would be interesting to review what caused the shift towards lifelong learning and led to the abandonment of the goals on innovative strength.

This novel type of analysis shows goals and methods, and whether the goals were achieved over time. Did the goals change, or were they dropped or replaced? What methods were used to achieve the goals and were these methods replaced during the years? And were some goals more important than others, or was more success reported regarding some goals than others? By aggregating this data for one partnership, we were able to produce a series that provided a picture of the development of the partnerships as a whole. The analysis of 48 partnerships at this level gives an insight into questions such as: are there any differences between the governance regimes in the goals reported? Were there sudden changes in the goals and activities of partnerships that indicate interventions? Under which governance regime did partnerships admit failure more easily? Under which governance regime did partnerships report new activities more frequently? Which partnerships changed goals frequently? And which activities were reported on the most frequently, and which were successful?

The following sections continue with the results regarding the entire population (n=48) and will then focus on specific regimes, goals, and activities.

Results of activities

The quantitative analysis of the self-reported attainment of goals presented in this chapter yielded the following results. On average, 24% of the activities were in line with expectations right from the start, and an additional 16%, the activities achieved their objectives after a few years. On average, 19% of the activities were never carried out, even though they had been mentioned in the plan. An additional 21% were carried out to begin with, but they performed below expectations or the results were not mentioned after the second year of implementation. Finally, 20% of all activities were started after the partnership had started, or was changed radically compared to its original approach. Some replaced the failed activities mentioned previously, while others were started because new goals and aims had been established, and/or they were an expansion of activities that had already been established. The results diverge significantly for each PPP, but they do provide an overall picture of the partnerships and their activities.

Table 18: number of sequences (N) of how activities were reported on during the development of the partnership (based on 48 public-private partnerships, four to five years of development)

Result	% of N	N
1. In line with expectations right from the start ²⁰	24%	203
2. In line with expectations after at least one year below expectation or no reporting ²¹	16%	136
3. No mention after the initial plan and never reported on thereafter ²²	19%	161
4. Activity was reported below expectations consistently and/or disappeared from reporting after second year ²³	21%	179
5. Activity was started after the initial plan and/or original activity was changed radically ²⁴	20%	172
Total	100.00%	851

20. Sequence: (1) activity started; (2) in line with expectations or well above expectations; (3) in line with expectations or well above expectations; etc.

21. Sequence: (1) activity started; (2) below expectations or no mention of activity; (X) in line with expectations or well above expectations. X means that this result can occur in either the third, fourth or fifth year..

22. Sequence: (1) activity started; (2) no mention of activity; (3) no mention of activity; etc.

23. Sequence: (1) activity started; (2) below expectations; (3) below expectations or no mention of activity; (4) below expectations or no mention of activity; etc.

Reflection on problem-solving capacity in partnerships

These results reveal a pattern of new partnerships that were trying to prove their effectiveness. Nearly 60% of all the activities showed strong fluctuations over the years (table 18: rows 2, 4 and 5): either the activities were started after the start of the PPP (underperforming activities were replaced by better-performing activities), or activities were tried and succeeded, or found to be failing, and terminated. Since the partnerships had only been active for a few years, this can be seen as a positive pattern which shows that partnerships were engaging in problem solving.

Around 19% of all activities were likely to have been window dressing included to acquire the grant (table 18: row 3), because these activities were never even started. It is likely that after the plan was awarded funding, the PPP had never intended to carry out these activities. It is also likely that most of these activities would never have been included in the plans of the PPP had the governance regime not required their inclusion, or implied that they were necessary. For example, PPPs may have copied the activities of another partnership that had previously been assessed positively in order to increase its chance of receiving funding.

For at least 40% of all activities, partnerships appeared to engage in effective problem solving according to their own estimation (table 18: rows 1 and 2). For 24% of these activities, the partnerships believed that they had chosen an effective approach right from the start (table 18: row 1): the partnership had managed to choose activities and approaches that they were satisfied with, and they were also satisfied with the results achieved during the subsequent years. The second category includes activities that initially failed to meet expectations, but were later transformed into successful activities (16%). These were activities that the partnership was not satisfied with initially, but which over time they managed to make a success of. It is also possible that the partners in the partnership lowered their expectations. This often happens after two or three years, and is more likely for activities that are more difficult.

20% of all activities were started after the grant had been awarded, or the activity was changed radically in its approach (table 18: row 5). These are more likely to have been chosen based on the intrinsic preferences of the partners. These activities were not mentioned in the partnership's original plan, but the partnership opted for them during its subsequent development.

24. Sequence: (1) no mention of activity; (X) activity started or activity changed radically. X means that the year in which the activity started or changed radically can be either the second, third, fourth or fifth year of development.

Overall, 60% of all the activities seem to indicate reflective problem-solving behavior (table 18: row 1, 2 and 5), choosing activities that were right for the partners or changing existing activities accordingly. Specifically for the RIF regime, this overall satisfaction is confirmed in a mid-term review where partners rated the satisfaction with the partnership at 7.4 on a scale of 10 (Van Casteren et al, 2014)²⁵. For at least 21% of all the activities (table 18: row 4), the evidence suggests that the partnerships failed to solve problems, since the activities continued to fall below expectations or were removed altogether. Some of these activities were tried for a few years but then disappeared from the reporting (and were likely dropped), and sometimes they disappeared after only one year of implementation.

Reflection on governance regimes

The regimes were not really effective in guiding partnerships towards the right activities at the start, as only 24% of their activities were successful from the start (table 18: row 1). Since none of the activities had been pre-formatted or worked out in detail, this was to be expected. The regimes did manage to steer the partnerships to reach a level where 40% of activities surpassed or met expectations (table 18: row 1 and 2), and an additional 20% of activities were introduced at a later phase in the partnerships' development (table 18, row 5). Although PPPs engaged in some degree of window dressing in their initial plans, they also felt free enough to discontinue unsuccessful activities and reported having done so in subsequent years. Additionally, the PPPs frequently changed course and did not persevere with goals and activities simply because they had already been agreed on.

These observations seem to conflict with the principal-agent features of the governance regimes, which would imply much more window dressing and an inflexible approach to achieving certain predefined objectives. Particularly under the RIF regime, which had the most bureaucratic features and less flexibility in the activities would be expected, there turned out to be just as a high degree of flexibility in the development of activities as in the other regimes, implying that there was sufficient scope for experimentation. On a critical note, the high degree of change meant that there was no way of knowing whether the PPP had been effective, and could indicate that the partnerships lacked a focus and were engaging in random experimentation; however, the relatively high success satisfaction rate would seem to indicate that this was not the case.

25. In other regimes, these type of satisfaction measuring has not been performed

These results bring us to the following question, which the case studies in chapter eight were designed to answer: did the PPPs engage in conscious problem solving or were they just randomly trying out different activities to find out what would work? This will answer questions such as: how did the PPPs decide on their activities? Why were so many activities discontinued straight away or as the partnership developed? And what did the PPPs do to transform unsuccessful activities into successful ones?

Variety of activities

The activities of partnerships can be summarized in five categories (see table 19). Some broader activities were aimed at achieving two aims at the same time, and thus fall into two categories and are counted twice. Practice-based research, in particular, was often categorized as both ‘improving initial education’ and ‘improving the innovative strength of businesses’. The second table shows the overall aims of the governance regimes, as presented previously, for the purposes of comparison.

Table 19: number of times a new activity was introduced (N) in 48 partnerships

Category	% of N	N
1. Improving initial education	49%	422
2. Contributing to innovative strength	22%	189
3. Matching education to the labor market	16%	136
4. Lifelong learning	10%	86
5. Production and research facilities	4%	36
Total	100.00%	869 ²⁶

Table 20: policy goals of governance regimes, repeated

Regime	Overall policy goal
RIF (VET)	Improving the match between education and the labor market
RCHO (UAS)	Improving priority area formation between education and research
PBT (VET + UAS)	Improving quantity and quality of students in STEM

What stands out is that improving initial education, the core activity of educational institutions, was by far the most common activity (table 19: row 1) with limited variance between the three regimes. Improving initial education was not a direct goal of any of the governance regimes, and given the overall goals of the regimes, one would have expected the other categories to be more important, or at least equally

26. A total of 869 activities were introduced, leading to an average of 18 activities per partnership

as important. This implies that there had been a serious mismatch. It is especially interesting that activities aimed at improving the match between education and the labor market, which were central to two of the governance regimes, represented only 15.5% of all activities. Even though improving initial education can also lead to a better match between education and the labor market, by making educational programs more relevant to the labor market for example, one would have expected the number of activities to be better distributed across the various categories, especially because problem analyses carried out by companies also indicated that other activities were important too (see, for example, chapter four on the policy context, particularly from the perspective of the labor market or competitiveness and innovation).

This conclusion is confirmed when we look at activities that began after the grant had been awarded. Under all regimes, the majority of new activities were started in the field of initial education, rather than a balanced mix across all areas of activity. The number of activities in initial education actually increased over the years. For example, 70% of all new activities started in 2016 in the RIF focused on initial education, and 63% in the RCHO regime. For PBT, this number remained more stable at 48% (table 21: row 1). The fact that the total number of new or radically changed activities is much higher in PBT than in RCHO and RIF will be reflected upon in the section on problem solving.

Table 21: activities started or changed radically after the first year (N), divided per category²⁷

All categories	PBT	RCHO	RIF
1. Improve initial education	48% (39)	63% (37)	70% (23)
2. Contribute to innovative strength	23% (18)	14% (8)	12% (4)
3. Match labor market & education	13% (10)	14% (8)	3% (1)
4. Lifelong learning	10% (8)	5% (3)	9% (4)
5. Production and research facilities	6% (5)	5% (3)	6% (2)

There were remarkable similarities between the partnerships' activities, both when we compare the governance regimes on the one hand and when we compare HBO and MBO on the other (see table 22). Most PPPs had a mix of activities across all five categories, and there were no significant differences between the regimes, except for one: partnerships in HBO were more likely to engage in activities in the category of

27. For PBT this means activities after 2012, for RCHO after 2013, and for RIF after 2014.

contributing to innovative strength (table 22: row 2, 26% on average in HBO versus an average of 18% in MBO). MBO PPPs were undertaken more activities in the area of matching education and the labor market (table 22: row 3, 18.5% on average in MBO vs an average of 8% in HBO).

Table 22: Percentage of activities started, sorted for each governance regime and split between MBO and HBO. PBT consists of both MBO and HBO PPPs, and is therefore split to show the difference.

All categories	PBT HBO	PBT MBO	RIF/MBO	RCHO/HBO	P-value
1. Improve initial education	47%	47%	50%	48%	0.7
2. Contribute to innovative strength	23%	19%	18%	28%	<0.01
3. Match education with labor market	20%	17%	18%	11%	0.03
4. Lifelong learning	8%	11%	10%	9%	0.6
5. Production and research facilities	3%	5%	4%	3%	0.3

This lack of variation is remarkable for two more reasons. First, some activities were explicitly excluded from funding under one regime whilst they were promoted under another. The RIF regime, for example, did not formally allow funding for lifelong learning activities, which would suggest that these PPPs would not engage in this activity. However, there was no significant difference with PBT, under which there was no such restriction, and this area was actually promoted during years of implementation. Another example relates to the fact that 11% of activities in the RCHO regime focused on the labor market and education (table 22: row 3), something which was certainly not an explicit goal under this regime. Second, although the grant received from the government under each governance regime varied significantly (ranging between €200,000 and €1 million per year), there was no significant difference in the number of activities undertaken under the different regimes (on average, the total number of activities varies between 15 and 20). This appears to indicate problem solving on the part of the partnerships, which engaged in a wide variety of activities to achieve the intended effect, rather than any top-down restriction on the number and range of activities.

Reflection on problem solving in partnerships

The fact that the partnerships experimented with various types of activities, and also allowed for changes in those activities, can be interpreted as very positive: the PPPs

experimented, found out what worked and what did not, and revised their decisions about which activities to engage in based on their experiences.

The partnerships appear to have engaged in goal displacement: as time went on, they focused more on those activities that were central to the most important partner in the PPP, the educational institution (see chapter two for an explanation of goal displacement). Goal displacement is thought to be stronger when the overall aim is intangible and built around abstract ideas (Warner, 1968), such as in the aforementioned regimes, which allows for deviation from a strict definition of the goal. It is possible and legitimate, for example, to argue that improving initial education would also lead to a better match between education and the labor market. The example of the relatively limited number of activities which focused on improving the match between education and the labor market could also be explained, therefore, by the definition used to categorize these activities, since this goal was formally never operationalized by the government. Assuming that goal displacement occurred, the partnerships can probably be best characterized as leader-follower partnerships, rather than as equal partnerships (Schaeffer and Loveridge, 2001), because the focus was clearly on initial education. Although most partnerships started out aiming for an equal partnership, they moved more and more towards a leader-follower relationship over time. This is consistent with the literature, which concludes that leader-follower relationships are *“more likely to emerge over time from trial and error than as the result of negotiation”* (Schaeffer and Loveridge, 2001: 14).

One important question that remains is whether the high number of activities aimed at improving initial education did indeed come about because the educational institutions were powerful enough to engage in goal displacement, or whether the companies also wanted to prioritize these activities. In other words, ‘what was in it for the businesses?’ Partnerships that are based on a contractual relationship solve this problem by means of funding: the government pays the businesses for their services and is therefore clearly cast in the role of ‘leader’. In the PPPs investigated here, however, both the school and the businesses were expected to contribute to funding, and the government encouraged them to form these partnerships. The question is, then, when the educational institution is dominant within the partnership and there is an unequal power relationship, are the other partners really satisfied?

This is a question that needs to be answered in the case studies. The unequal power relationship became more pronounced over time, and could have been reinforced by governance arrangements because the educational institution received the funds, was responsible for submitting the plans, and was also responsible for reporting in the regime. On the other hand, there was a free choice of activities and co-funding

was a requirement. Additionally, the involvement of the companies was audited (to some extent) during the development of the partnership. As such, the companies did have opportunities to influence the development of the partnership.

Reflection on the governance regimes

Certain characteristics of the governance regimes could explain the lack of variation between the partnerships. First, the entry requirements and interim audits did not assess who had contributed what to the overall goals of the regime, but were based on process indicators: there was freedom with respect to setting goals and activities; regional partnerships with co-funding were required; and the educational institutions applied for and received the funding grant. This meant that top-down influence on the course of the partnership was absent by design, leaving the partnerships free to make their own decisions. The fact that the partnerships did not display much variation between the regimes was because the partnerships had the autonomy to choose their goals and activities, and since – broadly speaking – the partners were similar across all regimes, it is unsurprising that there was little variation between the regimes and similar goals were identified.

Second, when drawing up their plans and revising activities, the partnerships also learned what other partnerships were doing through the learning program, both when drafting their plans and during implementation. Since the overall learning program did not make a clear distinction between the various policy goals in the regimes, this could also explain the lack of diversity in the activities of the partnerships. In the section below, regarding the differences between the pilot-PPPs and others, this learning effect is also clearly evident.

The question that arises from this section is *how were goals and activities chosen by the PPP?* How dominant was the educational institution during this decision-making process? How was it possible that PPPs engaged in activities that had no explicit goal within the regime and for which there was no funding? Can this process be characterized as reflective, and what effect did the learning and monitoring programs have on this behavior?

Problem-solving behavior

In addition to the observations outlined above, there are also observations to be made specifically with regard to problem solving. The first is the special position of the pilot partnerships.

The first seven partnerships (in the PBT regime), which were established one to two years before the other PPPs, were initially very unsuccessful according to their progress reports. Only 8% of all their activities were reported as meeting expectations right from the start, compared with the average of 22% overall (see table 23). Additionally, 33% of all activities began after the first year (compared to 21% overall), which shows that their initial activities needed to be rethought. These pilot PPPs clearly demonstrated their pilot status, both in terms of admitting to failures and replacing unsuccessful activities with new ones. The subsequent partnerships are likely to have learned from the experience gained from these pilot partnerships. This is evident in the quantitative analysis, but also from the policy reports. For example, the Van der Touw Committee (Van der Touw, 2013) was asked by the Ministry of Education to examine the successes and failures of the pilot partnerships, and this was explicitly requested by the pilot partnerships themselves. One of their findings was that discussions on the legal status of the PPP had held up their development, and the advice to other PPPs was to wait at least three years before establishing any legal entities. This advice was taken up by most of the subsequent PPPs. It appears that both the monitoring program under the PBT regime and the learning program managed to disseminate the lessons learned from the pilots, and connected the pilots with the PPPs that were established later.

Table 23: percentage of activities reported meeting or surpassing expectations right from the start

	RIF /2014	RCHO /2012	PBT /2012	PBT /2011	P-value
1. Results in line with expectations directly from the start	21%	31%	19%	8%	<0.01

A second observation is that PPPs involving UASs were more likely to report that activities met expectations right from the start. The RCHO regime – consisting of PPPs involving UAS institutions – had a 31% rate, compared to the average of 21% (table 23, row 1). When we compare the governance regimes, we find a logical explanation for this difference. The PPPs in the RCHO regime did not have to submit an activity plan until one year after receiving the grant, which was also the starting point of this quantitative analysis. This means that these partnerships had an additional year to

decide on their activities and prepare for implementation. Another explanation could have been that the PPPs in the RCHO regime were better motivated to evaluate their activities as satisfactory and meeting expectations. However, this would also imply that PPPs in the RCHO would be less likely to evaluate activities as having performed below expectations, but this is not the case, making this explanation less plausible.

A third aspect of problem solving includes persevering in the face of setbacks, and making ongoing improvements until the relevant goals were achieved. This also includes rethinking the activities in order to achieve the goal, changing the activities in order to achieve the goal in a some other way, or defining new goals once the original goals had been achieved. Partnerships in the PBT regime made more frequent and more radical changes to their activities. It was only under PBT that major changes in activities were reported, whilst under other regimes these activities were dropped entirely. Under the RIF regime, no major changes were reported and fewer activities were started after the first year, implying that less problem solving occurred.

Table 24: number activities started after the first year and radical changes in activities, average per partnership

Events	PBT (n=15)	RCHO (n=16)	RIF (n=17)
Radical change in activities	1.8	0.2	0
Activities started after year 1	3.8	3.5	2.3

Another example of persevering in the face of setbacks involves activities focusing on lifelong learning, which were – as argued by evaluation committees – the area that required the most attention. This conclusion is supported by the data, since far more activities involving lifelong learning performed below expectations. These activities were dropped or performed below expectations far more often than other activities, and under the RCHO regime up to 48% of these activities ‘disappeared’ without even being reported on (table 25, row 3). The PBT regime seemed the most capable of guiding the PPPs towards activities that were meeting expectations (41%, compared to a mere 18% under the RIF regime and 28% under the RCHO regime, table 25: row 1 and 2). It should be noted, however, that because the number of activities that focused on lifelong learning was relatively low (in total 83 sequences), none of these differences are significant: the differences between individual PPPs are larger than the differences between the regimes.

Table 25: Sequences of activities in lifelong learning (in percentage)

Activities in lifelong learning	PBT ²⁸	RIF ²⁹	RCHO ³⁰
1. In line with expectations right from the start	12%	11%	12%
2. In line with expectations after at least one year below expectation or no reporting	29%	7%	16%
3. No mention after the initial plan and never reported on thereafter	9%	26%	48%
4. Activity was reported below expectations consistently and/or disappeared from reporting after second year	23%	44%	12%
5. Activity was changed radically	13%	0%	0%
6. Activity was started after the initial plan	13%	11%	12%

Reflection on problem solving

Based on these observations, we have a mixed picture of the problem-solving capacity of the PPPs. There were clear learning effects due to the experiences from the pilot partnerships, and institutions seemed to be more capable of engaging in problem solving when they had extra time to prepare (as in the case of the UAS-PPPs). On average, 39% of activities met or surpassed expectations (table 18), as mentioned earlier in the chapter. These results provide grounds to believe that the partnerships engaged in reflective problem solving.

However, in the face of tougher challenges such as lifelong learning or the ability to radically change approaches that were proving unsuccessful, problem solving was more limited and these activities continued to perform below expectations. The partnerships generally chose the 'easy way out' by quietly dropping these activities and focusing on the activities that were meeting expectations, even though the assessment committees pointed out the importance of the activities that had been discontinued.

It is also interesting to note that partnerships under the PBT regime seem to have performed better in the area of lifelong learning activities, and did at least try to

28. There were 31 sequences in PST on lifelong learning (N=17)

29. There were 27 sequences in RIF on lifelong learning (N=15)

30. There were 25 sequences in RCHO on lifelong learning (N=16)

make these activities work (rather than simply dropping them, as in the case of the RIF and RCHO regimes). The PBT regime also performed differently when it came to reporting major changes in their activities. On average, each partnership in this regime reported 1.8 major revisions, compared to 0.2 and 0 respectively under the RCHO and RIF regimes. Both of these observations are signs of problem solving. The next section will explore this aspect in more detail.

