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The private sector as the 'unusual suspect' in knowledge brokering for international sustainable development: a critical review

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Although the private sector's engagement in sustainable international development is receiving increasing emphasis, its role in knowledge brokering has probably not yet received enough attention. Drawing on the Glegg and Hoens' (2016) meta-framework of knowledge brokering we analysed the role of the private sector in knowledge brokering in Europe and Africa, based on the literature. Of the 702 records identified from 5 bibliographic databases, 13 studies, representing 44 case studies and two surveys were included. The private sector's roles are versatile, extending beyond connecting research evidence to potential users, to connecting researchers to funding opportunities and to other researchers, and to hosting platforms for collaborative research and policy making. The private sector actively invests resources to facilitate knowledge uptake, however this is to a large extent driven by self-interest. Perceived self-interests remain a barrier to knowledge brokering with the private sector not always being a trusted partner. Our results demonstrate that 'lobbying and advocacy' should be an additional role included in the meta framework of knowledge brokering.

Keywords: private sector; knowledge brokering; international development; literature review; Africa; Europe

Introduction

One of the key challenges facing the field of international sustainable development is knowledge brokering between the domains of practice, policy and research and across organizations in order to improve the evidence-base for development policymaking, programmes and projects. Research on knowledge brokering is increasingly justified because its role in harnessing lessons from the millennium development goals agenda, fostering knowledge sharing and collaboration across organizations is deemed a critical step towards the achievement of Agenda 2030 and the Sustainable Development Goals (SDGs) (UN, 2015). In 2016, the UN Joint Inspection Unit, a key body which aims to improve the effectiveness of the whole UN apparatus, emphasized the importance of knowledge within the SDG process, arguing that knowledge has the potential to break down silos and is a natural integrating factor for all stakeholders in the implementation of Agenda 2030 (Dumitriu, 2016).

Within this context, the private sector is also receiving increasing attention in international development with Agenda 2030 and the SDGs calling upon 'all businesses to apply their creativity and innovation to solving sustainable development challenges' (UN, 2015). The private sector has been 'foregrounded' in the SDGs in which '… businesses, governments and civil society actors are equally called upon to pursue a more sustainable path forward' (Scheyvens et al., 2016: 372). There is greater emphasis on the private sector because of its purported potential to 'scale up the interventions that have proven most effective; to extend these approaches to new fields and unreached people' (UK Department for International Development, 2011), to employ its considerable financial, technical and technological resources (WRI/IIED, 2013) and to contribute to the effectiveness and efficiency of aid (Horn-Phathanothai, 2013; WRI/IIED, 2013). However, this greater focus on the private sector within the framework of the SDGs ignores its contested nature. According to Spangenberg (2017: 316):

> Business is treated as a per se benevolent actor for the public good, instead of a market based, profit seeking undertaking; the objectives and targets include no criteria to distinguish between a positive and a negative role of business for sustainable development (the fact that many sustainability problems have been caused by business activities is not mentioned at all).

Despite this background, there is a recognition within the international development community that the private sector is an increasingly important partner in knowledge brokering and that more needs to be known about it (Cummings et al., 2019). This is also reflected in policy with, for example, a recent consultation on Dutch knowledge policy indicating 'the role and influence of the private sector should receive more attention in research' (Wigboldus et al., 2019: 9). Although there has been an enormous amount of research on knowledge brokering practices within the public sector domain in international development, such research does not generally include the private sector. For example, the Research and Policy in Development (RAPID) group at the Overseas Development Institute (ODI), a prominent British think tank in international development, has published more than 1007 publications on 'research and policy in development' since its formation in 2003[1], focusing on the links between research, policy and practice. Through such research initiatives, focusing on knowledge brokering with their varying terminologies (knowledge intermediaries, knowledge translation, knowledge co-creation), many insights have been developed. Unfortunately research on knowledge brokering practices within the public sector, the private sector has received much less explicit attention than other actors and can be seen as an 'unusual suspect' in knowledge brokering for international development.

To review past evidence of knowledge brokering with the private sector, a critical interpretive synthesis was undertaken to examine the scientific literature on the private sector in

[1] Data collected 21 February 2019

knowledge brokering within multi-stakeholder partnerships in the field of international development. Although many partnerships also include an element of knowledge brokering, this paper focuses on partnerships with a specific focus on knowledge brokering, rather than on knowledge brokering as side process. It was intended to inform the empirical part of the project which will collect qualitative data from knowledge platforms in Uganda and Europe, as well as from global online networks on experiences of working with the private sector in knowledge brokering.