Reflection on governance regimes

From a governance perspective, two conclusions can be drawn. First, even though the regimes generally seem to have succeeded in realizing partnerships that were satisfied with their own performance, they were less successful in imposing their own priorities. Even though the evaluation committees clearly pointed out those priorities, the partnerships did not heed these warnings and abandoned activities that were relatively hard to make a success of. However, the partnerships under the PBT regime constitute an exception in this regard.

There were three important observations in the previous section. First, a difference between the pilot PPPs and the partnerships that were established later, showing a learning effect from the pilot partnerships. Second, under the PBT regime, unsuccessful activities were 'dropped' less quickly than in other partnerships (although they remained relatively unsuccessful: 50% performed below expectations). Finally, the PBT regime encouraged major revisions to existing activities – on average, 1.8 major revisions per partnership compared to 0.2 and 0 under the other regimes.

A major difference between PBT and the other regimes was the combined learning and auditing program, which was – especially in the first two years – obligatory. The qualitative research will explore whether this program did indeed have an effect, but the learning program seems to have encouraged the partnerships to engage in problem solving regarding activities that were more difficult and ensure that lessons were learned from these experiences. It is likely that obligatory participation and intensive monitoring made it less easy for partnerships to simply 'drop' activities that were performing below expectations, and they felt obliged to pursue them further. This did not necessarily mean that these partnerships were more satisfied with their own progress, but their experiences were (at least) shared with others.

The second conclusion is that the differences between the various regimes are limited. The additional time allowed for preparation under the RCHO governance regime had a clear effect, but other differences – such as in the monitoring and auditing requirements – did not.

Relationship between governance and PPPs

This section discusses the relationship between the conclusions of the assessment committees and the success rates reported by the partnerships. It is clear that the differences in the development of the activities between individual partnerships were larger than the differences between the three governance regimes. As table 26 shows, there were no significant differences between the development of partnerships in the three regimes. In other words, each PPP developed in a unique way, and the governance regime had no decisive or measurable influence on the development of its activities. An exception is that, as mentioned previously, partnerships in the RCHO are more likely to report that activities were according to expectation (see table 26), probably because they had an additional year to decide on their activities and prepare for implementation.

Table 26: correlation between PPPs within a governance regime

Variance analysis (ANOVA)	P-value
Met expectations right from the start	<0.01
Met expectations after at least one year below expectations or non-reporting	>0.05
Disappeared after initial plan and was never reported on	>0.05
Activity was reported as below expectations or disappeared from reporting	>0.05
Activity was started after the initial plan	>0.05

In their reporting, the PPPs were extremely open about whether activities were performing in line with expectations, despite the potential financial consequences of this. The PPPs frequently reported on failures, as if they were eager to communicate their mistakes to the governance regimes. However, the assessment committees did not base their assessment on these self-reported achievement rates. There is no correlation between the assessments made by the committees and the self-reported success rates. Chapter six describes what the three regimes focused on when assessing the PPPs. The RIF regime was strongly bureaucratic in nature, assessing whether all the activities planned had been carried out. The RCHO regime focused mainly on whether progress had been made relative to the starting point, and whether top-level support from education institutions and companies was being provided, and it therefore had more network characteristics. Finally, the PBT regime combined steering on performance indicators with measuring relative progress, thus including both NPM and network aspects. None of three approaches to assessing the PPPs are directly linked to the performance of individual partnerships (see table 27).

Table 27: conclusions of assessment committees compared to self-evaluation of partnerships

Governance regime	PPPs' self-evaluation	Approach to assessment
RIF	40% achievement rate	Whether activities had been carried out. All but one PPP received its grant (one PPP never started). RIF sometimes required PPPs to explain why certain activities had (not) been carried out when progress was lacking.
RCHO	45.65% achievement rate	All PPPs were assessed positively, three were assessed more critically than others, one was excluded from the program after two years.
PBT	33.12% achievement rate (including pilots)	Assessment based on original plan and relative progress, with many recommendations. In three cases, the grant was (temporarily) withheld.

Finally, looking at specific interventions under each governance regime, such as (temporarily) withholding funding, significant effects are visible. In these specific cases, it is clearly visible that after such an event, significant changes were made to the activities. However, these interventions are not visible in the overall data because there were too few of them and because there were many other interventions that led to similar significant changes. These include events such as partners deciding to leave a partnership, which led to similar changes, but the governance regime was unaware that this had occurred.

Reflection on problem solving

An important question is whether this method of assessment – either using performance indicators, a bureaucratic approach or a network steering – was helpful to the PPPs as they developed. No overall effect on the partnerships is visible in the quantitative data regarding individual interventions by the governance regime. However, an effect is visible when the governance regimes intervened specifically. In these cases, radical changes were made to the partnerships' activities. However, these changes were not solely the result of intervention by the governance regimes, but also occurred as a result of the internal dynamics of the partnership. So any positive or negative effect of specific interventions by the governance regime is, by definition, case-specific.

This leads to an important observation: the effectiveness of a governance regime includes the way it deals with sudden changes within partnerships, which emphasizes the importance of the degree of tolerance for deviation and mistakes. The activities changed constantly, and direct interventions by the governance regimes had only a very limited quantitative effect. The fact that partnerships could change their activities easily and were allowed to set their own goals and activities had a very positive effect in this respect.

Reflection on governance regimes

The lack of a correlation between assessment and performance is – considering the design of the regimes – understandable. The assessment committees focused mainly on process-type indicators, such as the implementation of the agreed activities or relative progress. They did not focus on the extent to which the partnerships contributed towards the overall goal, or indicators that could be compared to one another. This means that the assessment committee could be positive whilst the partners themselves were critical, or vice versa, a committee could give a positive assessment even though the activities had not necessarily contributed to the overall goals. Overall impact assessment and comparisons between partnerships were carried out using the learning program. Since 2014, the Katapult network has been monitoring the overall impact of partnerships using a number of indicators (such as the number of participating companies and students reached). However, these evaluations do not have a formal place in the governance regimes.

The question of whether the combined efforts of the partnerships led to the desired policy goals cannot therefore be answered. The overall goals of the governance regimes were never operationalized, and were left open by design. Since this analysis only considers the period up until 2016, it is possible to provide an insight into whether the partnerships continued their work in three years (2019) after the grant finished, based on an analysis by Katapult. After all, longevity was in all cases one of the partnerships' central goals. The table below shows the current situation (at the end of 2019). Most of the partnerships continued their activities after the grant finished, and some even expanded their activities. 'Continued' here means that the partnership continued under the same name and engaged in the same activities, whilst 'expanded' means that some partnerships scaled up or merged their activities, sometimes under a new name. For example, Teclab's activities were transferred to the Brainport Industry Campus.

Seven partnerships were also terminated, meaning that there is no longer a public-private partnership. In these cases, the results of the partnership have usually been integrated into the relevant educational institution.

Table 28: overview of partnerships that continued or were terminated as known in 2020

	PBT	RIF	RCHO
Continued or expanded (as a public-private partnership)	12	14	15
Terminated (results embedded in education institutions)	3	3	1

Two critical observations must be made here, however. First, there is no way of determining whether the individual activities were effective. The fact that partners are satisfied is important, naturally, but we cannot assume that the partners necessarily evaluated their activities in terms of their effectiveness. Whether this actually occurred or not is unclear. Is this random trial and error or were the activities chosen based on a proven method? Second, the extent to which the overall policy goals were achieved cannot be determined. For example, would another way of promoting these policy aims have been more effective? This is a perennial problem when evaluating policy.

Conclusions and questions for case studies

This chapter has described the development of the partnerships and the influence of the governance regimes on those partnerships, based on a detailed quantitative analysis. The following conclusions can be drawn.

The first conclusion is that under all three regimes, the roles of the government and the partnerships did not follow the traditional model of a principal-agent relationship. Chapter five has already provided two conclusions: first, that the governance regimes were to some extent hybrid in character. On the one hand, they allowed the partnerships considerable leeway, but on the other hand they also had some principal-agent features. In practice, the former characteristic predominated and the partnerships were free to decide on their goals and activities, with limited influence from the government. We can therefore conclude that the network features of the governance regimes were stronger than the principal-agent features. This approach was generally successful in guiding the partnerships towards a set of mixed activities that were all relevant to the overall policy aims, with a relatively high self-reported success rate of 40% for the partnerships right from the start. The assessment committees responsible for evaluating the partnerships were generally positive, too, with only a few negative assessments. Overall, then, it seems that the governance regimes were effective.

The strong network features led to two problems, however. First, 49% of all the activities related to improving initial education, indicating goal displacement on the part of the educational institutions as the dominant partners, an effect which increased over time (with the exception of the PBT regime). Second, this led to a situation whereby activities that were more challenging to implement could easily be dropped or allowed to continue underperforming, even though these activities were still considered important by the evaluation committees and partners. The PBT regime is, again, an exception in this regard and was far more successful in encouraging PPPs to engage in more challenging activities, disseminating experiences between partnerships. It seems likely that this was because the PBT regime combined accountability with learning, but this needs to be validated by the case studies.

The second conclusion is that the data is inconclusive regarding whether the partnerships engaged in reflective problem solving or made changes to their activities on the basis of trial and error. The fact that the partners saw their own activities as meeting expectations does not mean that they were actually effective. The assessment committees did not focus on this aspect either. In other words, even though all parties seem to have been satisfied with the partnerships' performance, we do not know whether the activities were effective in realizing their goals. There was an implicit assumption that the partners in the partnerships would be in the best position to know which activities they should engage in and whether these were effective. Yet this is cannot be taken for granted, and needs to be explored in greater depth. So far, we have only case-specific evidence to indicate whether individual activities within the partnerships were actually effective.

Given that network features were strongest and produced positive results, the effectiveness of network governance remains a central question: the conclusions clearly indicate that network governance had some drawbacks. Proponents of experimentalist governance argue that agents are better suited to play some of the traditional roles of the principal, and this assumption was reflected in these governance regimes. However, experimentalism also emphasizes that a number of key features are relevant in such a network setup, such as a feedback loop, which is crucial if the principals are to learn from the experiences of agents.

In some respects, this quantitative analysis raises more questions than it provides answers. The following two areas remain unanswered, and will need to be addressed through the case studies research. First, case studies can give insight in the randomness or reflexiveness of choosing goals and activities and deciding over them during the years. The development of the PPPs underwent significant change during their first years of development. To what extent can this be attributed to reflective

behavior, and to what extent was it based on a simpler trial-and-error approach? The second area is the need to get further insight in which (if any) aspects of the governance regimes helped the partners to engage in reflective problem solving and which activities were detrimental to this.



Chapter 8
Case studies

8. Case studies

The previous chapter detailed the quantitative analysis of problem solving by the partnerships. The large-scale quantitative analysis in chapter seven revealed that the network features of the governance regimes were stronger than the principal-agent features, and that this approach was generally successful in guiding the partnerships towards a set of mixed activities that were all relevant to the overall policy aims. The dominance of network governance features appears to have led to goal displacement on the part of the educational institutions as the dominant partners, and led to a situation in which activities that were more challenging to implement could easily be dropped or allowed to continue underperforming. The interviews with project managers in chapter six revealed how the freedom to set goals and choose activities on the one hand and the the learning program on the other helped to loosen the principal-agent relationship between the government and the schools. The interviews also explained how the requirement for co-funding helped to increase the level of commitment of partners, and showed that most formal aspects, especially audits, gave rise to strategic behavior or were seen as an unnecessary administrative burden.

Although it was possible to draw these conclusions, some questions still needed to be researched further to put these results into more context. First, whether goals and activities were chosen at random or following a process of reflection, and how decisions were made as the partnerships developed. How did partnerships decide on these goals and methods, and could this be characterized as lower-order trial and error or higher-level reflection? Second, which aspects of the governance regimes helped the partners to engage in reflective problem solving and which aspects were not helpful. To address these remaining questions, this chapter includes three in-depth case studies.

Selection and implementation of case studies

Most of the partnerships were evaluated positively by external assessment committees (see chapter seven), and the case studies were randomly selected from those partnerships that were evaluated positively. This means that the negatively evaluated partnerships were excluded from the sample. Although it would have been interesting to explore why these partnerships failed, the results of the quantitative analysis provided more grounds to choose the partnerships that had been evaluated positively as case studies: (a) the number of partnerships evaluated positively was much larger and therefore the effects of the governance regime on these partnerships would be easier to generalize; and (b) considering the small number of partnerships assessed negatively, this was likely have been for reasons specific to those partnerships, rather than any effect of the governance regime.

For each of the case studies, the activities and the partnership as a whole were perceived as successful by the partners themselves, with individual activities sometimes being seen as successful and others as less successful. The question is whether the partnership engaged in reflective problem-solving behavior and whether the governance regimes supported this behavior. The key aspects are therefore which decisions were made during the development process, why those decisions were made and what influence the various stakeholders had. Each case focuses on the choices made that define the PPP as it was by the end of the research period, the motivations and influences of the various partners, and the influence of the respective governance regime.

For each case study, progress reports, assessment reports and other documentation (such as SWOT analyses or newsletters) were examined. Additionally, 49 interviews were carried out to add further nuance to the case studies (17, 23 and 9 interviews, respectively). Twelve of these interviews were conducted by the researcher in 2019. The other interviews were conducted during the period 2012-2017, almost all at meetings that were held within the learning program (each partnership was eligible for a SWOT analysis by an independent expert team, as explained in chapter five).

The first case is the Center for Innovative Craftsmanship in Water Technology in Leeuwarden, which was established in 2012 and received a grant under the PBT governance regime. The second case is the Centre of Expertise in the Biobased Economy in 's-Hertogenbosch, which received a grant in 2012 under the RCHO governance regime. The third is the High Tech Centre Delft, in Delft, which was established in 2014 and received a grant under the RIF governance regime. In all cases, multiple MBO or HBO institutions, multiple businesses and local government bodies were involved.

Each case study is structured as follows. First there is a brief description of the PPP, and then an overview is presented of the development of the partnership during the research period and beyond. After this introduction, we turn to how the PPP decided on its goals and activities, the partnership's structure and organization: what, according to the partners, were the key elements that played a role in its development. This is followed by a section on the extent to which the partnership became self-sustaining. Each case study concludes with a reflection on the two key concepts of the theoretical chapter: problem-solving behavior and the effect of the governance regimes, reflecting on the questions outlined in the first paragraph.

Case study 1 – Center for Innovative Craftsmanship in Water Technology

The Center for Innovative Craftsmanship in Water Technology (or 'CIV Water') is based in Leeuwarden, a city which refers to itself as the capital of water technology. Wetsus (the Institute for Fundamental Research on Water Technology), a university of applied science and the Centre of Expertise in Water Technology (CEW), a startup hub focusing on water technology, and a large water lab are all based within an area of less than one square mile. The Institute for Life Sciences is also located there, an institution composed of two vocational schools (Friesland College and Nordwin College) that played a key role in developing CIV Water.

According to local companies, CIV Water was set up because there was a severe shortage of skilled labor for the water technology sector. Semi-public institutions, such as water authorities and drinking water companies, complained both of an aging work force and rapid innovation that required new skills and competencies in their workforce. Or, as the director of a business partner argued: *“For several years, there was the feeling of a mismatch between the labor market and education, both vocational education and higher education. This mismatch concerned the knowledge, competencies and skills that are necessary in companies and public organizations in the water management sector. And that mismatch was growing.”* The institute of Life Sciences therefore decided to respond to the call for proposals of the Platform of Science and Technology. In 2012, the resulting PPP was awarded a grant of €2 million for a five-year period.

CIV Water³¹ is a success story. After an initial struggle, the majority of the partners are very satisfied with the results achieved after four years, and the PPP managed to become self-sustaining. The assessment committee, however, also made criticisms during the partnership's development, resulting in an interesting case with which to evaluate the interaction between the partnership and the governance regime. This case study starts with the overall development of the PPP, then describes how its focus, goals and activities were decided on, how the organization of the PPP developed, and how the PPP intends to become self-sustaining after the grant finishes.

31. The abbreviations CIV, CIV Water and and PPP will be used both throughout this case study.

Overall development of the PPP

CIV Water was established significantly earlier than its official launch date, as is often the case with the partnerships considered here. In this case, the idea of a partnership originated from two (semi-public) companies and the Director of the Institute for Life Sciences. The companies pointed out to the director of the school that they were dissatisfied with the commercial training available, because the courses provided did not improve the competences of the employees. Together, they agreed that better results might be achieved by working with a non-commercial educational institution, because the regular education given to students could then be combined with training courses for employees. For the school, it would be beneficial for staff to work with real businesses, as this would further improve the quality of their education.

Based on this idea, they decided to draw up a business plan. According to a director from an educational institution that was closely involved, the way in which this happened was crucial to the partnership's subsequent success: *"It was crucial to gain each other's trust. We found someone who could write our plan, which we could submit to receive funding, but that was going to cost a lot of money. We shared the risk of not being awarded the grant. So, from the first moment, we shared the financial risks. And that was extremely important. Without that financial commitment, each party could have left the partnership at any time."*

After the formal launch in January 2013, the four business partners and two schools formed the project team that later became the advisory board: Vitens (a drinking water company), the two water authorities (Wetterskip Fryslân and Noorderzijlvest), and Waterlab North (WLN, a private research facility). The partner schools were Life Sciences (a partnership between two vocational schools) and Life Sciences and Technology (the University of Applied Science).

The PBT asked these partners to sign a performance contract. This contract was not signed by PBT, only between the partners themselves. This was designed to increase commitment between the partners, and to emphasize that the agreement was not between the PBT and the PPP, but between the partners of the PPP. For the PBT, this was a major difference with the pilot partnerships, with whom the PBT and the educational institution had signed a performance agreement. The performance contract committed CIV water to the following goals every year:

- Students: 30 additional students would attend a water-related educational program at the MBO Life Sciences. Over 200 students would follow a minor. At least 500 students from vocational and secondary education would also benefit from, for example, short courses and promotional materials. Finally, 50% would continue their studies at the University of Applied Science.

- Life-long learning: 40 students would be retrained to work in the water sector, 85 students would receive in-service training organized by the PPP, and 100 employees would receive training by the PPP at the request of regional businesses.
- Innovation: annual participation of students in ten innovation projects, together with Wetsus and the CEW.

CIV Water aimed to expand to become a partnership involving over 40 organizations and planned to establish a foundation to organize all its activities. There were also some ideas about a union between staff from vocational education and higher education.

In hindsight, two projects involving the key partners Vitens and Wetterskyp Fryslân formed the basis of the partnership's success. These projects focused on producing the 'professionals of the future' and involved in-house education programs which these partners paid for; however, the partners also had a major role in the implementation of the program. For example, most teachers came from the companies themselves. Following the success of this formula, it appeared that several other companies had similar needs, and similar programs were set up for them, which helped the PPP to grow. The organizations thus grew intertwined, with each organization continuing to assume part of the responsibility, and the contracting-out of responsibilities was excluded. This was presented as one reason for the success of the partnership.

Each partner perceived the role and added value of the PPP differently. Reflecting on the role of CIV Water, one member of the advisory board and the board of directors of a participating educational institution commented in 2017: *"I consider the PPP to be one that can open doors at educational institutions, water authorities and water companies. The PPP also managed to improve and increase cooperation between educational institutions in this part of the country, and that now extends beyond just water-related educational programs. The PPP is an engine that continuously engages with new partners and undertakes activities that have a lasting impact. For example, they create new learning materials for secondary education and tertiary education. But the PPP also has a broader scope: they focus on the development of the labor market and the development of future professions"*.

An employee from one of the business partners remarked: "The PPP is a sort of in-house education partner, and a partner that the authority could not do without. The PPP has expanded cooperation between Water Authorities. The PPP is the crucial link between partners, because it speaks the language of education, companies, and the Water Authorities. The Water Authority Noordzijlvest clearly feels it has a stake in the PPP." And another employee from another business partner commented:

“The PPP offers a unique combination of possibilities for training, expertise in areas relating to water, and cooperation with other organizations. Nobody else offers this. Educational institutions only provide basic knowledge. And commercial educational institutions offer tailor-made courses in Utrecht, but they do not offer the complete package. This unique combination is an important reason for working with the PPP.”

The PPP was perceived as a success, and managed to extend its activities after the grant ended. It is seen as a success story by the participating partners. The assessment committee, however, was more critical – as will be explained below. Of the 26 performance indicators that the PPP set itself, 17 were achieved, four were achieved in part, and six were not achieved at all. These indicators did not remain constant over the four-year period, and were updated midway through the period.

KPI	Realization 2017
1. At the end of 2017, the CIV will have a strategic agreement with two national partners.	0
2. In 2017, the CIV Water partnership will grow by 3 businesses/government bodies, and 5 schools also join	7 (1 business, 3 schools, 2 water authorities, 1 knowledge center)
3. The optional component waste water Process Operator will be accredited by SBB	75% (not yet ready for approval)
4. The optional component Water Lab Technician/Analyst will be accredited by SBB	90% (presented to SBB for approval)
5. The optional component Process Operator waste water will be made digitally available to the partner schools	90% ready
6. The optional component Water Lab Technician/Analyst will be made digitally available to the partner schools	90% ready
7. Two new optional components will be prepared in 2017	100% achieved
8. The underwater drone pilot will be provided by HBO/MBO collectively	100% achieved
9. CIV Water will work with VHL on the development of new modules for AD Water Management and the Environment	First design ready
10. In the spring we will organize a water project work week for 4 partner schools	100% achieved

11. In the spring we will organize an exchange for teachers and students of MCAST in Malta, with the aim of establishing a long-term exchange program for students	100% achieved
12. In the autumn, we will organize an exchange with students and teachers lab technicians/ process technology from Indonesia in partnership with WMD and WLN	Preparations started, implementation delayed
13. At least 25 regular MBO students will be following at least 1 business training program with one of our partners	50% achieved
14. CIV Water will contribute to the professionalization of teachers by organizing 3 internships for expert practitioners, teachers, professionals from the field	14 (of various types and lengths)
15. Turnover forecast for 2017: €270k	66% achieved
16. BBL program level 4 will start September 2017 with 15 participants, out of work service workers within the water sector	0% achieved, postponed to 2018
17. In cooperation with TNO and Vitens, develop, test and evaluate an effect measurement tool	100% achieved
18. Work done by knowledge workers/teachers will reach a ratio of 60/40 in 2017	35% knowledge workers
19. ELO established and operational for the Water Community and the business training programs	100% achieved
20. Perfect View implemented as CRM package	100% achieved
21. Support at 5 meetings to acquire water students commissioned by education partners	Involved at 5 meetings
22. Organize a meeting with Wetterskip Fryslan with the theme of 'Education for MBO students'	100% achieved
23. CIV Water will organize Careers Week in partnership with water authorities	100% achieved
24. Story-telling to be used as marketing instrument	published
25. Implementation of research among VMBO/ MBO students into interest factors within the water sector in partnership with Waterschap Rivierenland	100% achieved
26. Update on market research in Water Technology	0% (research delayed)

Choosing the focus of the PPP: Life-long Learning

The following example shows how CIV Water decided on its goals and activities, and the influence of the governance regime within that process. Although the original focus of the partnership was on life-long learning, this was not inevitable at the time of the grant proposal. The proposal had three pillars of activity: education, innovation and life-long learning. The bulk of the funding was intended for the pillars of education and innovation, and not for life-long learning, because the PPP expected its life-long learning activities to generate revenues. This was also how the PPP planned to become self-sustaining after the project period. The partnership chose these three pillars because of the requirements of the PBT – or at least, this is how the PPP partners interpreted the call for proposals. Even so, the original idea of life-long learning was clearly the best-formulated aspect of the plan. The assessment committee in 2012 was disappointed that the main focus would be training and education rather than innovation projects (the second pillar): *“The focus is on education and training, rather than on innovation projects. This is disappointing, particularly in light of the connections with the Center of Expertise in Water Technology.”* Nonetheless, the partnership received funding.

The PPP took the feedback it received seriously, and did attempt to establish an ‘innovation’ pillar. One employee of the partnership reflects: *“We explored this possibility, and wanted to establish that pillar of the program. And we asked our partners whether they thought this was necessary. We hired staff from the Centre of Expertise. But the results were disappointing. There was insufficient motivation to get the activities up and running. That pillar has not been completely abandoned though; there is a much closer connection to the University of Applied Science. But the pillar has not been set up as originally planned.”* Reflecting on the development of the PPP, the director of one business partner commented in 2016: *“The initial focus on research and innovation in vocational education was not distinctive enough and did not match the demand from the companies. Refocusing on education and training made much more sense. It appears that life-long learning has most impact and added value.”*

The assessment committee first pressed the partnership to focus more on the innovation pillar, but later accepted the arguments of the partners. In 2015, it explained in its audit report: *“The cooperation with the University of Applied Science, the customer-focused, tailored training programs and education minors show that a clear choice has been made. The PPP focuses on education and training, offering tailor-made education programs to companies, and translates the knowledge acquired to education programs in regular education.”* Neither the committee nor the PBT compelled the PPP to pursue the innovation pillar as originally planned, nor did

they threaten to withdraw funding, and the performance indicators were modified accordingly.

Asked about what had really supported the development of the partnership, the interviewees frequently mentioned the learning program, and specifically one expert within the program. Initially, he was involved with the PBT's learning program and helped the partnership by providing a few sessions to help with their focus. Later, the partnership hired him and he coached them as the program developed. An employee of the partnership reflected: *"Matthijs was familiar with other partnerships and also the PBT. He really helped us to move from concept to practice. He was on board with the new business case and sustainability search. He also helped us to reach out to the national level by helping us create more visibility."*

Reflection on choosing goals and activities

The example above is a typical example of the relationship between PPP and the PBT governance regime and there are other similar examples. Particularly in its first few years, the PBT concentrated on the focus and activities of the partnership, expecting the PPPs to be active in all three pillars of education, innovation, and life-long learning. This corresponds closely to the three policy fields that the regime sought to integrate (see chapter four).

Reflecting on governance, in the first few years, the regime's steering philosophy clearly reflected NPM-type steering, establishing performance indicators and making the grant performance-related. After the first year, however, the PBT became more flexible in the exact goals and activities used for evaluation, because partnerships proved unable to pursue certain goals and activities. However, this shift was conditional on agreement amongst the partners of the PPP. As time went on, properly substantiated changes in the focus, goals, and activities of the PPP were tolerated, no matter how far-reaching, without jeopardizing the partnership's funding. As long as CIV Water seriously tried to achieve the relevant goal and presented convincing arguments for why it could not be achieved, the PBT abandoned its initial approach of steering on innovation. So the main criterion for the PBT was not whether this goal was one of the performance indicators – as it had been previously – but whether the partners had collectively agreed to the change. To validate this, the assessment committee engaged in close monitoring and interaction with the companies in the partnership, and staff at the PBT also maintained close contact with the project manager of the PPP. In other cases, a shift in direction led the PBT to withhold funding temporarily until agreement was reached, or, if the partnership reduced the scope of its activities, the PBT reduced the funding accordingly. This demonstrates the change in the PBT's steering philosophy, from steering on performance indicators towards

a network approach that closely reflected the development of the partnerships (as explained in the chapter on governance regimes). This approach required much closer monitoring by the PBT and its assessment committee, because it was difficult to distinguish between a change of course based on reflective problem solving and changes due to opportunistic behavior.

Reflecting on *problem solving*, top-down steering did not lead to window dressing. Compared to the assessment reports and interviews, the monitoring report is accurate. There are two reasons for this. First, because the assessment committee conducted interviews with most stakeholders, it was harder to engage in window dressing. But more importantly, as the example above makes clear, the PPP stood to benefit from an honest approach in explaining why goals and activities had not succeeded, because that would allow them to change course. As their development was being monitored closely, the partnership felt obliged to pursue the innovation pillar seriously, and engaged in reflective problem solving (which led to the conclusion that it was not a suitable approach for this partnership).

This approach did not fully prevent goal displacement. As explained in chapter one on implementation, the less precise the overall policy goals (of which innovation is a good example), the more leeway the executive agencies had to realize their organizational goals, which is also referred to as goal displacement. In the case of CIV Water, the educational partner came to be the dominant actor in the partnership. Most of the funding was focused on improving initial education, clearly showing that the education partner wielded the most influence. However, the participating companies also had a clear role to play, resulting in a strong focus on life-long learning. The companies managed to redirect attention from innovation towards life-long learning. This supports the conclusion of the quantitative chapter, that the PPPs can be characterized chiefly as leader-follower partnerships.

Organization and the focus on governance

The foundation of the partnership's success was recruiting staff for CIV Water directly from the partner companies. However, this process took nearly a year, and meant that the PPP developed much more slowly. A director of the educational institution reflects: "*The process of moving from plan to practice was difficult and took too long*". The business partners quickly became impatient: "*We were aware that since the first year, little progress has been made. [A business partner] emphasized the need for action, and now, a year later, we are very satisfied with the progress*" (employee of a business partner, 2015). In 2014, a teacher from the school and employees of two different business partners reflected on the first year, when goals were not achieved and how more effort was required in order to achieve them: '*The new and*

the unknown, especially moving from supply-driven to demand-driven and really involving companies in the operation, takes a lot of time and effort'.

The business partners expected the educational institutions to take the lead since they were receiving the funding, whilst the person who was responsible at the school already had a full-time job and had little experience with this form of cooperation (like the majority of the partners). This led the PPP to recruit a dedicated project manager: *"The recruitment procedure for the project manager was deliberately left up to the business partners to manage, rather than the school. I was put forward by the Wetterskyp, and Vitens also put forward a candidate. Later on, the Vitens candidate also managed to spend two days a week working on the PPP. Because of this, right from the start, the two most important business partners were closely involved. And this helped speed up the process"* (project manager, 2018).

This new way of working was quite a challenge for both the companies and the teachers. And although the projects involving both Vitens and Wetterskyp proved difficult, a new way of working was established: *'The first year of the Vitens project was hard. It was a matter of searching and exploring by trial and error to find out what Vitens really needed, what the vocational school wanted. And the TNO [the Netherlands Organisation for Applied Scientific Research - TNO] was also involved. After the first year, the process up to that point was evaluated closely, which led to really new ways of working and training'* (teacher involved with the activities, 2014).

The question was, however, which 'governance construct' would suit this way of working the best. In the original plan, the PPP promised to establish a separate legal entity, but very soon the advisory board decided that this was not a viable option. The board argued that there was no benefit to a legal construct, since it could never be legally binding. Informally, the educational institution did not want to create and fund a separate institution which they would have no control over, and which may become a rival to them or be critical about them. However, since they also had to act to safeguard their funding, they had to provide the PBT with a good reason, because they had initially committed to a separate legal entity.

The PPP tried to work with individual cooperation agreements between the PPP and the various business partners. Three questions were central: (a) what would the partner do to help the PPP develop? (b) which life-long learning activities did it want to engage in? and (c) what did they want the PPP to pay for them? However, in practice, this approach did not work well: *"Well, that sounded nice, were it not for the fact that it was a really ineffective way of working. Because when it did not fit into the schedule of the company or school, it would just be postponed again. And*

this happened frequently” (project manager, 2018). This model was refined over the years but never fundamentally changed, although the length of the agreements was extended to three years rather than one year.

The assessment committee attempted to steer on the governance quite strongly. In 2014, the committee concluded that the ownership of businesses had not been adequately arranged and emphasized that a solution needed to be found. In 2015, the committee acknowledged that the focus on the legal entity was not working and did not push for a solution. In 2016, the committee emphasized again that the question of shared responsibility had to be answered soon. Following this advice, in its business plan for 2016 the PPP again committed to establishing a separate legal entity. Finally, however, in 2017 the PPP again changed course to allow a more prominent role for the educational institutions. Again, the committee advised that *“the organization of the CIV [PPP] must be positioned separately, and not as part of the vocational school, otherwise, the crucial function of connecting education and business and driving innovative projects between the two will no longer work. Position it as a ‘rebel’, between education and employers.”*

The director of one business partner reflected: *“The governance of the CIV has been a difficult search. Nowadays, there is a director of the CIV who is also the director of one of the school’s programs. Formally, the educational institutions are responsible for the CIV. In practice, the advisory board receives all the documentation, including financial statements, and has a strong advisory role in relation to the director; the board guides him and supports him. (...) the CIV might be too closely linked to the educational institutions to really incorporate the dynamics of the outside world. However, because of that close positioning, it can also get a lot done in the vocational schools. The CIV really is able to bring new developments into the school.”*

A teacher reflected in a similar way, comparing his experiences with another PPP. Things are better than the Centre of Expertise Water Technology (CEW) *“because the split between the CEW and the University of Applied Science led to a situation in which the CEW was unaware what was happening in HBO and how education was organized (for example, the need to take into account the learning aims of students”* (teacher, 2015).

The PBT regime steered strongly on a business model with a separate legal entity, in order to prevent cooperation from being ‘soft’. When the committee discovered that the PPP was not going to change its governance, because they were satisfied with the way it was, they dropped this demand. Asked about this approach, the project manager argued: *“Yes, the committee did this to prevent the cooperation*

being too soft, as schools were used to. So I really think this approach to steering had its benefits.” But although he praised the fact the committee was not too lenient, he criticized it for focusing on the wrong areas: “It is funny to look back. For the first two years, the committee went on and on about a separate legal entity, and that the governance so far had been too unclear. And then halfway, they argued that the PPP had made a smart decision not to rush the legal entity. At the time, I was really mad with the committee” (project manager, 2018).

Reflection on the organization and governance

Reflecting on *problem solving* in public-private partnerships, the discussion on governance relates closely to one of the four obstacles mentioned in the theoretical chapter on public-private partnerships: organizational difficulties and the resource costs that these involve make the business case less attractive (McQuaid, 2000). A public-private partnership is not a start-up or a new organization. It is a combination of public and private partners which aims to achieve (potential) benefits, but this also makes it hard to organize; hence the emphasis in the literature on network organizations rather than creating new organizations. The PBT and its expert committee approached the PPPs as a start-up organization, as is clearly evident in the initial policy reports on the PPPs (Hermans et al., 2010). CIV Water did not choose this approach, mainly because they saw a downside in too loose a connection with the educational institution at the nearby Centre of Expertise for Water Technology. They therefore maintained their original governance construct, but also tried to promote a sense of ownership among the participating companies – which they obviously succeeded in doing. Again, the partnership managed to engage in reflective problem solving and ignored the top-down steering of the assessment committee.

Reflecting on governance, as with deciding upon goals, the PBT regime shifted from a more top-down approach, such as demanding a separate legal entity, towards a network approach in which there was much more scope for the partnership to decide for itself. It is interesting to observe the effect of the demands for a separate legal entity. Although the strong focus on the legal entity was criticized, the pressure from the committee was also commended as having prevented cooperation between partners from being too soft. If the committee had not taken this line, their cooperation may not have been as successful as it was. So although the committee’s top-down steering with regard to a specific governance method did not bear fruit, this external pressure did help the partnership to develop. If this pressure had not have been there, the cooperation would probably have been softer and led to fewer results. The expression “sometimes it takes a fresh pair of eyes to make you choose the right course” (*vreemde ogen dwingen*) was often used to describe the need for external pressure.

The PBT regime also used the experiences from the partnership as a success story to disseminate to other PPPs, making it into a good example on how to organize a PPP. For example, the project manager of the PPP often spoke at meetings organized by the PBT.

A self-sustaining PPP and the future model for the CIV

Besides the three activity pillars of the PPP, an overarching aim was to turn the cooperation into a self-sustaining PPP that could function without additional subsidies. The PBT and the assessment committee implicitly expected that PPPs would work on the basis of a business model with profits. As the partnership developed, there was much discussion between the partnership and assessment committee on the business model.

In 2014, the main conclusion of the assessment committee was: “Based on the monitor and meeting with the PPP, the committee concludes that the CIV is still in phase 1 of the phase model for public-private partnerships in vocational education. The fact that the business model has been re-examined is evidence for this conclusion. The committee recommends letting go of the old business plan, and reformulating it with new goals and activities”. The PPP responded in formal terms: “The CIV is rather shocked by the assessment of the committee. The visual representation of progress in particular is seen as discouraging. The sense of progress and meaning in the process of cooperation is not evident in the audit report.” (Letter from the partnership to PBT, 2014).

The discussions between the committee and PPP were heated at times, but the committee managed to put the finger on the right spot, as the same discussions were occurring amongst the partners, who were struggling with the concept of a self-sustaining partnership. For example, a member of the board of an educational institution presented the partnership’s vision on the business model: “We have to see the business model of the CIV in terms of securing enough structural income to cover the costs of the project organization; only then will it become a sustainable vehicle”. By contrast, one of the business partners argues: “Commercial thinking within the CIV needs to be professionalized. The CIV does useful things, but it forgets to send an invoice for them. The CIV has only been making agreements with partners that its services need to be paid for since 2017.”

These discussions continued throughout the whole of the project period. The direction chosen in 2017 fitted broadly with the vision of the educational institutions, with a small team linking the businesses with the educational institutions. The

implementation of activities, such as life-long learning activities, involved a contract between the educational institution and the participating business – with the PPP acting only to bring them together. The assessment committee understood this vision, but was not impressed by the plan for 2017 and beyond: *“the committee concludes that the new plan and its translation into new KPIs and targets is somewhat ambivalent: some aspects only relate to connecting businesses and education, while others include executive tasks. This is confusing”*.

The PBT reached its own conclusion and took a different opinion to the committee. In a confidential e-mail in January 2018, the manager responsible at the PBT argued: *“[name employee PBT] was at the CIV Water. The problem is not in what they intend to do, but how they have presented it. I am a bit worried about the conclusions in the audit report, which are very unclear. Despite the fact that the CIV PPP (as one of the few) (a) receives considerable revenue from company training, and (b) receives a fee from the educational institutions for their connecting role between companies and education. This has hardly been seen before, and seems quite unique”*. This conclusion led the PBT to continue its funding.

The project manager reflected on the behavior of the expert committee in 2018: *“There was much pressure from the audit committee, both the development of the business model and establishing a legal entity. (...) the audit committee was meant to be a critical friend, evolving along with the CIV. But because of its changing composition, we continuously had to explain to the committee how we were developing. It became something we dreaded, an ordeal we had to get through. But this is also something that we blame ourselves for; we are very practically oriented, but often we are unable to write this down properly.”*

In hindsight, the assessment committee admitted that the conclusions reached by the committee had not been entirely fair with regard to the situation of the CIV. In 2019, one member of the committee reflected that this had been caused partly by the enthusiasm of the committee, and partly by the PBT’s phase model: *“At the beginning, we really envisioned the start-up mentality and a business-style approach. That idea hampered us. It was only when the matrix with the four different typologies was added that we were able to let go of this approach because we could move on from that start-up model.”*

The interaction between the assessment committee and partnership was therefore not seen as helpful in developing a future model for the PPP, although this point was raised at every meeting. These discussions did greatly influence the discussions going on within the partnership, however. The learning program and, in particular,

the expert mentioned previously are considered key factors in the success of the partnership, particularly because these activities were in-depth and did not involve any financial repercussions.

Reflection on sustainability and future model for the PPP

As the partnership developed, there were three different ideas about how to ensure its long-term viability. The educational institution itself did not favor a commercial model, and preferred to connect to businesses through a small team that was funded by the partners. Activities carried out by this team would be done within the existing organization of the school. The business partners, on the other hand, argued for concrete products and services that would bring in revenue, and wanted to pay for these products and services rather than for a team. They criticized the commercial aspect of the partnership. Finally, the PBT focused chiefly on the goal of becoming a self-sustaining organization based on a start-up model that was quite similar to the approach of the companies, but they changed their approach midstream when it became clear that this model was failing.

Reflecting on *problem solving*, there was extensive discussion between the partners regarding how to achieve a sustainable partnership. Because this involved a leader-follower relationship, it was the educational institution that was ultimately able to decide on the future model. However, it is not at all clear that the 'educational model' was better than the model preferred by the companies. The decision was based mainly on the preference of the educational institution. And even though the PBT and its assessment committee initially pursued ideas that were similar to those of the companies, they later switched to support the educational institution's idea regarding a model for long-term viability.

Reflecting on *governance*, again the shift from a more top-down approach towards a network approach is clearly evident. At first, there was steering on a specific model, but later on this was replaced with various models that the PPPs could choose from (the matrix with typologies as mentioned in the previous section). In this specific case, this appeared to be the right solution, because the partnership went on to achieve success. However, this success can also be characterized as somewhat coincidental: there was no real argument for choosing the school's model over the companies' preferred model, and it was mainly the leader-follower relationship that led to this outcome. Introducing the network approach thus means a heavier burden of responsibility for the governance regime: it needs mechanisms to avoid partnerships choosing the most convenient route, while also incentivizing them to engage in problem solving. The PBT did succeed in doing this with regard to choosing goals and activities, but it could be argued that it failed to do so in the discussions on

the sustainability and future model of the partnership, as this was seen chiefly as a burden.

Case study 2 – Center of Expertise for the Bio-Based Economy

The Center of Expertise for the Bio-Based Economy (CoE BBE, PPP) is a partnership between Avans University of Applied Science and Zeeland University of Applied Science. Its aim is to deliver the best professionals for a 'bio-based society' by renewing education and conducting applied research. It assumes that there will be a transition from a fossil-based economy to a bio-based economy. The PPP works with secondary vocational education, 120 business partners, and governmental agencies.