Knowledge brokering for international development: an overview of theories and frameworks

The field of sustainable development is populated by international organizations, such as the UN organizations, the bilateral organizations, such as the Department for International Development (DFID) in the UK and the US Agency for International Development (USAID), as well as international and national non-governmental organizations (iNGOs and NGOs) which are concerned with development. While development is defined as: 'the synergy among millions of innovative initiatives people take every day in their local societies, generating new and more effective ways of producing, trading, and managing their resources and their institutions. The work of policymakers and development agencies influences the success of those initiatives, by shaping or undermining those efforts' (Ferreira, 2009: 99). Knowledge which is relevant to development includes global, national and local knowledge. Knowledge brokering therefore encapsulates inter organizational as well as cross-domain knowledge integration and co-creation (Cummings et al., 2019). Knowledge brokers therefore act span the interface between knowledge generators and users by networking and advocating for a cause on the basis of the expertise they possess in their domain, their legitimacy and credibility (Jackson-Bowers et al., 2006: 2).

Knowledge sharing and collaboration across sectors, both formal and informal platforms has been argued to be a critical step towards the achievement of SDGs and is enshrined in SDG 17: 'Strengthen the means of implementation and revitalize the global partnership for sustainable development' (UN, 2015). Knowledge brokering allows isolated or unconnected actors to share information and resources and to interact economically, politically and socially (Stovel and Shaw, 2012). Typically, a 'broker moves among groups fostering collaborative processes, with the aim of generating new "brokered" knowledge that is more robust and readily applicable within its intended local context' (Glegg and Hoens, 2016). The broker may connect separate areas of a network socially, economically or politically, and therefore he/she is the only one to access both valued information and resources from different areas of the network (Stovel et al., 2011).

Frameworks and models of knowledge brokering

The dynamics of knowledge brokering processes have been studied extensively in global literature. A number of theories and frameworks have been put forward to describe this process. Haworth-Brockman (2016: Unpaginated) influenced by others, considers that knowledge brokering is 'messy and complicated, which can also be understood to mean that what is translated, how it is translated, by whom, when and why … depends' . In addition, knowledge brokering has many synonyms where 'Terms such as knowledge brokering, knowledge translating, knowledge exchange, and knowledge mobilization are all used extensively, but the different terminology has hidden the fact that the actual functions they describe are all systemically related to each other' (Shaxson et al., 2012:2).

Given this complexity and the many different models, frameworks and terminologies, the Glegg and Hoens (2016) meta-framework was identified, based on a synthesis of five different frameworks and models:

1. The Knowledge to Action Cycle which is premised on the belief that knowledge generation and the implementation of existing and new solutions is a complex cyclical process (Graham et al., 2006). In order for this process to run efficiently, it is imperative to remain vigilant to problems at each stage of the knowledge generation, synthesis and exchange process, and to document the problems in reports, discussion forums, clinical logs or research papers, so that they can be identified by researchers and other experts who can promptly address them.

2. Developed by the National Collaborating Centre for Methods and Tools (NCCMT), Canada, (2011), the Promoting Action on Research Implementation in Health Services (PARiHS) framework provides a perspective on the factors that are important when implementing research into practice. The focus of this framework on facilitation makes this a good framework for relationship-based knowledge brokering. In summary, the PARiHS framework posits that different types of evidence both tacit and explicit, including; research evidence, practitioner experience, community preferences and experiences, and local information, need to be considered. This evidence needs to be embedded into decision making through a process of negotiation and shared understanding with careful consideration of contextual issues.

3. The Fernandez and Gould (1994) framework explicitly addresses the influences of power in relationships. It expands upon existing concepts of brokerage to include contextual factors stemming from the properties of the knowledge brokering actors. From these, it proposes a fivefold typology of brokerage roles.

4. Diffusion of innovations is not a model or framework but a theory, originally developed by Rogers (2003). As expressed in this theory, innovation, communication channels, time, and social system are the four key components of the diffusion of innovations.