The Center focuses on the biobased economy. In 2011, in an earlier attempt to secure funding for the Center, its focus had been primarily on bio-based chemistry, but this was rejected because this focus was too narrow. It therefore refocused on the vision of a bio-based society. *“There was one special individual during Center’s initial phase, a true visionary. This was very important, a visionary who saw the transition towards a new economy”*, which helped refocusing as one employee of the partnership remarked. From a regional perspective, this choice of focus was unsurprising. For a number of years, the region of West Brabant has been focusing strongly on bio-based economic activity. There were several regional boards (especially the Bio-based Delta) and various routes by which businesses could secure grants for bio-based development. However, until 2012, the HBO institutions had played a very limited role in this: its bio-based activities were limited to a small part of an existing faculty, with only two lecturers on this subject in HBO.

After an overview of the partnership’s overall development, the following case study will focus on three aspects that played a key role in how the partnership developed. Most of these aspects were decided on in the first or second year, because the PPP had already attempted to secure funding and subsequently built on those original plans. The first aspect discussed is the PPP’s role as ‘missionary’, which led to a relative lack of support from business. The second aspect is the status of the PPP as a separate business unit. The third focuses on the attempts to establish a ‘Knowledge Center’ for bio-based activities with a focus on business development and the valorization of knowledge.

Overview of the development of the PPP

In 2012, the initiative was granted the status of Center of Expertise and began to receive €4 million from national government over a four-year period. By 2016, its total turnover for the 2012-2016 period amounted to over €20 million, and it was aiming

for €34 million in the subsequent years. The partnership maintained its focus during that period and its activities — which were split into three categories – had generally been successful and were being scaled up. The most critical point in its development was the lack of funding from business. Although businesses participated widely in the partnership's many (subsidized) research projects, real business support was lacking because the bio-based economy was developing less quickly than many expected. The Center therefore played a visionary role, anticipating future developments, rather than becoming a Center that developed services and products that businesses needed in the short term.

The PPP had three activity pillars, comprising a broad set of activities.

- First, it pursued educational activities: bio-based minors and projects for several programs (environmental studies, chemistry, law, etc.), the introduction of a massive online open course (MOOC). This pillar was successful in the case of the majority of activities.
- Second, it focused on research: the appointment of associate professors, research minors, research projects (also international), and state-of-the-art facilities (for example a biopolymer center). This pillar was also successful.
- Third, it became a knowledge center for bio-based industry, meaning a Center that helped companies with their questions on research and innovation. This pillar was the least successful, and the partnership underwent a rebranding after four years because its new ambitions involved focusing on business development and valorization.

The Center grew in size quickly and produced professional reports on its progress. Financial support from businesses was forthcoming for specific research projects, but most business support was provided 'in kind'. This reveals the reason for the failure of the third pillar; the Center had acquired a very good reputation after four years, but it remained primarily a school and research center, rather than becoming the knowledge center that it aspired to be. Its final report set out an ambition extending to 2017 and beyond: "There are many opportunities in the 'services for businesses' pillar, which is now a known as 'valorization and business development'". As one of the employees of the Center remarked: "These are (commercial) requests from businesses or government bodies that need support for their operations and innovation activities."

Although many of the partnership's activities were a success, there was much debate about the added value of the PPP, particularly within the schools. Three board members, for example, described that added value in very different terms, reflecting the debate. The first, a member of the board of one of the educational

institutions, argued: “It is an instrument that helps strengthen the external orientation of the university towards its societal and economic environment”. Another board member focused more on the added value for companies: “Good results have been generated with a couple of companies that they already knew. But now the Center really needs to show it can also provide economic benefits for other companies.” By contrast, a third board member emphasized: “the policy within Avans is that Centers of Expertise, including the Center for the Bio-based Economy, must always serve the education sector.”

External partners also had different ideas about the partnership’s added value. A member of the board of the Chemistry Top Sector, part of the innovation policy of the Netherlands, argued that the main focus should be on helping small and medium-sized businesses, since universities and the TNO (a research organization) are unable to support these companies, whose needs are mainly practical, whilst regional government focused primarily on cooperation between educational institutions. When smaller companies were asked, diverse opinions were also expressed. One employee from the dominant SME company in the partnership commented that the partnership’s added value was in “communicating the possibilities of bio-based products”, while another SME employee argued that the PPP “might be able to help to find people with the right skills”. In general, the smaller companies wanted the PPP to act as a missionary for bio-based products and to help find enthusiastic students who would want to work for their company, whilst the larger companies wanted the PPP to focus on equipping students with the right skills and competencies (both in bio-based fields and more traditional fields of study).

These diverse views on the added value of the CoE did not prevent the partnership from developing, however, and it is now seen as an import asset for both the universities and the region.

Missionary status of the CoE for the Bio-based Economy

The Centers of Expertise were required to focus on one of the Netherlands’ nine ‘top sectors’ as part of innovation policy in the Netherlands, but the CoE BBE focused on two of them (chemistry and agri-food). The PPP received overwhelming support from regional government, regional triple helix boards (Biobased Delta) and the Ministry of Economic Affairs, but support from businesses was less forthcoming. In a report, an advisory committee concluded in 2013: “The minimum requirements for co-funding have been met. But in comparison to other Centers, a lot of this is in-kind funding”. In another report, it was noted that “co-funding of the public private partnership is satisfactory, but the Center fails to explain the limited financial commitment of companies. The companies’ stake in the partnership is still insufficient.”

In every progress report, both schools and regional government emphasized that the bio-based economy was still a developing field. Since oil prices were low during the period of the project, larger companies were unwilling to invest in this emerging field, which explained the lack of funding. In fact, little urgency was felt by most businesses. Usually, PPPs are established because more students are needed to work in a specific economic field, and/or because education needs to change radically in order to keep up with rapid developments. But in this case, businesses did not need more qualified people and neither was it necessary to radically change education in the field at that time. One employee of the Ministry of Economic Affairs argued: *“This contrasted with the high-tech sector, which operates very differently and was already seeing a severe shortage of personnel. The bio-based economy is currently mainly about making chemistry ‘green’ and creating new business opportunities for the agricultural sector.”*

The PPP therefore relied mainly on government support, along with a few small companies that focused specifically on bio-based products, and subsidies focusing on research and development projects that many companies participated in. Business support mainly took the form of participation in publicly funded research projects, which required (in-kind) co-funding. Both in 2014 and in 2018, the Center observed that it was not delivering services and products for businesses; they found it difficult to capitalize on the knowledge generated (‘valorization’). On the question of whether the Center ever considered focusing more on businesses’ short-term needs, one employee recalled: *“No, we never considered this, it never came up. (...) We really were a missionary. This was also a kind of idealism, I realize now.”*

One member of the board from the educational institution described the search as follows, in the belief that the PPP would be able to achieve knowledge valorization: *“We want to play a meaningful role in the regional economy, more than just providing students. They have a lot of knowledge that is useful for SMEs. But Avans is not yet succeeding in this. Everyone knows one or two good examples, but nobody can describe what role Avans has when it comes to valorization. The Center really shows how this can be done, and how we can be more visible to the outside world.”*

Two business partners and an employee of the Ministry of Economic Affairs, however, reflected that the main added value of the CoE was that young people were learning about bio-based materials, rather than the added value of research or business support. For example, one business partner emphasized that *“education needs to be outside the regular school and inside the businesses”*. And an employee of the Ministry of Economic Affairs reflected: *“the Center must ask itself whether it is able to help SMEs. This requires so much knowledge and experience. (...) The strength of*

the Center is enabling students to come into contact with real companies, so they get a better understanding of how things work in practice.”

The search continued right until the end of the project period and beyond, as can be observed in discussions between the employees of the PPP. Valorization was still seen as a key aspect for the position of the PPP relative to the educational institution, as one employee argued: “We need to be careful that we do not become one of Avans’ regular expertise centers. Our Center is so much more than that. We operate nationally and we do a lot more than just education and research.” But the questions remained: what was the partnership exactly, and how could this be demonstrated when support from business was so far below expectations?

However, two employees of the PPP knew what needed to be done to achieve a self-sustaining partnership and greater business ownership. “Since the Center wants to continue its activities and become self-sustaining, we should focus more on involving the business community and larger companies have to be brought in. Currently, the business partners are mainly small companies which are trying to bring their bio-based products onto the market. These companies are not able to support the Center financially. [We need] larger companies, such as Sabic, DSM, DOW, and also Cosun.” However, in order for these companies to become full partners, they wanted co-ownership, as was the case in the application labs. This, in turn, would have implied a less dominant role for the educational institution. Although the PPP thought such companies could play a minor but important role in these public-private projects, this was not often allowed to happen, as reflected in a statement made in the introduction of this case study: “The policy of Avans is that expertise centers, including the Center of Expertise for the Bio-based Economy, should serve education.”

The influence of the assessment committee during this search focused mainly on the co-funding requirement for businesses. As mentioned in the section on the partnership’s general development, the committee noted the lack of funding from companies right from the start. However, it also observed the success of the two other pillars and the success of the Center in acquiring research grants and the commitment of companies to this research. The committee therefore concluded in 2014 that “companies are committed through individual partnerships and co-funding is substantial”. In 2016, at a meeting between the review committee and Center, the absence of funding from businesses was discussed: “the review committee now understands that cash funding from larger companies is lacking and that smaller companies do not have the funds”, and a discussion on how funding could be realized in the future. However, the committee never grasped the scope of this discussion within the partnership, mainly because its reviews were not detailed enough.

As early as 2013, these questions were addressed in the learning program, in which the Center participated intensively, and the search for demand-driven activities played a central role in the feedback provided. A feedback report observed that *“the focus will attract more students and other companies. However, in practice, these students will mainly begin with more traditional process industry jobs, rather than bio-based jobs”*. Additionally, the report observed that *“the development of the partnership focuses mainly on the organization within the school, rather than the development of close relationships with companies”*. The effect of the SWOT assessment was clearly evident, both in the development of the partnership and in official documentation.

Asked about the effect of the feedback from the review committee, some employees argued that its interventions had not supported the PPP’s development. For example: *“The basic features of the system were really good. The earmarking of funding, the requirements in the call for proposals. Also, the idea of comparing nationally and comparing between various Centers was good. However, nobody acted on the conclusions of the committee. Not even the board of directors. They just said, ‘good luck with that’”*. According to employees of the Centre, the board of directors of the schools steered the course of the Center towards education or research. This strong steering was strengthened by the governance structure, as we will discuss below.

Discussions over the overall direction of the Center did not prevent the executive team of the partnership from engaging in new and, for the board perhaps, somewhat controversial activities. One employee of the Center reflected: *“There is a very successful project now. But at that time, nobody wanted to take the initiative, so we did. If I hadn’t done so, the application center would never have happened, and that was crucial for the development of the bio-based ecosystem. Afterwards, that decision was criticized by the board of directors.”*

Reflection on the Center's missionary status

Reflecting on problem solving, the Center was very successful in developing two of the three pillars in their plan, and actively pursued the third pillar. Interestingly, much of the debate over the direction of the partnership, and especially the role of the third pillar, took place within the educational institutions. The partnership was strongly characterized by a leader-follower relationship, more so than CIV Water, with the business partners participating in several projects but not in the overall steering of the partnership. The most influence on the direction of the Center was exerted through the regional boards, which also influenced the Center with cash funding, because the companies felt no real sense of urgency. The Center engaged in various intensive activities to promote problem solving, and the learning program and the SWOT assessment were a very important element in this because all

stakeholders were closely involved in this review. Differences in opinion regarding the overall direction of the partnership played a key role during its development, and these internal politics hindered the development of the third pillar. This will be further elaborated in the next section.

Reflecting on the influence of the *governance regime*, this mainly occurred at the start of the Center when deciding on the overall focus. An earlier grant application had been rejected because its focus was too narrow, leading the partnership to broaden its focus. The process of reviewing and evaluating were initially seen as positive, with the right interval and level of actors, and these were perceived as a helpful element in the development of the partnership. However, because the consequences and conclusions remained hidden among the Centers, this increasingly became seen as a formality. When it came to deciding on the partnership's overall direction and individual activities, the review process had a very limited influence.

The PPP as a 'business unit' of the school

Soon after the establishment of the PPP, it was positioned as a separate business unit within Avans University of Applied Science, on an equal footing with the existing academies and reporting directly to the board of directors. This separation was introduced because the PPP was seen as a partnership between two Universities of Applied Science, which required a relatively autonomous position. As one employee of the Center reflected: *"It was a major shift in the positioning of the Center, as it belonged to two schools. A director-level position was therefore created. This also led to an equal position with the existing academies, and this was crucial. (...) Before, it had just been part of a regular expertise center, which was the responsibility of a policy officer on the board of directors. That was a powerless position."*

The question of whether the Center was autonomous or actually part of the school was much debated and never truly resolved. Particularly inside the boards of the school, this was a delicate debate, and this was not appreciated by the (business) partners. The internal debate was about whether and to what extent the PPP should be outside the school's regular bureaucracy. Most partners agreed that the PPP should be positioned outside of regular education, so that it could engage in new activities and chart a new course – outside the regular school bureaucracy. Otherwise, it was fairly certain that any new goals would not be achieved because regular education would get priority. On the other hand, if the PPP had been positioned too far from the school, it would be more difficult to involve students, because teaching staff would not feel part of the PPP.

Ultimately, the following organizational construct was chosen: *“The responsibility for education remains that of the academic directors. (...) The Center will develop education, after which the school itself is to be responsible for its implementation. Activities within the primary process of education are not part of the Center.”* Or, as an official document explained in 2013: *“Governance discussions had meant that responsibilities and activities shifted from the Academy towards the Center.”*

This perspective differed from that of the businesses. They were not really concerned by the way the PPP was organized by the school, and focused primarily on the creation of facilities for innovation, such as application labs. These were paid for either by businesses, regional/local governments, or sometimes by the school. They were not places for regular education or regular business activities but rather they focused on innovative projects. For example, there is the Biopolymers Application Center (BAC). *“The BAC is a platform for everyone working in the field of bio-plastics. The intention is to make it part of the Center, in order to revitalize it.”* One employee of the Center reflected: *“each application center has a different setup. (...) it is hard to control these application centers. But then again, you should not want to control them, since the school has no ownership over them. But it is hard for the school to recognize this. (...) the role of the Center is to bring all the necessary competencies and skills into the Center. Because the application center itself is not owned by the school.”*

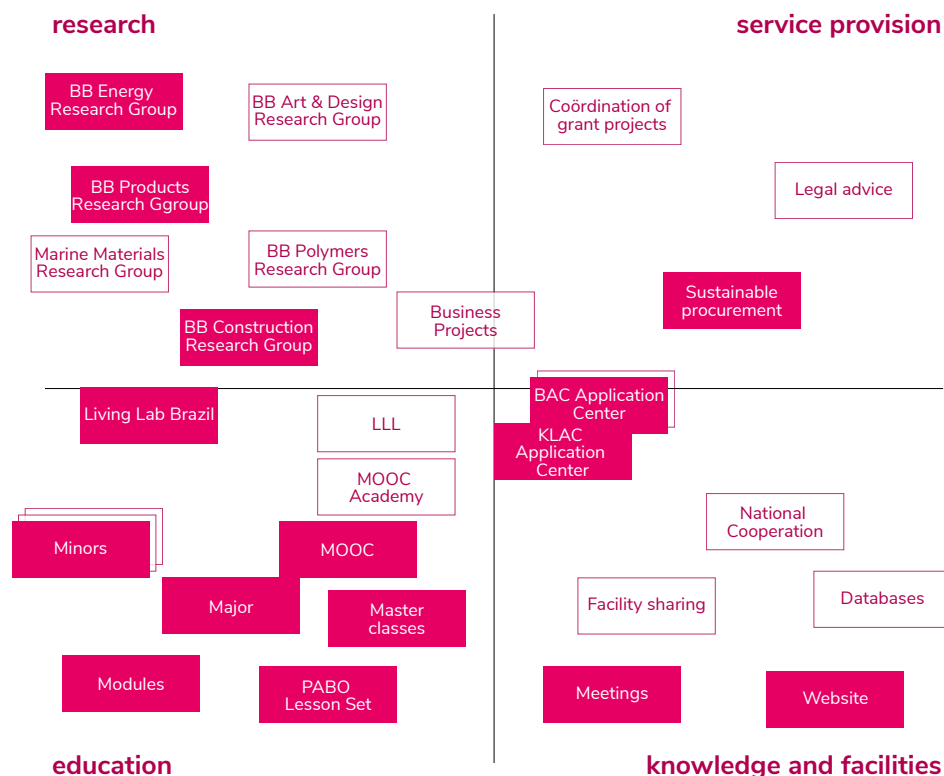
These projects, in which the school only had a limited role, were perceived as problematic for the education partners. Internally, these discussions were sometimes quite frustrating for the PPP, too. *“This really sapped our energy. The way a school deals with a partnership and the lack of willingness to really commit to a Center. That was a hard battle.”* Another employee reflected: *“The Center wants to share knowledge and responsibilities, but regular education finds it hard to share.”*

The role of the governance regime in the development of the partnership was very important at the beginning, when it clearly emphasized the need for a public-private partnership, including in organizational terms. This was one factor that led to establishment of the separate business unit. The governance regime had less influence as the partnership developed. Even though the governance model was discussed at every meeting with the Review committee, and the stake of the companies was constantly emphasized, the committee would relent and any official decisions was postponed. In 2016, it was concluded that the future governance model of the partnership was not yet clear, and particularly the role of companies.

Activities within the learning program closely mirrored the findings of the Van der Touw Committee (2013), and did not emphasize the governance model. They focused

much more on the actual activities and level of commitment from the companies, rather than on the way the model was organized. The following figure three shows how activities were organized and how the discussions on ownership played a role:

Figure 3: The activities shown on the left are school-related activities and fully owned by the educational institutions. On the right are the activities that are co-owned, or activities in which the school has only a partial role (translated to English).



Reflection on the PPP as a business unit in the school

There were many discussions regarding the governance structure of partnerships, and not only in this specific case. Each partnerships was organized differently because each school and its surrounding stakeholders was organized differently. This was partly why the Van der Touw committee was set up, because these discussions were proving to be a divisive distraction. The literature on partnerships also emphasizes this point as a common reason for the failure of partnerships, and in the previous case study, too, organizational aspects led to disagreements.

Reflecting on *problem solving*, the partnership faced a difficult situation concerning its governance structure. To begin with, due to the influence of the governance

regime, it was decided to install a separate business unit which – in the eyes of the project team of the Center – helped to achieve significant freedom in its operations. In subsequent years, however, this position was contested by the board of directors. Particularly when it came to developing full partnerships, the school was far more conservative than the staff of the Center, because this involved significant financial risks. This contrast between a more enterprising mentality versus a more risk-averse mentality was also observed in a 2018 report commissioned by the learning program (Heemskerk & Massier, 2018). As the partnership developed, the Center evolved into a strong leader-follower relationship, with full partnerships within the Center's sub-projects (such as the application labs).

This is a discussion that occurs in most partnerships. However, interestingly, in this case rather than being a discussion between the companies and the school, this was a discussion between the board of directors and the executive team (the business unit of the school). Compared with CIV Water, for instance, the position of the executive team was weaker. Instead of the executive team acting as a link between companies and schools, it played the role that the companies might normally have taken. The companies, meanwhile, were only involved in the implementation of the projects, for the most part. This was beneficial for these programs in the short term, and indeed the Center excelled in this regard, but it was less beneficial for the development of a public-private partnership: the educational institution's role as the key player in the Center was reinforced.

Reflecting on the governance regimes, the RCHO regime played a major role in the establishment of the partnership, particularly in setting ground rules (such as the requirement for a public-private partnership). Over time, this influence diminished, as the Centers felt that the reviews were not really leading to any changes. In this sense, the governance regime was not helpful in resolving the discussions around the governance model.

The learning program had a more significant influence on the development of the partnership and played a role in problem solving. It also provided certain suggestions regarding the governance structure and helped the partnership to achieve a model in which some activities were fully owned by the school and others were realized through full partnership. However, the activities of the learning program did not really help to resolve the discussion between the board of directors and the executive team, because the learning program had no formal authority and thus no authority over the board of directors. Since the discussion regarding the structure mainly concerned power relations rather than substance, the recommendations were not ultimately helpful.

Case study 3 – High Tech Center Delft

The High Tech Center Delft (HTC Delft) is a partnership between high-tech companies such as Koning & Hartman, Festo, and KPN and the vocational schools ROC Mondriaan and The Hague University of Applied Science. Its core location is a 2000-square-meter workplace where students participate in projects organized by companies in the field of mechatronics and robotics. The idea is that students learn to work with state-of-the-art knowledge, companies can benefit from student input for the problems they face, and employees and students work together.

There were three defining choices that heavily influenced the way in which the PPP developed. The first was the decision on the focus of the PPP. Second, was the influence of Koning & Hartman and Festo, which introduced agile team-working methods to run the projects with students. Third was the decision to steer the partnership on its existing activity plan, which led, in the opinion of other partners, to limited creativity and missed opportunities.

Development of the PPP

HTC Delft is located in a building that was destined for demolition, but was made available to the partnership for a few years by the municipality. Initially, an initiative of The Hague University of Applied Science called Betafactory operated at the location, after which HTC Delft set up its facilities in the building so that UAS and VET students could work together. The location was provided by the municipality for a value of €120,000, and this served as co-funding for the project. Although it was supposed to be a temporary location, the demolition of the building was postponed until 2020, meaning that it remains the PPP's headquarters today.

Before HTC Delft was launched, a foundation called *Techniek Educatie* (Technical Education) – whose participants included the municipality, a small company, the Hague UAS, secondary vocational education, and the Technical University of Delft – applied for a small grant from the municipality so that it could draft plans for the acquisition of more significant funding from the RIF. This small grant was used to hire professional support. Since ROC Mondriaan (the vocational school which would receive the grant) was not familiar with RIF grants, they demanded that the activities be placed under a separate legal entity to mitigate the associated risks. This also led to an increase in the sense of ownership for the businesses involved. These decisions were made shortly before the deadline and almost led to the school backing out, and this was only prevented when a local municipal official negotiated a deal with the chair of the school.

After this initial struggle, the activities undertaken within the PPP were a success, and according to their progress report, most of the 28 planned activities have been carried out – with the notable exception of life-long learning activities. The total budget over the four-year period (2014-2018) was €750,000 in cash (national and regional government), and €600,000 of in-kind funding (mainly staff hours and facilities) from businesses and the educational institution. Compared to the other two case studies, this was a modest budget, but the focus was also more specific: to bring in companies to work on projects and form student teams to run these projects. To support this core activity, meetings were facilitated between the businesses involved (known as ‘HTC café’), specific aspects of the curriculum were developed, and activities were organized to help pupils and students get to know the world of high tech.

The PPP was a success during the four years that it received RIF funding. It reported successes in relation to most of its activities and was even visited by the Prime Minister and government minister responsible, as well as by other dignitaries, to celebrate its successes, particularly the close involvement of the companies. However, the partnership did struggle to making its activities part of the regular curriculum, and for the most part these activities remained extracurricular. As the end of the funding period approached, it appeared that the PPP could not be sustained in its existing form. The vocational school therefore chose to join forces with the HBO-institution to construct a new location for students of both schools. The intention is to transfer the HTC Delft model to this new location. However, existing business partners and current projects will not be joining it, and the existing partnership is essentially breaking up and becoming a school-driven partnership that seeks out support from companies, but only where this is possible.

Focus of HTC Delft

Businesses were attracted to participate in HTC Delft as an opportunity to influence education programs and increase the number of students studying this particular field. For years, there was no education program at this level in Delft in this specific field, even though there was a technical university; the university of applied science established its programs a couple of years earlier. Much emphasis was put on the fact that many companies were complaining of a shortage of qualified staff, but were not actively involved in educating students. Often, this was blamed this on unwillingness on the part of the educational institution. The launch of a public-private partnership was thought to be an opportunity to acquire more influence: “You say that education moves too slowly; now is the chance to participate. The opportunity to influence education as a company” (business partner of HTC Delft). For example, one SME decided to participate because it was concerned about a shortage of vocational

students in technology in the future; the company needed students to be trained in the right areas, creating a better match between education and its own business activities, and this was their main reason for joining the partnership.

At the start of the PPP, the vocational school launched an education program on mechatronics, thus addressing the needs of companies in Delft from the get-go. The PPP was intended to complement this program, but it never really succeeded in this goal. Students who participated in HTC Delft did this not as part of their formal curriculum – as was originally planned – but as part of an internship. This meant that the promise of HTC Delft was only partially fulfilled. True, students and businesses did come into close contact through the partnership, but the businesses only had a limited influence on their education (this influence was limited to participating in working groups that formulated the education program for mechatronics). As one employee of the Center explained: “So we had *new teachers who were really eager to get started with the education programs, but who were not really open to cooperation with companies or to new forms of teaching if the outcomes were uncertain.*”

This led the businesses to complain that the PPP was of limited added value. The PPP focused mainly on carrying out projects organized by companies, run by students and teachers. However, they had trouble convincing the participating businesses that (a) vocational students were able to run these projects (*vocational education mainly involves work of an operational nature, I am hesitant*'), and (b) that running projects was necessary to achieve the intended goals. Second, since the education program had only recently got off the ground, the available students were mainly first-year students (*that was quite difficult. How to make projects that suited the level of those first-year students*'). Third, there was no proper methodology for how to run these projects; neither the teachers nor the employees had any idea how they should approach this. Additionally, businesses were asked to pay €2000 per year to participate in HTC Delft, whilst running projects in the adjacent Betafactory – funded by an HBO-institution – was free of charge.

On the other hand, the educational institution found it difficult to involve the businesses closely and to find businesses that wanted to participate for longer than a single project. As one director from the MBO school reflected: “Companies do not want to commit themselves for four years. We really had to work hard to involve them. On other projects, this happens more easily now, with employees from companies who teach together with a regular teacher, for example. But you need to give companies a few different options. Some companies want to help think about the curriculum. Others just want to have new employees. It really varies.” The

participating companies were also sometimes very demanding, which undermined the Center's enthusiasm to cooperate, according to one employee of the Center: "[company X] brought an employee who was frustrated that the students were not able to perform a very specific technique. Then I really thought – just forget about that technique, it's only relevant in your company."

To summarize, the first two years were spent largely trying to decide on the precise focus of the partnership and how to satisfy a range of different partners simultaneously. There were diverging expectations on all sides, and these needed to be brought together. The activity plan proved to be useful, as there was a several activities tested. One of the most valuable activities in this period was the HTC Café, which were informal ice-breaker sessions designed to bring school staff and business employees together. But as certain activities proved useful, the key players – teachers and businesses – became less enthusiastic. They acknowledged the needs identified and were enthusiastic about the concept, but were unable to translate those needs into their core activities. The teachers needed clarity regarding the concept and how it would fit into the curriculum, whilst the businesses wanted more tangible results.

The governance regime had an influential role before the launch of the partnership, because of the formal grant requirements. The partnership was aided by an external consultancy firm in order to draft its plan and meet those formal requirements. The influence of the regime after two years will be discussed in the next section, but in the first two years, its influence was limited once the grant application had been submitted.

Reflection on the focus of HTC Delft

Problem solving was evident at the very start of the partnership. There was a new education program, and companies were involved for the very first time. Compared to the other two case studies, this was a different starting position. The fact that the partnership was housed in a building that was due for demolition gave an indication of this, meaning that the partnership would at first be temporary. The search for focus was another indication: ideas were tried but failed, and expectations were not met. So far, the partnership has engaged in problem solving with little interference from the governance regime.

Agile team-working methods, deviating from the original plan and a self-sustaining PPP

A key aspect of HTC Delft was running business projects with student involvement. However, this was easier said than done. In 2015, Koning & Hartman, important business partners, came up with the concept of 'slow consulting'. The idea was

that projects that did not need to be carried out immediately would be given to the PPP to work on. For three months, an employee from the company was posted to the PPP and, working with a group of students, work was done on a test case and eventually a patent was even applied for. This success led to spin-off projects with other companies, and the belief took hold that the concept actually could work. This meant that during 2016, the PPP gained momentum and there was a feeling that it would continue to develop and this model could be expanded. Several more such projects were launched and some high-profile visitors came to review the model, including the Dutch Prime Minister.

In 2016, an analysis was carried out as part of the learning program. The analysis concluded that “the focus is mainly on finding students and projects. This is very promising. However, more building blocks are needed to achieve a successful result on individual projects. The PPP offers companies a real path for innovation, but it needs to expand this approach to make it successful.” It recommended linking the PPP with several field labs that had been set up nearby.

However, according to the partners, the influence of the governance regime was acting as a brake on development. Although the PPP pursued these leads and went on to launch projects with other companies, it was – with its relative limited resources – unable to focus its attention fully on these projects. The original plan also specified other requirements that had to be met, and it was not easy to involve other business partners, because – according to the partners – the grant regulations did not allow for this. This was a much criticized aspect of the funding formula. Formally, as new companies entered, they would bring additional funding (either in kind or in cash), and DUS-i would therefore reduce the level of the government grant proportionately, so that the overall budget for the partnership would remain unchanged. However, in practice, other companies mainly entered to engage in new or additional activities. As such, there was no incentive to find new business partners at all. One employee of the Center described this effect as follows: “The scrum methodology [an agile team-working method] was what we really wanted. And strangely, the grant regulations were an issue. You only looked at the original plan, and at exactly what needed to be done. Sometimes I believed that rather than our companies and the school deciding what we did, it was the grant regulations that dictated what we had to do.” This attitude to the grant was exacerbated by the school's inexperience with this type of grant.

This issue became steadily more frustrating, according to one business partner: “The most difficult thing I found was that you made a plan for four years, and then you were held to account for a plan that had been drafted four years earlier. And no

changes were possible. In other words, you were trapped in your own cage. (...) this happened in stages. First, you would discuss the plan with the project team. Then you would discuss it with the board. Then you would discuss it with the school, which had formal responsibility. And then there would be an assessment committee who also assessed us on how we were performing. At some point you started wondering just how transparent we needed to be, or how creative we had to be in justifying our actions. And I don't want to be creative and hide the truth. We are very proud of what we do. (...) at least half of the time of all our discussions went into discussions about what we were allowed to do. Then I prefer to play it safe."

Shortly after the launch, the PPP had made some changes in its budget for which it had asked for permission, because it wanted to delay some spending on infrastructure. This meant that the partnership was reluctant to ask for permission to make still more changes later on, concerned that this would raise questions about the progress of the PPP. As one of the major business partners commented: *"I think it was a failure to communicate. We should have been open and able to discuss it with RIF. But I went along to those meetings twice, and I really felt that I was not able to share all information."*

In the learning program, employees from the PBT (which was implementing the learning program) and members of the partnership frequently discussed this problem. It was concluded that the school had relatively little experience with these type of grants, and preferred to play it safe. Even though not everyone agreed with this approach, the educational institution was ultimately responsible and therefore had the final say. Neither the members of the partnership nor employees of the PBT were able to convince the educational institution to change its approach.

By 2018, this had led to a situation in which most activities were being carried out, with the scrum projects involving students as the flagship, but with no clear vision for the future. The fact that the location of HTC Delft was temporary and would soon no longer be available increased the pressure to make a decision about the future. This provides a good insight into the arguments of both the businesses and schools. HTC Delft's proposal for a cooperation agreement between a technical university, an HBO institution, and HTC Delft appeared to be unviable. As the progress report mentioned: *"The option of joining forces with the technical university, the University of Applied Science [the HBO institution] in High Tech Center Delft as a "Techfactory" has been dropped."* This meant that HTC Delft would disappear in its existing form, and the HTC Delft concept would be taken over by the educational institution. This was because none of the partners was willing to pay for the costs of the location and staff that would be required to run its projects: the partnership was seen as an

optional extra, and as useful but ultimately non-essential. The educational institution was very disappointed that the businesses were unwilling to pay for the location and infrastructure: *“the cost of the location, that makes it hard. In the budget, we have a lot of fixed costs that need to be covered. And the companies would need to pay for the location and rent. Because the educational institution cannot afford it.”* On the other hand, some of the founding business partners were disappointed that the educational institution planned to discontinue HTC Delft in its existing form and to continue the approach without them.

However, there had been multiple opportunities during the project period to make the partnership more successful. In the analysis report mentioned previously, it was concluded that there were many opportunities for the partnership to evolve. For example, as one employee of a funding agency in the region argued: *“HTC Delft is in a location that is too isolated. There are several field labs in the region, and each of those field labs should be connected to vocational and higher education. The question is which lab HTC Delft could be linked to. That would function as a magnet.”* However, although some of these leads were pursued, no choice was made because the partnership decided to prioritize the activity plan and not to deviate from this. Nevertheless, although outside the scope of this case study, the education institution successfully received a grant for the upscaling of HTC Delft, with the participation of eight of the original partners of HTC Delft.

Reflection on the scrum projects, deviating from the original plan and a self-sustaining PPP

The interaction between the partnership and governance regime became detrimental to problem solving, because the partnership felt unable to deviate from its original plan and therefore could not pursue new leads and promising activities. This meant that the partnership ceased to evolve and develop, and the partners pursued alternative options for extending the partnership, which was ultimately discontinued. Formally, the RIF regime allowed deviations from the original plan, but the partnership believed that too much deviation would not be permitted. Additionally, it appeared that the partnership was unable to convince the RIF of its case because it felt unable to share all information.

In CIV Water and the CoE BBE, interaction between the partnership and the governance regime alternated between constructive at some times, and bureaucratic and burdensome at others. It is clear that in this case, however, the relationship was a significant impediment to the development and sustainability of the partnership. Additionally, the activities in the learning program did help to make the activities more successful: the partnership had many ideas and its future looked promising,

but one key problem persisted: the (perceived) lack of freedom to deviate from the original plan.

An important question is whether the absence of the governance regime would have been a key success factor in achieving a sustainable partnership. But since none of the partners had much experience, this might very well have impeded the partnership's development too. However, it can be concluded that the governance regime and the learning program were unable to guide the partnership towards sustainability, even though there was certainly the potential for this.

Life-long learning

A final aspect is the partnership's failure in life-long learning. Interestingly, this was an explicit goal for HTC Delft at first, even though the grant could not be used for these activities. It was even perceived to be an essential aspect, as the director of the educational institution reflected: *"life-long learning had to be part of our activities. This was compulsory and we wanted it as well. The question was how to manage this. The technical sector is more difficult than the care sector, for example, because there are many small companies, and many different skills and competencies within those companies."*

Activities were not successful in this area, as the progress report admitted: "This goal has only been achieved to a limited extent. Employees of the companies have participated in projects and in the HTC café. Students sometimes bring knowledge and skills to their internship that are not yet known to small companies. However, contract-based education for companies is not being achieved."

The reason this did not work is that it was never really tried, because the costs were expected to vastly outweigh the benefits and no budget was available for developing these activities. Both the program manager and the educational institution argued that the differences between companies were so great that it would have been hard to fill a class with students. The life-long training that they did manage to provide was targeted at teachers, because HTC Delft had a close relationship with them and knew what they needed. The relationship with companies was not close enough to do the same, and they were unable to provide courses that the businesses would pay for.

Reflection on life-long learning

The failure of life-long learning is mainly due to the fact that it was never really tried, because the budget was limited and the partnership was already focusing on achieving the goals that they were receiving funding for. If they had been able to

scale up the scrum projects, the life-long learning activities would have stood a better chance of becoming a reality. However, since they were still struggling to make a success of these projects, it was obvious that life-long learning was a lower priority. Thus, as also observed in the quantitative analysis, it is fairly unsurprising that these activities failed, because limited attention and resources were directed towards this area. Reflecting on the governance regime, there was no funding for life-long learning activities, so these activities were not monitored and therefore played no role in the regime.

Conclusions

The three PPPs featured in these case studies took very different approaches. They were located in different regions of the country, focused on different fields and the maturity of the partnerships varied significantly. Problem-solving behavior from the partnerships was required in order to identify the partners' shared problems and solutions. There were many obstacles to overcome, several of which are evident in these case studies. The case studies are thus representative of all partnerships. Even though each partnership faces different challenge and obstacles, the need to engage in problem-solving behavior is universal.

Two main themes have been especially relevant in these case studies: the extent to which the partnership engaged in problem-solving behavior, and the extent to which the governance regime promoted or impeded that problem solving (resulting in for example goal displacement, as observed in chapter six). In the individual reflection in each case study, these themes have been discussed. Overall, the following conclusions can be drawn.

First, confirming the conclusions of the quantitative chapter, it is clear that the governance regimes were able to guide the partnerships through the first phase of their development. In chapter one on problem solving, a distinction between lower-level trial-and error and higher-level reflection was made, the latter referring to reflective problem solving under circumstances of uncertainty, the former referring to applying old routines to new situations. The partnerships engaged in a significant amount of experimentation, had a relatively high success rate, engaged in a wide range of activities, and achieved a high satisfaction rate among the partners. Particularly when deciding on goals and activities and the dialogue on how to achieve sustainability, the partnerships were engaging in higher-level reflection problem solving. The partners went through the phases that characterize problem solving: realization of a problem; (2) analysis of the situation; (3) formulation of various hypotheses, (4) testing and (5) reflecting on effectiveness (see chapter one). There was room for improvement, however, in relation to step 5, the extent to which activities and their effectiveness

were evaluated. This point is expanded upon below.

The fact that the governance regimes were able to guide the partnerships through the initial phase of their development was mainly due to the shift towards an approach based more on network governance and the move away from the principal-agent logic, with much more scope for experimentation and a focus on learning and developing through the learning program. These elements were particularly important in allowing the educational institutions to engage in problem solving rather than following the rules set by the government. But this shift was not always made, as the latter case study shows, and the formal rules and procedures could easily come to dominate again.

Second, by contrast, first-order learning dominated with regard to questions of structure and governance models. Each partnership struggled with the question of ownership and governance models, applying old methods to the new situation they faced. In all cases, this led to the emergence of a leader-follower partnership. This explains the high degree of goal displacement, as observed in chapter six. The activities that were outside the comfort zone of the relevant educational institution often ended in failure, with life-long learning being one example of this. The life-long learning activities that did succeed were invariably carried out with the closest business partners or the schools' own teachers. Interestingly, one of the case studies has been successful in realizing these activities. This success can be explained by the fact that employees of the PPP came from the companies that participated in those activities, leading to a balanced leader-follower relationship between school and companies. In the other two cases, however, the leader became more dominant during the years. In one case (HTC Delft), this meant that the partnership was abandoned in favor of a public-public partnership with another school, while the involvement of companies was relegated to second place. In the case of the CoE BBE, it is still unclear how the dominance of the school will affect the future development of the partnership.

First-order learning therefore occurred in relation to politically sensitive issues for the educational institutions. Educational institutions clearly dominate their field, often excluding other actors from taking on formal roles and enjoying primacy in the provision of education. It is therefore to be expected that the concept of public-private partnerships – the corollary of which is that other stakeholders may exert a strong influence on direction, goals and activities – was difficult for the educational institutions to accept. In vocational education, there are examples of full partnerships being achieved, but these usually have a history spanning several decades. All three regimes were – based on the case studies – unable to break through these 'deep-

seated features' of the institutions concerned, although the CIV Water did manage to find a balance between these features and the need for the companies to have a say over the direction of the partnership. By the same token, this situation also led the partnerships to be very wary of engaging in activities that were outside their direct control, such as innovation for small companies (CoE Biobased Economy) and life-long learning (HTC Delft).

Third, the learning program played a key role in the development of the partnerships in two respects. First, it helped the partnerships to acknowledge that collaboration is hard, that it is inevitable that some activities will fail, and that learning and developing are the key to a successful partnership. It also helped in the interaction between the formal actors (PBT, RIF, RCHO), and all three governing bodies acknowledged the value of the learning program. The learning program therefore played a large role in the shift from a principal-agent relationship towards a network approach with a focus on learning and development. Second, activities in the learning program often were able to generate valuable guidance and helped guide the partnership towards sustainability, especially in terms of developing activities. However, the learning program failed to help the partnerships to reflect on their effectiveness. The program helped to identify opportunities and point out possible directions, but lacked any structural evaluation of the activities. This would have strengthened reflective problem solving and thus helped to bring about the fifth step in the problem-solving process. Secondly, as the learning program did not have a formal role in the RCHO and RIF regime, they were unable to help with the politically sensitive issue of ownership of companies, and was thus unable to prevent unbalanced leader-follower partnerships.

Fourth, the governance regimes were not able to overcome deep-seated institutional characteristics, which calls their long-term suitability into question. The regimes were only designed to guide the partnerships for four to five years. But even in this short time, old patterns reasserted themselves and the role of the educational institutions increased. In combination with the high failure rates in activities that were outside the comfort zone of the educational institutions and the strong focus on the core activities of the educational institutions, this could very well be a toxic combination that, in the long run, will diminish the participation of the businesses. To some extent, the PBT regime performed better in this respect, showing that external pressure in combination with the learning program can lead to a more balanced partnership, and more activities outside the core activities of the educational institution. So although these partnerships were successful, the question is whether they can be sustainable over the longer term, with an increasingly dominant educational partner and a focus on activities that are mainly important to the educational institution. Is the success of individual activities enough to help the partnerships become self-sustaining, or

are the deep-seated characteristics too deeply engrained? And if so, what type of governance regime should be put in place after the initial phase of guiding the partnerships towards becoming full-fledged partnerships rather than leader-follower partnerships. Or is this not desirable, or simply not achievable?

Fifth, the relationship between the overall goals of the framework and the individual activities of partnerships remained vague. The partners were not really concerned with the overall goals of the framework, although they did not oppose them. They see them more as an opportunity to reach their own goals. These opportunities also led the partnerships to engage in activities that were outside the overall framework goals; in the learning program, these activities were actually encouraged when it appeared that pursuing them would benefit the partnership. The learning program also led some partnerships to believe some these activities were obligatory or expected by the assessment committees.



Chapter 9

Conclusion: a partial success story, prone to failure

9. Conclusion: a partial success story, prone to failure

Public-private partnerships that bring together educational institutions and businesses are seen as a route towards a better-equipped workforce, because educational institutions are often considered too slow to adapt to the rapid developments in technology and society. Since 2010, the Dutch government has attempted to realize these partnerships in various ways. This thesis has examined the three governance regimes put in place by the Dutch government, and evaluated their effect on the problem-solving capacity of public-private partnerships. A review of the literature revealed that the key to realizing these partnerships is the need for reflective problem solving to establish new goals, methods and routines, as opposed to random trial and error, or even resistance to change (the independent variable). A review of the literature on governance revealed two opposing schools of thought on achieving problem solving: a principal-agent approach, whereby the solutions to problems are imposed in a top-down manner, versus a network approach that focuses on establishing common ground and trust between actors in order to promote problem solving amongst the partners themselves (the dependent variable).

In this concluding chapter, the main results of the previous chapters will be summarized, including triangulation with various sources regarding what can and cannot be concluded from the data. After this summary, an overall reflection on the research question will be presented. Finally, the priorities for further research in the future and the implications of this research – including for practice – will be discussed.

Summary of results

Chapter one introduced the concept of problem solving in partnerships and differentiated between lower-order trial and error, based on existing routines, and higher-level reflection in order to identify new methods. Chapter seven gave a quantitative account of how this process took place in 48 partnerships over the course of five years, distinguishing between various categories of activities based on the partnerships' own evaluation of their progress. Chapter eight gave an in-depth qualitative account of this process in the form of three case studies.

Combined, these results make it possible to answer the first sub-question, providing an insight into the development of partnerships in Dutch MBO and HBO:

- To what extent is there a relationship between the development of PPPs in Dutch MBO/HBO and their governance?

The results show that the partnerships engaged in some higher-level reflection in order to achieve their goals, except in the area of structure and governance models. The partners formulated their own goals and activities, reflected on whether these activities were proving effective and changed their approach where necessary. While only 24% of the activities met expectations right from the start, the partnerships managed to increase this percentage to 40% over time, and the introduction of new activities also led to a 21% increase in the number of activities. The case studies, meanwhile, revealed motivated project managers, teachers and companies that actively engaged in problem solving in order to initiate new activities that had not yet been tried. These results are valid across all three governance regimes.

The results also show strong goal displacement in the direction of the most dominant partner within the partnerships. Under all three regimes, 49% of all activities focused on improving initial education. Goals that were equally or more important for companies, by contrast, such as contributing to the companies' innovative strength, improving the match between education and the labor market, and lifelong learning, all received less attention. Over the years, this percentage increased further, with the exception of the PBT regime. The case studies revealed how this could occur: the partnerships in the case studies gradually became leader-follower relationships, with the educational institution in the dominant role, able to steer goals and activities, with insufficient counterweight from the governance regime (with the exception of the PBT regime). Lower-order trial and error problem solving was applied to questions of governance and structure, applying old methods to reinforce a more familiar situation in which education institutions would dominate.

Chapter four described the three policy perspectives that played a role at the start of the partnerships: the education perspective, the labor market perspective and the competitiveness and innovation perspective. Based on the results described above, it can be concluded that the education perspective was the most dominant, and became steadily more so as the partnerships developed.

Moving on to the next set of findings, chapter two introduced four ideal types of governance, two based on principal-agent governance (bureaucracy and new public management) and two based on network governance (network governance and experimentalist governance). Chapter five described the three distinct governance regimes that were in place for the partnerships, each with 15 to 17 partnerships under it, and chapter six described the experiences of project managers under these regimes. This brings us to the second research question:

- To what extent did subsequent developments in the governance of existing and new PPPs move away from principal-agent models and towards a more network and/or experimentalist governance framework?

Three governance regimes were put in place to guide the partnerships. They share important features. Within each regime, the overall goal was self-sustaining partnerships, with each partnership being free to set its own goals and choose its own activities. The overall goals of the regimes were not operationalized. Second, co-funding of partners was a requirement to acquire government funding. And third, all the regimes included an (intensively used) learning program through which the partnerships could share information, receive confidential feedback, and learn from other approaches. This learning program strongly influenced experiences with the governance regimes. Finally, the educational institution applied for and received the grant, and was responsible for reporting on the partnership's progress.

All three governance regimes were originally set up based on a principal-agent logic. However, this principal-agent logic was not applied strictly: principal-agent features such as auditing were weakly enforced, giving the partnerships significant freedom to maneuver. Additionally, self-sustaining partnerships with the freedom to set goals and choose activities, and the inclusion of a learning program, are both features that correspond closely with network governance. The (strict) requirement for co-funding and the monitoring of the use of that funding can be seen as performance indicators, and correspond to methods from new public management. Finally, the fact that the educational institution applied for and was granted funding is an aspect that corresponds to a principal-agent relationship between the Ministry of Education and educational institutions.

There are some respects in which the regimes differed. The RIF regime combined the network features with strong bureaucratic features, such as funding based on (achieved) activities, which was perceived as contradictory: the freedom to choose goals and activities was combined with strict monitoring of activities, with little formal room for maneuver, although permission to change the original approach was nearly always given. The PBT regime radically changed its approach. During the first few years, the regime had a strong new public management orientation, and was highly criticized for combining an emphasis on learning and development with performance indicators that had been specified in advance. This criticism led PBT to shift its approach towards network governance and two distinct features of experimentalism: accountability instruments were used for learning purposes, and the regime itself was able to adapt. Finally, the RCHO regime was characterized mainly by network features, emphasizing the different starting points of the PPPs

and focusing on creating conditions that were conducive to cooperation. The regime was criticized as superficial and too broad-brush.

Next, the results from the quantitative chapter seven and qualitative chapter eight provide an insight into how the partnerships dealt with these regimes, enabling us to answer the following sub-question:

- To what extent is there a relationship between development of PPPs in Dutch MBO/HBO and their governance?

Although the three governance regimes were originally set up based on a principal-agent logic, enforcement was weak and many network governance features were introduced, giving the partnerships significant freedom to maneuver. The explicit aim of all three regimes was to build sustaining partnerships and included freedom to set goals and choose activities. No differences were found between the governance regimes, even though the starting year, governing agency and main policy goals of the regimes were all different. Instead, the partners decided on their own goals and activities, with an important role for the learning program, which enabled the partnerships to learn from one another. Thus, the relationship between the development of PPPs and the policy goals of the governance regimes is weak by design.

There is however a relationship between the development of partnerships and their governance when considering problem-solving capacity. Positively, the fact that partnerships engaged in higher-level reflection in order to achieve their goals was an effect of the network approach taken within the governance regimes. The partners formulated their own goals and activities, reflected on whether these activities were proving effective and changed their approach where necessary without interference of the governance regimes. The fact that most of the partnerships continued their activities after the grant was finished is a positive sign that the approach in all three governance regimes was successful.

However, the regimes tended to lean strongly towards the dominant educational institution in the partnership, reflecting the traditional principal-agent relationship between government and education institutions. The educational institution was responsible for applying for and receiving funding, and the way in which that funding was spent had to fit within the rules and guidelines of the respective educational institution. This led to goal displacement on the part of the educational institutions as the dominant partners, an effect which increased over time (with the exception of the PBT regime), and to a situation whereby activities that were more challenging

to implement could easily be dropped or allowed to continue underperforming. In various ways, this strengthened the shift towards a follower-leader partnership, which became more pronounced over time and increased the focus on the core goals of the educational institution. Certainly over the longer term, this led inexorably to a smaller say for the businesses. In the case studies, this effect was visible in two of the three cases by the final years of our research period.

To some extent, the PBT regime was better able to steer the partnerships towards a more balanced partnership, showing that combining accountability with learning could lead to a more balanced partnership, preventing some of the goal displacement and leading to more activities outside the core activities of the educational institution. This will be explored in the next section.

For the next sub-question, chapter six on the experiences with the governance regimes, chapter eight on the case studies, and the quantitative analysis in chapter seven provide the most revealing information:

- What were the effects (both negative and positive) on the operations and performance of the PPPs of such shifts in their governance?

Three aspects of governance were seen as positive for the development of partnerships, and this is backed up by the quantitative data. First, the fact that there was an overall goal of achieving a self-sustaining partnership but with the freedom to choose its own goals and activities was seen as an effective approach. The diverse range of activities (as explained above), but also the continuation of most of the partnerships after the grant had finished, shows how this aspect helped the partnerships to develop. Second, the co-funding requirement was seen as positive, since it maximized the ownership of all the partners. This also explains the variety in the activities of the partnerships, with 50% of activities (potentially) benefiting partners other than the educational institution. From the case studies, it appears that the more activities focused on initial education, the more difficult it was to achieve co-funding. Third, the learning program was seen in a very positive light, especially with respect to support during the early phase of the partnership as decisions were made on goals, activities, structure and methods. This learning effect was particularly evident when comparing the pilot partnerships in the PPPs, and the integration of accountability and learning in the PBT regime shows how this contributed to problem solving in challenging areas such as lifelong learning.

Although it did not directly affect the operations and performance of the partnerships, one negative aspect was the lack of evidence regarding whether new goals and

methods actually helped to achieve the overall policy goals. The chosen network approach gave the partnerships significant freedom, but at the same time lacked a method for evaluating and comparing the effectiveness of the various approaches taken by the partnerships. And although the regimes did assess the progress of the partnerships, these assessments focused primarily on process indicators such as the number of companies involved, the amount of co-funding, or the scope of the activities. This point will be discussed in greater detail in the next section of this chapter, as it relates to a central weakness of network governance.

Two further negative aspects can be identified, which varied significantly between the governing regimes and significantly affected the operation and performance of the partnerships. First, under the RIF regime, strict monitoring of activities and limited room to maneuver significantly restricted the problem-solving capacity of the partnerships. This point comes across clearly in the case study, and is also evident in the quantitative data on lifelong learning, where nearly 44% of activities underperformed but were not adapted. This result could not be quantified further, indicating that this issue was not experienced in all RIF partnerships. Second, the RCHO regime with strong network features and (according to the criticisms made) a superficial and broad-brush approach, led to a situation in which over 48% of all activities relating to lifelong learning were dropped without any further intervention. Under the PBT regime, on the other hand, in which accountability was combined with learning, there was a 41% success rate in the area of lifelong learning (vs respectively 18% and 28% in the RIF and RCHO regime). It must be noted that since the number of lifelong learning activities was relatively low, these differences between regimes are not significant, and the quantitative results could not be confirmed for other activities. This indicates that not all partnerships experienced these effects. However, the effect of divergence in the approach taken and the results achieved is confirmed by the case studies.

These two negative aspects underscore an interesting point that was discussed in chapter one: to truly stimulate problem-solving behavior, the partners in the partnership would need to be placed in a situation of uncertainty in which falling back on old routines and methods was not an option, so that they would be required to engage in higher-level reflection. The RIF regime and RCHO regime offered many opportunities to fall back on old routines and methods as the partnership developed: under RIF, simply carrying out the activity plan was enough, and under RCHO it was fairly easy to simply 'drop' a challenging activity and focus on other activities. This can easily lead to a situation in which only first-order problem solving occurs. PBT, by contrast, combines learning and accountability and appeared to perform better, preventing the partners from falling back on old routines. In the case study, however, it

appears that the way in which this process is organized under PBT could be improved (this will be discussed in more detail in the section on policy recommendations).

Finally, the chapter on governance types and the connection with problem solving, combined with the three empirical chapters, provides an insight into the final sub-question:

- Could a more radical reorganization of the PPPs along experimentalist governance lines be expected to enhance their capacity to handle rising uncertainty?

The answers to the previous questions show that the strong network approach led to problem-solving behavior in the partnerships, a wider range of activities and lasting partnerships. Three negative aspects have also been highlighted: (a) it is unclear whether the activities actually led to progress on the overall policy goals of the regime; (b) the freedom to choose an approach gradually led to a more dominant role for the educational institution; and (c) the partnerships were able to drop activities that proved 'too challenging', even though these were key to achieving important policy goals. This led to a situation where other partners (other than the dominant educational institution) were less enthusiastic, and other routes had to be found to achieve more challenging policy goals.

As explained in chapter two, experimentalist governance is a coordinated method for learning through diversity, and lends a structure to the overly fluid practices of network governance. Experimentalism may be able to overcome the negative aspects outlined above in the following ways. First, and most importantly, in the four steps of experimentalism, the overall goals of a governance regime are linked to the problem-solving capacity of regional partnerships (see chapter two for an explanation of the four steps that are involved). This means that the partnerships would be asked to participate in structured peer reviews in order to evaluate which activities were contributing towards the overall policy goals. These results would then be processed in the framework with open-ended goals. Freedom in setting goals and choosing activities would be preserved, but the more structured approach to learning would help – or in some cases even force – the partnerships to choose activities that are actually effective and relevant to the policy goals. This approach could help to overcome issues (a) and (c) mentioned in the previous paragraph. For example, if lifelong learning is seen as a priority by only a few successful partnerships, both the overall goal of lifelong learning and the successful methods would become part of the governance framework. This would encourage all the partnerships to engage in lifelong learning activities, either by adopting the successful methods or by finding their own methods if they believed these would work better. To some extent, the RIF

regime did move towards this type of policy steering, as will be outlined in the section on the future of the partnerships.

Another benefit of implementing experimentalist principles would be that it would force a rethink of the (excessively) dominant principal-agent relationship between the Ministry of Education and the educational institutions which formed the basis for both applying for and receiving funding for the partnerships. The involvement of more stakeholders could influence the framework and open-ended goals would likely disrupt this setup, at the very least allowing room for other options. Additionally, experimentalism could even call into question whether and to what extent educational institutions should be involved at all, or whether other types of partnerships might be more effective.

The risk involved with experimentalism is that it could become a slightly improved version of new public management, due to the emphasis on monitoring and performance metrics. It is possible that the partnerships would follow the governance framework and existing practices too closely, without innovating in their goals and methods, because educational institutions are accustomed to following new rules and guidelines closely. As such, the design of any new regime, and especially the peer reviews, would be crucial and would need to avoid monitoring progress using performance indicators.

The second barrier, the dominance of one institution, is discussed at length in the literature on experimentalism, in which it is referred to as a structural barrier to change. To some extent, experimentalism assumes a willingness on the part of stakeholders to change the status quo, and the dominant role of the educational institution is a typical example. The solution of experimentalism lies in the possibility of a penalty default. In the case of partnerships, this penalty could be that if the educational institution is unwilling to share its autonomy with other partners, the grant will be awarded to another partner, for example. This solution has frequently been proposed in parliament as a method of addressing the dominance of the educational institutions within these partnerships, but has never been put in place.

How to implement aspects of experimentalism will be discussed in the section on policy recommendations.

Conclusion: a partial success story prone to failure

This section reflects on the results presented in this thesis and evaluates the main research question: how well-equipped is the governance framework for PPPs developed in Dutch VET and HPE to handle the uncertainty caused by rapid innovation and the increasing need for intertwinement between organizations? This question was motivated by the apparent contradiction between the governance regimes which emphasize the need to be responsive and demand-driven, on the one hand, and reports by evaluation committees that emphasize structural barriers to developing these partnerships and the need for more freedom for development, on the other hand. The combined results from the previous chapters contribute to our understanding of this contradiction, and this section provides some answers to the main research question.

The results clearly illustrate this apparent contradiction. On the one hand, the governance frameworks provided plenty of scope for the partnerships to be responsive and demand-driven, adopting a successful network approach with an emphasis on learning and development with some principal-agent elements. The framework was indeed able to provide freedom for development and led to some impressive results, including up to 10,000 participating businesses and 82,000 participating students, according to a recent impact study by Katapult (Katapult, 2019). Elements of this network approach have been transferred to the Katapult learning network, and the network is expected to grow strongly over the next few years.

On the other hand, the framework has not been able to overcome the fact that the educational institutions have become ever more dominant, redirecting the majority of funding and energy to the area of initial education. Additionally, two of the three governance regimes were unable to promote problem solving in the partnerships in relation to tackling tough but urgent challenges, most notably lifelong learning³².

This explains the title of this section: a partial success story prone to failure. Despite the successes achieved to date, without changes to the governance regimes we can expect educational institutions to retain their dominant position within the partnerships, and their activities to focus ever more on areas that are their key priority. This will reduce participation among businesses, leading to a spiral in which the education institution becomes ever more dominant. The fact that two of the three

32. This does not mean that there were no partnerships in these regimes that engaged in tough challenges such as lifelong learning; this point merely emphasizes that the governance regimes did not have any mechanisms installed to stimulate (or force) these partnerships to engage in these challenges.

frameworks were unable to encourage partnerships to engage in tough challenges also shows that the partnerships are not equipped for tackling tough but urgent challenges, which is likely to reduce the participation of businesses even further.

In the remainder of this section, the implications of these results will be analyzed further. First, from a policy perspective, we will discuss the future of these partnerships in the light of the latest policy developments. Second, we will critically appraise the strengths and weaknesses of network governance in this specific context. Third, possible solutions for overcoming the problems outlined will be discussed, building on experimentalist governance.

The future of the partnerships

The period in which the partnerships were researched ended in December 2017, but many developments have taken place since then which can shed more light on the research question. Although the picture outlined above may seem a somewhat pessimistic future outlook for the partnerships, some of the developments that have occurred in the last few years could lead to the continuation of partnerships, whilst others reinforce the conclusion that the partnerships will become increasingly education-dominated. In describing the latest developments, the three perspectives described in the chapter on policy context will be taken into account: the education perspective, the labor market perspective, and the innovation and competitiveness perspective.

The results of the *Regionaal investeringsfonds mbo* (Regional Investment Fund for MBO), instigated by the Ministry of Education and subject to the RIF regime, have received high acclaim and this fund has been extended until 2022. Funding has been changed in three noticeable ways. First, the fund focuses more explicitly on the areas of lifelong learning and research skills for vocational students. This encourages partnerships to engage in activities in these areas. Second, existing successful partnerships can scale up their activities, either by adding new target groups or by expanding their existing activities. For these scale-ups, partnerships are required to engage in activities that focus on research skills for vocational students. Third, the requirement for an activity plan for at least four years has been changed significantly: both the activities and co-funding must now be planned for a maximum of two years, after which a mid-term review is held. The first mid-term reviews will take place in 2021. Finally, the learning program has been extended, with an important role for assisting scale-ups and assisting in the mid-term reviews.

This development gives the existing fund a sharper focus on the labor market perspective (through lifelong learning) and the competitiveness perspective (through research skills). The renewal of the grant also steers the partnerships towards activities in areas where previous partnerships were less successful in (particularly lifelong learning). The addition of the mid-term review provides an opportunity to steer the partnerships midway through the program. Perhaps most importantly, this development shows that the Ministry has been able to learn the lessons of previous experiences and has altered the governance regime in such a way that the partnerships are able to continue to develop. Other features, such as the requirement for co-funding and the application and awarding of the grant by the educational institution, have not been changed. These developments could be very positive for the development of the partnerships, since they address some of the weaknesses observed in the regime.

The results of the Centers of Expertise also have been praised. The RCHO regime, however, has been cancelled entirely due to criticism on the performance agreements that were also part of this regime, and the funds for partnerships have been integrated into the regular funding settlement for the educational institution. In an agreement between the Ministry of Education and the HBO institutions in 2018, Centers of Expertise were added as a policy priority for the educational institutions. In 2019, the *Vereniging Hogescholen* (association of HBO institutions) established a committee to advise on the future of the Centers of Expertise, chaired by the Vice-Chair of an employers' association. This advice was published in October 2019, and it recommended reinforcing the approach taken by the RCHO. The advice is now being discussed by the HBO institutions, with no formal role for businesses. In practice, HBO institutions are now free to take decisions on the budget, and there are no co-funding requirements or even any requirement to engage in public-private partnerships. The *Vereniging Hogescholen* has a strong belief in the networking capabilities and intrinsic motivation of HBO institutions to engage in public-private partnerships. The Reiner Report shows that over 44 Centers of Expertise are indeed under development (Reiner et al., 2019). Recent field observations show they have a strong focus on practice-based research, a policy priority for HBO institutions. Preliminary observations also show that the size of the budget for the partnerships has been reduced significantly, and the target of achieving 50% co-funding has been abandoned.

The development described above seems to be reinforcing both the main strength and the main weakness of this governance regime, as observed in this thesis: on the one hand, Centers of Expertise have been widely implemented, and are likely to result in many more partnerships. On the other hand, the dominance of the educational

institution has been reinforced, with the key objectives of the HBO taking priority, thus limiting the scope for the involvement of businesses.

Finally, as mentioned in chapter four, the PBT regime was cancelled in 2016, when the RIF and RCHO regimes replaced the PBT regime. The PBT regime was discontinued, because the Ministry of Education wanted to keep closer control of the grants given to educational institutions, due to criticisms from the independent internal auditor of the national government (Auditdienst Rijk, ADR, yearly reports from 2015 onwards). Since the PBT was not formally a government agency, grants for educational institutions through the PBT were severely restricted. And although the PBT was involved in designing the RIF and RCHO regimes, these two regimes had a different governance 'tradition', resulting in very different regimes. As a consequence, the key feature of combining accountability and learning has been abandoned.

In light of these developments, it is likely that the development of partnerships in vocational education will continue, whilst in higher education the partnerships will be guided more by the aims of the educational institutions. Overall, the risk of overly dominant educational institutions remains constant. The direction that these governance regimes take can be explained by the fact that the debate on the steering of educational institutions is dominated by questions regarding the (range of) autonomy of the educational institution, the quality of initial education, and the administrative burden of accountability, reinforcing old routines³³. These debates focus primarily on the relationship between the government and educational institutions. While the PBT regime studied in this research was able to combine accountability and learning, under the new governance regimes, no such combination is possible. Additionally, the position of the educational institution is as strong as or even stronger than before. It remains to be seen what the effect of these policies will be, but the initial political discussions have already begun. There has been criticism of the dominance of educational institutions, especially in the relationship between the education sector and the labor market, resulting in calls for top-down bureaucratic rules. One resolution recently passed by the Dutch Parliament illustrates this, calling for an *"exploration of whether a national consultation structure can be established between higher professional education and organized business in which non-binding agreements are made about the relationship between education and the labor market, following the example of or in consultation with the consultative bodies of SBB"*³⁴.

33. See for example the debates on <https://www.scienceguide.nl/2018/04/huidige-kwaliteitsafspraken-smaller-geworden/>, accessed 25-6-2020

34. <https://zoek.officielebekendmakingen.nl/kst-31288-825.html>, accessed 27-06-2020

Alongside these developments, the Dutch government is also actively seeking to address skills shortages in other ways, as explained in chapter four. Very often, this involves the same actors as in the partnerships. When reviewing these newly established grants, and comparing these to the approaches studied in this thesis, these grants differ in the following three ways. First, the new grants are aimed at more specific goals, such as implementing a 'third learning path' for employed persons and jobseekers, or a grant for SMEs to 'remove obstacles to investing in training and development'. Second, these grants are no longer only issued by national government, and regional governments are also providing similar targeted grants. Third, with the help of the Ministry of Economic Affairs, business associations are increasingly encouraging partnerships that are driven by companies, such as Smart Industry Field Labs, which also aim to establish skills programs that aim to train and educate their employees.

By 2020, this has led to a situation in which there are now over 48 different grants that aim to address the skills shortage (Katapult, 2020a), each with a (slightly) different approach. Some of the partnerships researched in this thesis are actively seeking additional funding and activities to build on their existing partnership. But many new partnerships have also been launched: there are already 334 partnerships in the Katapult network, of which 143 were not established in the RIF, RCHO or PBT regimes (Katapult, 2019). Given that the amount and scope of the grants is increasing over time, the problems observed in this thesis are likely to become more pronounced and more politically challenging because: (a) the effectiveness of the activities carried out using the grants cannot be assessed; (b) criticism of the dominance of most powerful actors is increasing; and (c) really tough challenges are not being addressed.

Network governance: weaknesses and strengths

Reviewing the various policy initiatives in the previous section, there is clearly a strong belief that the way forward is to create partnerships (either with or without publicly funded education) that have (some degree of) freedom to choose their own goals and activities, and that there should be some sort of government funding to support these activities. One urgent question, however, is how to bring these partnerships about, and what type of governance is the right way forward, in light of the barriers observed in this thesis. What the previous section demonstrates is that, even between vocational education and higher professional education, there is a significant divergence regarding what is considered an effective governance regime for these partnerships. Similar divergences exist regarding the position of employer associations, employee associations and other actors.

The current focus on stimulating partnerships is clearly dominated by network governance, and this approach suffers from one very important weakness. To quote Koppenjan and Klijn (2004: 258) in their reflection on their frequently cited work on how to deal with networks: “much problem solving takes place in closed subsystems, where vested interests attempt to realize solutions on close cooperation with government through the exclusion of non- or weakly represented parties, the blocking of innovative solutions that violate the dominant interests and preferences, and non-transparent processes that lack democratic control and legitimacy. The outcomes are ineffective, inefficient and insufficiently legitimized solutions and decisions that benefit from those directly involved in the short run, but are undesirable from a broader perspective.”

Thus, inside the partnerships, battles are fought over whose interests and preferences will prevail: those of the educational institutions, the companies or regional government. The case studies revealed several examples of such battles, which arose during the development of the partnerships: the increasing dominance of the educational institution within the partnership; discussions around activities that primarily benefited businesses rather than students; companies that were used to a more commercial approach to activities and more willing to introduce a revenue model, while the educational institutions were more reluctant to do this.

This thesis clearly shows the strength of network governance in empowering networks to develop a wide array of activities, but also its weakness when it comes to steering on outcomes. The battles mentioned in the previous paragraph remain ‘invisible’ from a democratic point of view; they take place within the partnership, and it can take years before the results are visible to outsiders. Although the partnerships will continue to learn and develop, it is possible that they may learn and develop into a sub-optimal direction. This means the outcomes may be ineffective, inefficient or insufficiently legitimized from a broader perspective. As described in chapter three, a principal-agent solution would involve the government setting rules and guidelines to prevent this from happening, but this would also strip away much of the innovation and creativity. This is a strong argument for finding a way to retain the strengths of network governance, while also introducing more structure in order to ensure that solutions have more democratic legitimacy. This proposal will be discussed further in the following section.

Implementing principles of experimentalist governance

Although the three governance regimes were originally set up based on a principal-agent logic, they shifted significantly towards network governance. However, in developments since the research period, new regimes have reinforced the relationship between the government and the educational institutions, reflecting current debates between associations of educational institutions and the Ministry of Education. These approaches contrast with the earlier policy conclusion that the way forward on the skills problem is to create partnerships. There is significant divergence regarding what is considered an effective governance regime to encourage these partnerships. One promising way forward is to implement the principles of experimentalist governance, as this could provide an opportunity to combine accountability with learning, and to create a framework with open-ended goals with local implementation by stakeholders. The implementation of such a governance approach could enable stronger steering on outcomes while also avoiding heavy-handed, top-down governance methods, which educational institutions would rather avoid.

In the case of public-private partnerships aimed at addressing skill shortages, the conditions for implementing experimentalist governance would be met. First, governments are yet unable to formulate a “comprehensive set of rules and effectively monitor compliance”, there should not be disagreements over basic principles to avoid distributive conflict, and it requires openness to other (civil society) actors, “either as agenda setters or problem solvers” and an acceptance that they are indispensable for success (De Burca et al., 2014: 483-484). In the case of partnerships, actors agree on the urgency of the goals, they have accepted the need for cooperation in order to move forward, and there is a very turbulent and uncertain environment. Many civil society actors are willing to contribute as agenda setters or problem solvers, as numerous private initiatives have shown. However, if the situation were to change and, for example, funding for educational institutions was under threat, or if the historical positions of other actors was threatened, it is likely that substantial distributive conflicts would arise. In other words, experimentalist governance is less suitable approach in a context where major political and redistributive debates are at stake.

Experimentalist governance could therefore serve as a viable route by which to address the skills problem, and could be used in several other situations as well. In purely practical terms, the implementation of (a form of) experimentalist governance would be feasible, and would require at least the following two steps. First, the actors that provide the various grants, meaning several Ministries, employers’ organizations, and regional governments, would need to agree on a broad framework

with open-ended goals, which would be updated periodically. Although structures like the Social Economic Council could provide the necessary structure, this would entail the risk that, rather than a critical review of the outcomes of the various peer reviews, political disputes would ensue. Second, several grants could be provided in parallel, but within each grant, an 'experimentalist' route would be added that could replace the usual methods that partnerships are required to follow when reporting. This experimentalist route would include a structured form of peer review, with a structured method for reporting back to the central actors. If a partnership was unable or unwilling to participate in this route, it could fall back on the other – less attractive – route. The experimentalist route could also include a form of learning program, to disseminate the lessons learned through the various peer reviews, or could include a way of sharing these lessons with the several learning programs that exist already.

These two steps would result in a more structured way of learning from diversity and better feedback to the national policy level, and it could prove to be a way of tackling the dominance of the educational institutions and diverting resources and attention to more challenging policy priorities. More generally, authors on experimentalism also state that the governance can be used in most areas of public policy where general outcomes – such as water quality or good healthcare – are generally accepted as important. Interestingly, one of the first projects of the European Union on Platforms of Vocational Excellence focuses on water quality, combating the issue of the aging workforce in water companies and the lack of skilled existing employees. In chapter ten, further recommendations are given to governments how to practically implement these principles.

Research limitations

The first limitation of this research is the lack of significant variation between the governance regimes. Although the regimes appeared very different at first glance, they were initially based on principal-agent logic, with various network characteristics added. In practice these differences proved smaller than expected. This result is an interesting finding, but – with hindsight – it would have been interesting to consider examples outside the context of vocational and higher education, or to compare different European countries with similar policies. The relative lack of variation limited the comparable results in this thesis.

The second limitation is the fact that the results of the quantitative analysis depended on self-monitoring by the partnerships. This proved to be a valid way of measuring the success rate of the partnerships, but this method limited the extent to which the performance of the partnerships could be compared. In fact, in the policy recommendations, precisely this approach is recommended in order to gain

a better understanding of the actual effectiveness of partnerships. However, and this will remain problematic regardless of the governance regime or the partnership: partnerships are inherently hard to compare because they start from different positions and they operate in very different environments. Comparing performance can quickly lead to an NPM approach to managing the networks, and this involves significant risks.

Third, the study focuses primarily on problem-solving behavior within partnerships, and (intentionally) did not consider other issues that arise in the formation and development of partnerships. One example is the extent to which the partnerships are democratically accountable, and how these partnerships relate to the accountability of educational institutions to the political arena. When this perspective is considered, it is easier to understand why some educational institutions resisted change: they were afraid they would be held responsible if the partnerships developed in the wrong direction. Key issues concerning accountability may well have limited problem solving within the partnerships. Although this perspective has been taken into account in this thesis, the subject of accountability involves many more dimensions which could explain the dominance of educational institutions within the partnerships.

Fourth, the researcher was closely involved with the governance regimes and partnerships, and worked with PBT. Although this allowed the level of detail in this study that would have been hard to accomplish without, this position also meant that there is a risk of bias towards the researchers' own or PBT's preferences and opinions. The researcher was aware of of this risk, and attempted to avoid this bias by using triangulation: multiple methods and data sources were used to validate the results (for example the combined quantitative and qualitative approach, and using interview results conducted by other interviewees as well).

Further research

A fairly obvious area in which to extend this research would be to take a European perspective, given the development of the Platforms for Centers of Vocational Excellence. Since these Centers are regionally embedded but linked at the European level, this would provide an opportunity to research how – from an European perspective – solutions to the skills gap are being generated, how these Centers can learn from each other, and whether the European Union is able to introduce a (peer) learning approach, as it plans to. The researcher is currently exploring the feasibility of such a research, since the Katapult learning program is being expanded into other countries.

Second, in the Dutch context, many other grants are now being proposed in order to achieve similar goals. Each of these grants has a different approach, sometimes with companies taking the lead, in other cases with the educational institution taking the lead, and in some cases business organizations or even employer associations. This proliferation of new initiatives provides a very good opportunity to systematically compare approaches and consider their effectiveness, both by evaluating their approach and the projects that are funded. If all these grants were to be accompanied by a research program, this could significantly improve the effectiveness of the policy. Such an approach has been proposed within the Top Sector approach in the Netherlands, with the aim of carrying out a research program of €30 million to investigate these partnerships.

Third, this study gives a very detailed account of how 48 partnerships have evolved over the years within three regimes. However, it does not take into account partnerships that were developed outside a top-down governance regime. Comparing 'bottom-up' partnerships with 'top-down' partnerships, in order to discover which approach was more effective, would be another interesting area for research.

Fourth, in order to compare 48 partnerships, a fairly broad definition of problem solving and partnerships was used in this study. This means that the partnerships were diverse in terms of their approach, target groups and educational sector. From the perspective of – for example – partnerships that focus on practice-oriented research or the development of hybrid learning environments, it would be valuable to focus on these types of partnerships and their effectiveness.

Finally, this thesis assesses the strengths and weaknesses of network governance and shows how experimentalist governance could be a way of overcoming the weaknesses inherent in network governance. There is an assumption that educational institutions are willing to change. One interesting question, however, is how and to what extent educational institutions can and do change; and, therefore, how – from a theoretical point of view – bureaucracies can change into experimentalist organizations, renewing and revisiting the established view of bureaucracies (Olsen, 2004).



Chapter 10
Policy epilogue

10. Policy epilogue

This chapter reflects on the practical implications of the results of this thesis, and incorporates the ten years of experience acquired by the researcher in the governance of public-private partnerships in vocational and higher education, and its benefits and drawbacks. The observations and recommendations presented in this chapter are designed for policy makers in the Netherlands and throughout Europe.

This policy epilogue builds on the message of the conclusion – ‘a partial success story, prone to failure’ – and offers concrete recommendations on how to retain the strengths of the Dutch approach while also addressing its weaknesses. To briefly recap, partnerships between education and businesses are increasingly seen as a way to address the skills gap – that is to say, the mismatch between the current and future workforce and the requirements of employers due to rapid changes in technology and society. For example, reports estimate that at least 58% percent of all jobs will undergo significant change over the next ten years (Manyika, 2017), and this is without even considering the impact of the COVID-19 pandemic. Partnerships between businesses and educational institutions are increasingly seen as a solution to this skill gap (European Commission, 2020), because they include both public and private partners and should be able to achieve goals that could not be achieved independently. This thesis has evaluated the extent to which these partnerships are able to engage in reflective problem solving to achieve new goals and innovative methods of tackling the skills gap – as opposed to applying old methods and routines to problems that have been tried and failed before. Additionally, the thesis has evaluated the extent to which the government has been able to guide these partnerships towards successful problem solving.

Problem solving, one focus of the thesis, is motivated by the need for education institutions and businesses to respond and adapt to rapidly changing circumstances and continuously search for new solutions. If they succeed, the continuous search for new goals and methods leads to reflective problem solving, and subsequent partnerships can be directed towards promising goals and methods. As a spill-over effect, the results of these partnerships could be applied in less volatile environments (Sabel, 2004), such as the regular work of educational institutions or large businesses. However, problem solving is often said to be hindered by the governance system. Existing rules, procedures, bureaucracies, targets imposed from the top down – all these are often said to restrict the scope for problem solving (see chapter three of this thesis). Within the Dutch education system, there are many examples of such restrictions: top-down performance agreements, top-down qualifications structures (*kwalificatiedossiers*), strict rules on public-private cooperation, accountability rules,

bureaucratic rules and procedures set within educational institutions, and so on.

Observations

The current approach by the Dutch government is a *partial success story*. Summarizing from the concluding chapter, the approach is a success, because 15.000 companies and nearly all education institutions became involved with these partnerships in a period of ten years (Katapult 2020), investing in these partnerships with the aim of long-term cooperation. The companies and schools within the partnerships managed to engage in a mixed set of goals and activities, of which 40% were experienced by the partners as successful. Most partnerships continued after the grant was given. The implemented governance regimes thus led education institutions to become more responsive and flexible: they brought 'outsiders' in, stimulated cooperation, and led to reflective problem solving towards new goals and activities. This conclusion is in line with external review committees that evaluated (parts of) these regimes (see page 14 of this thesis). The approach is *partial successful* because of the fact that 50% of activities focused on the core activity of the education institution (improving initial education), which was not a direct aim of the governance regimes. This left less room for activities that were outside the comfort zone of education institutions, such as lifelong learning. Additionally, activities that were started outside this comfort zone failed or were dropped more frequently. Of the three governance regimes compared, the approach taken by the *Platform Bèta Techniek* (PBT) proved most successful in this respect.

The success of the approach can be explained by the strongly network features of the governance regimes. The regimes steered the partnerships towards long-term cooperation, and the goals and methods used to achieve them were explicitly left to the partners themselves to agree on. The specific requirement for co-funding reduced non-committal behavior by the partners. And the accompanying learning program helped the partnerships to engage in new activities and loosen the existing bureaucratic relationship between educational institutions and the government. The principal-agent features of the governance regimes (such as top-down assessment committees and activity-based funding) were present but did not predominate; these were, in the main, seen as a bureaucratic burden. Nevertheless, the strong network characteristics also led to goal displacement towards the goals of the educational institution, risk-aversion with respect to the goals that the educational institutions were less comfortable with, and the emergence of leader-follower relationships with the educational institutions in the dominant role. The long-term feasibility of this approach is therefore open to question: goal displacement increased during the research period, and this is very likely to reduce the participation and commitment of the businesses involved, leading to a cycle in which the education institution

becomes ever more dominant. To some extent, the PBT approach, which explicitly combines learning and accountability, led to more balanced partnerships, less goal displacement and, as a result, activities such as life-long learning were addressed more seriously.

Policy recommendations

First, in light of these observations, the strengths of the Dutch approach must be underlined: a network approach to achieve long-term cooperation, the freedom to formulate goals and decide on the methods used to achieve those goals, the explicit requirement for co-funding, and the positive effect of the accompanying learning program in loosening the bureaucratic relationship between educational institutions and the government. These are important lessons when considering the future policy for Netherlands, and are also relevant to other countries where partnerships between education and companies have not yet been attempted.

Second, however, major improvements could be realized to counter the drawbacks of the network approach. Lessons from experimentalist governance (EG) are helpful, because this type of governance focuses specifically on the negative effects observed: EG aims to lend more structure to the otherwise overly fluid practices of network governance, and has “*distinctive mechanisms for accountability, monitoring, and compliance enforcement [that] respond to the demands of a world in which precise policy goals and methods of achieving them cannot be determined ex ante, must instead be discovered in the course of problem-solving*” (Sabel and Zeitlin, 2012). First, EG focuses on ‘diagnostic monitoring’: error detection, root-cause analysis and benchmarking with others, specifically at the lowest level of implementation. Rather than activity-based funding or top-down assessment committees, EG involves the use of peer reviews as a central mechanism, emphasizing the scope for tailor-made solutions and local innovation. Peer reviews are thus considered an alternative to top-down monitoring and assessment, which builds in accountability and learning mechanisms.

This approach was not taken in the governance regimes researched here, which instead focused on a weakly implemented form of top-down steering. The researcher, following preliminary results of this study, initiated a systematized peer-review approach within the Katapult network in 2019³⁵. This approach has currently been tested both within the overhauled RIF regime (MBO) and within the overhauled regime for Centers of Expertise (HBO). The initial evaluations of this approach have

35. <https://www.wijzijkatapult.nl/tools/peer-review/>

been positive: both partners and peers are very positive about the learning effects, and are particularly satisfied with the level of the concrete recommendations. This approach is considered more helpful than an external committee that focuses on assessment rather than learning, because in peer review the emphasis is on learning from peers instead of assessing progress. This is underlined by the fact that the previous 'phase model', which implied some kind of blueprint for the development of the partnerships, has been replaced by a model that focuses on 'building blocks' for partnerships. Embedded in the peer review approach is a broader evaluation of multiple peer reviews, learning general lessons and giving general recommendations to a larger group of partnerships and stakeholders, as part of the Katapult learning program.

However, this type of approach is not yet considered a legitimate alternative within the governance regimes, which is a testament how firmly rooted they are in principal-agent relationships. For example, in the RIF regime (MBO), an external committee now performs a mid-term review, and while the peer review is considered a useful learning activity, it has no role in accountability. For the Centres of Expertise (HBO), an advisory committee explicitly compared the option of an external assessment committee with the option of a peer review, and recommended the implementation of a peer-review system based on the Katapult model (Reiner, 2019). However, the current emphasis in HBO is on granting autonomy to individual educational institutions, and a peer-review model could be seen as an impediment to that autonomy. Additionally, peers within the Katapult network are reluctant to propose the peer review model as a form of accountability, as this might limit its learning aspects. Thus, even though evidence of the effectiveness of peer reviews is increasing (Sabel and Zeitlin, 2012; Ho, 2017), peer review is not yet considered to be a viable alternative. In the longer term, this could lead to reduced participation in peer reviews (as there would be two forms of review). Experience in Katapult's learning program has revealed that usually two types of partnerships participate in peer review: the best-performing partnerships participate in these type of activities (because they are the most eager to engage in reflective problem solving) and the partnerships that are performing very badly (since they have nothing left to lose).

Using a form of peer review, experimentalist governance focuses on a "*recursive process of provisional goal-setting and revision based on learning from the comparison of alternative approaches to advancing them in different contexts*" (Sabel and Zeitlin, 2012: 169). 'Recursive' in this context means the continuous evaluation and improvement of existing goals and methods. Several types of recursive learning are distinguished. First, in high-reliability organizations (HRO), such as nuclear plants, the focus is on error-detection and root-cause analysis,

with a focus on near-miss reporting. In 'rolling-rule regimes', a broad goal is set and local actors are benchmarked against a standard, with a focus on continuous improvement. In pragmatist organizations, a system is implemented to detect and correct errors at the lowest level, and this is subsequently applied to higher levels (Sabel 2004). The essential point across all these types of organizations is that learning and accountability are interwoven: in all these types of organizations, the explicit aim is to identify errors and best practices that can be disseminated in order to improve collective performance. This runs counter to the prevalent conception of accountability in today's MBOs and HBOs.

The desire to implement this key feature of EG can be observed by the project managers within partnerships, as observed in this thesis (chapter six). Project managers emphasize the fact that goals and methods are still unknown, and that there is an eagerness to learn from alternative approaches. This observation is also shared by the Social and Economic Council (*Sociaal Economische Raad, SER*), which is currently implementing a program to promote initiatives for life-long learning, focusing specifically on learning from and sharing good practices.³⁶ However, in their current form, the governance regimes are not equipped to handle this key feature: their primary logic is based on principal-agent relations, emphasizing the need to control and monitor the actions of the executing actors. Instead, the roles of the principal and agent need to be redefined: agents are responsible for setting concrete goals and deciding on methods, while the principal is responsible for establishing an overall framework and for equipping agents to engage in reflective problem solving.

Implementing these key features in future funding rounds would require a rethinking of the existing rules for allocating funding to educational institutions and companies, because these rules adhere strictly to a principal-agent logic. In all likelihood, implementing the four clearly described steps of EG (see page 44 of this thesis) would vastly improve the results achieved with the same funding, and at the same time fulfill the need for accountability and transparency. This approach would reinforce the strengths of the existing network approach, remove the bureaucratic burden of persistent principal-agent features, and at the same time give the top-down actor more capacity for peer review-based steering based on promising goals and methods. EG principles could be applied to the European Skills Agenda (European Commission, 2020), for example, under which Centers of Vocational Excellence are being created with a focus on establishing partnerships in vocational education and businesses. Another example is an existing grant awarded by the Dutch Ministry of Social Affairs, which focuses specifically on establishing partnerships to promote learning and

36. <https://www.ser.nl/nl/thema/leven-lang-ontwikkelen>, accessed 1-07-2020

development in SMEs³⁷ The COVID-19 pandemic has increased the focus on life-long learning and the mismatch between the education system and the labor market, and this will likely result in new or redefined grants. Finally, implementing these principles in the quality agreements for MBO and HBO, the most important steering instrument that the Ministry of Education has at its disposal could help to resolve the current debate around on the one hand the need for greater transparency over the results achieved by educational institutions, as requested by the Dutch Parliament, and on the other hand more emphasis on the autonomy of partners to decide on goals and methods, as advocated by associations of educational institutions.

One remaining question is how to resolve the problem of an overly dominant partner that is able to engage in goal displacement. In principal-agent governance, a solution to this problem would be power-sharing at an institutional level. The recent resolution passed by the Dutch Parliament to explore a '*national consultation structure (...) between higher professional education [HBO] and organized business*' – as has already been implemented in MBO – is one example of such a solution. This resolution is a response to the overly dominant role of educational institutions in the eyes of organized business and the Parliament. However, this path is also leading to a power struggle at the national level, and will not directly affect the dynamics within partnerships. For example, the fact that this national consultation structure already existed in MBO during the period of this research (although not in HBO), did not result in better results being achieved by the MBO partnerships. A more promising approach would be to highlight good practices at the local level, where power sharing would lead to better results, and actively moving these practices horizontally and upwards. A penalty default (see page 45 of this thesis) could force those actors that do not cooperate with these practices into a situation of uncertainty, obliging them to engage in reflective problem solving based on proven good practices, for example by threatening to include rules on public-private cooperation assessed by the Education Inspectorate. These local effects would move upwards, too, leading to power-sharing at the institutional level rather than the power struggle that we see today.

To conclude, willingness and enthusiasm among project managers, teaching staff and employees to address the skills gap through closer cooperation between schools and businesses remain very high, and the first results have been promising. The challenge for policy makers today, however, is to effectively harness that willingness by structurally enabling these actors to engage in reflective problem solving and learning from diversity.

37. <https://www.ser.nl/nl/thema/leven-lang-ontwikkelen>, accessed 1-07-2020

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Appendix I: list of abbreviations

PPP(s):	Public-Private Partnership(s).
CoE(s):	Centre(s) of Expertise.
CIV(s):	Centra voor Innovatief Vakmanschap, Centres of innovative craftmanship.
DUS-i:	Dienst Uitvoering Subsidies Instellingen, executing agency for providing grants to education institutions.
RCHO:	Reviewcommissie Hoger Onderwijs & Onderzoek, Review committee for higher education and research.
VET:	Vocational Education and Training.
HBO:	Hoger Beroepsonderwijs, higher professional education. The institutions in the HBO are called hogescholen, and are translated as Universities of Applied Science.
MBO:	Middelbaar Beroepsonderwijs, vocational education.
PBT:	Platform Bèta Techniek, Platform for Science and Technology.
ECBO:	Expertisecentrum voor Beroepsonderwijs, Centre of expertise in vocational education and training.
WRR:	Wetenschappelijke Raad voor Regeringsbeleid, The Netherlands Scientific Council on Government Policy.
WEB:	Wet Educatie Beroepsonderwijs, Law on Vocational Education.
BOL:	Beroepsopleidende leerweg, learning path in MBO.
BBL:	Beroepsbegeleidende leerweg, learning path in MBO.
SBB:	Stichting Beroepsonderwijs Bedrijfsleven, Association for Education and Businessess.
WHW:	Wet op het Hoger Onderwijs, law on higher education.
NVAO:	Nederlands-Vlaamse Accreditatieorganisatie, Accreditation Agency of the Netherlands and Flanders.
MOOCs:	Massive Online Open Courses.
NWO:	Nederlandse Organisatie voor Wetenschappelijk Onderzoek, National Research Organization.
CDA:	Christen Democratisch Appel, Christian Democratic Party.
VVD:	Volkspartij voor Vrijheid en Democratie, Liberal Party.

Appendix II: learning activities

SWOT: Strength, weaknesses, opportunities and threats analysis

Kennismakingsgesprek: introductory meeting and advisory meeting

Verduurzamingsessie: workshop on how to make a partnership sustainable

Regioanalyse: analysis of how the partnership operates in the region compared to other PPPs

Niet zoveel contact tussendoor: limited contact between PBT and partnership, once or twice a year

Veel tussendoor contact met projectleider: intensive contact between PBT and partnership, at least four times a year

Individueel advies over verduurzaming: advice on how to make a partnership sustainable

PPS RIF	Learning activity
Masterplan MEI	SWOT 2014* Kennismakingsgesprek 2015 Verduurzamingsessie januari 2018 Regioanalyse 2018* Niet zoveel contact tussendoor
Aerospace maintenance	SWOT 2014* Kennismakingsgesprek 2015 Henk Heijnen PPS Z-O Verduurzamingsessie januari 2018 Regioanalyse 2018* Veel tussendoor contact met projectleider
DC Tech	SWOT 2014* Kennismakingsgesprek 2015 Individueel advies over verduurzaming 2017 Verduurzamingsessie 2018 Veel tussendoor contact met projectleider Bijeenkomst Topsector chemie
Zorgboulevard Roosendaal	SWOT 2014* Henk Heijnen PPS Z-O Verduurzamingsessie januari 2018 Regioanalyse 2018* Veel tussendoor contact met projectleider Bijeenkomsten Zorgpact

Food and Process Tech Campus	SWOT 2014* BTW casus 2016 2x Verduurzamingssessies 2017 Verduurzamingssessie januari 2018 Gemiddeld contact tussendoor met projectleider Winnaar Pro-motor award 2017
System integrator	SWOT 2014* Kennismakingsgesprek 2015 Regionanalyse Zuid Holland Henk Heijnen PPS Z-O
RTC 2020	SWOT 2014* Kennismakingsgesprek 2015 Verduurzamingssessie 2018
Techport	SWOT 2014* Kennismakingsgesprek 2015 Techport 2.0 sessie Corina Kuiper* Verduurzamingssessie 2018
Kennisplaats Westerkwartier	SWOT 2014* Kennismakingsgesprek 2015 Verduurzamingssessie 2018
Greentech PPS	SWOT 2014* Kennismakingsgesprek 2015 (?)
House of logistics	WOT 2014* Kennismakingsgesprek 2015 Regionale analyse 2017* Verduurzamingssessie 2018 Veel individueel contact
SCIVCI	SWOT 2014* Regionale analyse 2017 Verduurzamingssessie 2018 Veel individueel contact (incl case film)
PPS VMT	SWOT 2014 BTW casus Regionale analyse 2018 Verduurzamingssessie 2018
Techwise	SWOT 2014 SWOT 2015 Verduurzamingssessie 2018 Veel individueel contact, oa studiereizen

HTC Delft	SWOT 2014 Kennismaking 2015 Ondersteuning Corina 2016 Verduurzamingssessie 2018 Veel individueel contact
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PPP RCHO

Learning activity

Greenpac	No SWOT Organized GA 2016 Uses typology model in progress report Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Genomics	SWOT 12 november 2015 (na midterm) Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Entrance	SWOT 26 juni 2013 SWOT 22 april 2014 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
ACIN	Informeel feedback 2013 tbv review RC Informeel feedback 2014 tbv review RC Inventarisatie koers 2017 en verder Informal contact roughly twice a year
CoE BBE	SWOT 2 juli 2013 SWOT 1 september 2014 SWOT 7 maart 2016 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Ucreate	Informeel feedback 2013 tbv review RC Informeel feedback 2014 tbv review RC Inventarisatie koers 2017 en verder Informal contact roughly twice a year
KennisDC Logistiek (interviewed)	Informeel feedback 2013 tbv review RC SWOT 7 april 2015 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Fontys HTSM	SWOT 2 maart 2015 Inventarisatie koers 2017 en verder Informal contact roughly twice a year

TechForFuture	21-8-2013 gesprek PBT over kennisprogramma Uses typology model 9 mei 2016 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
CELTH	SWOT 19-2-2014 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Deltatechnologie	No SWOT Inventarisatie koers 2017 en verder Informal contact roughly twice a year
TechYourFuture	Uses typology model 2016 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
RDM	SWOT 10 juli 2013 Informeel feedback 2014 tbv review RC Inventarisatie koers 2017 en verder Informal contact roughly twice a year
SEECE	SWOT 3 juli 2013 SWOT 24 juni 2014 Inventarisatie koers 2017 en verder Informal contact roughly twice a year
EIZT	No SWOT Inventarisatie koers 2017 en verder Informal contact roughly twice a year
Healthy Ageing (interviewed)	SWOT 10 juni 2013 SWOT 22 april 2014 Inventarisatie koers 2017 en verder Informal contact roughly twice a year

Appendix III: categories and activities

Category	Activity
Improve initial education	Topopleidingen niveau hoger
Improve initial education	Verbeteren reguliere opleiding (+participatie hierin)
Improve initial education	Praktijkgericht onderzoek (sec, volume)
Improve initial education	Praktijkgericht onderzoek in onderwijs
Improve initial education	Praktijkgerichte opdrachten (vanuit bedrijven) in onderwijs
Improve initial education	Multidisciplinaire teams
Improve initial education	Multi-level teams mbo-hbo-wo
Improve initial education	Masterclasses voor studenten
Improve initial education	Masterclasses /opleidingen voor docenten
Improve initial education	Versnelde route mbo-hbo
Improve initial education	Ontwikkeling keuzedelen / minoren/specialisatie
Improve initial education	(Inter)nationale stage / trainees
Improve initial education	Docenten uit het bedrijfsleven
Improve initial education	Aankomende docenten betrekken
Improve initial education	Ontwikkeling Associate Degree met hbo
Improve initial education	Ontwikkeling leerwerkomgeving
Improve initial education	Onderzoekspublicaties
Improve initial education	Master onderwijs
Improve initial education	Promovendi
Improve initial education	Lectoraten
Improve initial education	Certificaten / additionele waardering
Improve initial education	Internationale studenten
Life long learning	BBL opleiding niveau 4+
Life long learning	Individuele modules voor medewerkers
Life long learning	Maatwerk voor bedrijven
Life long learning	Masterclasses voor werkenden / ondernemers
Life long learning	Duale Associate degree met hbo

Life long learning	Om en bijscholing werkzoekenden
Contribute to innovative strength	Onderzoeksprojecten voor bedrijfsleven
Contribute to innovative strength	Ontwikkelopdrachten vanuit bedrijven
Contribute to innovative strength	Verhuren van faciliteiten (facility sharing)
Contribute to innovative strength	Licenseren / verkopen van ontwikkelde kennis / IP.
Contribute to innovative strength	Commerciële opdrachten in faciliteiten
Contribute to innovative strength	Kenniscirculation activities (theme days, seminars, etc.)
Contribute to innovative strength	Start ups
Contribute to innovative strength	Maatschappelijke vraagstukken onderzoeken
Contribute to innovative strength	Co-creatie sessies met bedrijven
Contribute to innovative strength	Publicaties voor praktijk
Contribute to innovative strength	Bedrijfsnetwerk onderhouden
Contribute to innovative strength	Talentprogramma professionals
Contribute to innovative strength	Bijbanen in de sector voor studenten
Production and research facilities	Productie- en onderzoeksfaciliteiten van onderwijs
Production and research facilities	Gezamenlijke faciliteiten bedrijfsleven en onderwijs
Production and research facilities	Gebruik maken van externe faciliteiten
Match labour market & education	Doorlopende leerlijnen vo-mbo/hbo
Match labour market & education	Doorlopende leerlijnen mbo-hbo
Match labour market & education	Doorlopende leerlijnen hbo-wo
Match labour market & education	Promotie basisonderwijs
Match labour market & education	Promotie voortgezet onderwijs
Match labour market & education	Meer studenten door marketing & communicatie

Appendix IV: Interviewees and sources

RCHO

- Assessment framework Centres of expertise
- (All) formal assessments from Centres of expertise
- Public evaluations of RCHO and Centres of expertise
- Assessment committee reports and informal notes by researcher
- SWOT analysis performed by PBT to assist in RCHO-regime

PBT

- Call for proposals for PPPs
- Public audit reports of assessment committee
- Individual audit reports of assessment committee
- All progress reports by PPPs
- Informal notes of assessment committee and correspondence between PBT and committee

RIF

- Regulations on the Regional investment fund vocational education
- External evaluation of Regional investment fund in 2015 (ResearchNed)
- Individual progress reports of PPPs
- Assessments of individual projects of RIF
- SWOT analysis performed by PBT to assist the RIF regime (start at halfway)

Interviews with project managers

- Wim van der Maas – projectleider Aerospace Maintenance, 2018
- Manfred van der Kreeke – projectleider Centrum voor innovatief vakmanschap Biobased Economy, 2018
- Els Oprel – projectleider Centrum voor innovatief vakmanschap maritieme techniek, 2018
- Harry van den Hof – projectleider Centre of Expertise Logistiek, 2018
- Henk Lukken – projectleider Duurzame Chemische Technologie, 2018
- Joost Degenaar – projectleider Centre of Expertise Healthy Ageing, 2018
- Eddy van Laar – projectleider Centrum voor innovatief vakmanschap IJ5 Lab, 2018

Centrum voor innovatief vakmanschap Water

Documents

- Business plan en regionale visie uit 2012
- Formele Beoordeling en notulen beoordelingscommissie 2012

- Voortgangsverslag 2013, 2014, 2015, 2016 en 2017
- Auditrapport 2013, 2014, 2015, 2016 en 2017
- Informal emails between PBT, committee and PPP

Interviews

- Pieter Hoekstra (projectleider), 2018
- Peet Ferwerda (directeur MBO Life Sciences, Friesland College), 2018
- Rob Stol (chairman of assessment committee), 2018
- Hilde Prummel (directeur Waterlaboratorium Noord), 2015
- Robbert de Geus (docent MBO life sciences), 2017
- Ton Sierhout (voorzitter CvB Nordwin), interview held by Bas Douma 2017
- Jolanda Smit-Bodjes (HR adviseur), interview held by Bas Douma 2017
- Walter Kamstra (Wetterskyp Fryslan), interview held by Bas Douma 2017
- Peter Kloosterman (Vitens), interview held by Rob Stol 2015
- Henk Flikkema (Wetterskyp Fryslan), interview held by Rob Stol 2015, interview held by Henk Scheepers, 2014
- Sytze Batema (cursist vanuit Heiploeg), interview held by Rob Stol 2015
- Leo Groendijk (docent Van Hall Larenstein), interview held by Edwin Berends 2015
- Remko Drost (Waterschap Rivierenland), interview held by Edwin Berends 2015
- Marc van Niekerk (Reinders Waterbehandeling), interview held by Edwin Berends 2015
- Sieger Rinsma (docent Nordwin college), interview held by Henk Scheepers, 2014
- Keime van der Molen (Waterlaboratorium Noord), interview held by Henk Scheepers, 2014

Centre of Expertise Biobased Economy

Documents:

- Business plan 2012
- Formal progress report 2013, 2016
- Formal assessments and formal reports of audit meeting, 2013 en 2016
- Notes and pre-filled assessments from committee meetings 2013 en 2016
- Informal SWOT analysis by PBT at request of the PPP in 2013 en 2016

Interviews

- Petra Koenders (former projectmanager), 2018
- Juliette Brokx en Maurice van London (medewerkers CoE), interview by Corina Kuiper en Edwin Berends, 2016
- Jan de Vos (controller CoE), interview by Corina Kuiper en Edwin Berends, 2016

- Douwe Frits Broens (medewerker CoE), interview by Corina Kuiper en Edwin Berends, 2016
- Pieter Vollaard (hogeschool Zeeland), interview by Corina Kuiper en Edwin Berends, 2016
- Geert Mol (medewerker CoE Biobased), interview by Corina Kuiper 2016
- Peter Besseling (Ministerie van Economische Zaken), interview by Corina Kuiper 2014
- Petra Koenders (projectleider), interview by Corina Kuiper 2014
- Ralph Simons (current project manager), 2016
- Wijnand Piree, HR director Suikerunie, 2016
- Edwin Torn Broers (Hogeschool Zeeland), interview by Corina Kuiper 2014
- Erik Lammers (afstudeerder Avans via BOM), interview by Corina Kuiper 2014
- Stijn Mattheij (docent bij Avans), interview by Corina Kuiper 2014
- Nies Rijnders (Directeur Avans International Studies), interview by Corina Kuiper 2014
- Dorien Derksen (Rubia, lector Biobased Products) interview by Corina Kuiper 2014
- Aaik Rodenburg (Directeur Rodenburg), interview by Corina Kuiper 2014
- Paulus Woets (Provincie Zeeland), interview by Corina Kuiper 2014
- Paul Rupp (Voorzitter CvB Avans), interview by Corina Kuiper 2014
- Robert Lazeroms (Cosun, kenniskringlid lectoraat), interview by Corina Kuiper 2014
- Ruud Hoosemans (ZLTO), interview by Corina Kuiper 2014
- Berth-Jan Deelman (R&D manager Arkema), interview by Corina Kuiper 2014
- Diederik Zijderveld (CvB lid Avans), interview by Corina Kuiper 2014
- Adri de Buck (CvB Hogeschool Zeeland), interview by Corina Kuiper 2014

High Tech Centre Delft

Documents:

- Business plan 2014
- Formal progress report 2015, 2016, 2017
- Formal assessment form by RIF, 2014, 2015, 2016 and 2017
- Informal SWOT analysis by PBT at request of HTC Delft in 2015

Interviews:

- Marcel van Wijk (project manager), 2018
- Wilma Verhoeks (directeur techniek ROC Mondriaan), 2018
- Martin Seiffers (voorzitter bestuur HTC Delft, tevens eigenaar Accenda BV), 2018
- Aad Reurings (RRP), interview by Corina Kuipers, 2016

- Wim Janssen (Koning & Hartman), interview by Corina Kuipers, 2016
- Marcel Pleijsier (Festo BV), interview by Corina Kuipers, 2016
- Peter Reijneker (Hittech Multin), interview by Corina Kuipers, 2016
- Anton Duisterwinkel (Innovation Quarter), interview by Corina Kuipers, 2016