5. The K* or K Star spectrum framework (Shaxson et al., 2012) describes a continuum of functions and processes of knowledge brokering, ranging from dissemination to co-creation and innovation.

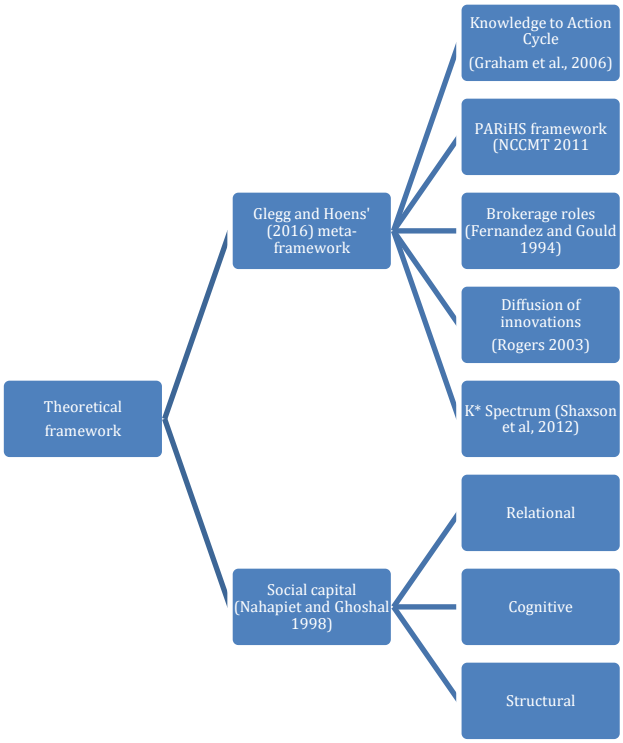

Figure 1: Conceptual provenance of the theoretical framework (Authors, derived from Glegg and Hoens 2016 and Nahapiet and Ghoshal 1998).

Based on these models and frameworks, Glegg and Hoens (2016) identify 5 different knowledge brokering roles in their meta-framework: information manager; connecting agent; capacity builder; facilitator; and evaluator. Each of these roles is described by their functions producing a total of 16 functions. Although the role of capacity builder does not appear in any of the five models/theories reviewed above, Glegg and Hoens (2016) included it as additional role because it is an important function of knowledge brokering. Capacity building, also known as capacity development and capabilities, is a stalwart of international development (see, for example, Merino and de los Ríos Carmenado, 2012) which makes its inclusion particularly appropriate here. This synthesis employed the Glegg and Hoens (2016) meta framework(see figure 1) , which describes five roles of a knowledge broker because the role

of the private sector as a knowledge broker and its participation.in in these activities has not been well documented.

We reviewed existing literature on the private sector's knowledge brokering activities through this lens to capture roles, prcesses facilitators and challenges in order to glean lessons to inform Agenda 2030. In addition, we considered the role played by social capital by focusing on cognitive (what), relational (who) and structural (how) aspects of knowledge brokering.

Methods

Critical Interpretive Synthesis (CIS), a method for conducting a systematic literature review, was used to interrogate selected articles that focus on the role of the private sector in knowledge brokering. The CIS method was selected because it facilitates the analysis of complex, diverse bodies of literature (Dixon-Woods et al., 2006; Barnett-Page and Thomas, 2009; Taylor et al., 2009; Gysels et al., 2012; Kazimierczak et al., 2013; Ako-Arrey et al., 2015), it is particularly suitable for the analysis of qualitative literature (Egger et al., 1997; Charmaz, 2006; Dixon-Woods et al., 2006), allows the development of new concepts and theories because it offers a 'flexible, iterative, dynamic, and explorative approach' (Ako-Arrey et al., 2015).

The process of conducting the CIS included; conducting a comprehensive literature search, applying predetermined eligibility criteria to screen and retrieve articles, and data extraction and analysis. The private sector activities were assessed using the lens of theoretical framework developed in the previous section. Specifically, the study selected a CIS approach because it allows for interpretive, in-depth exploration of literature and employs the qualitative principle of saturation while searching data.

It should be noted that the CIS methodology does not aim to include an exhaustive number of papers but rather a comprehensive sampling frame of potentially relevant papers based on a given eligibility criteria (Entwistle et al., 2012; Markoulakis and Kirsh, 2013). Based on the included papers, the CIS methodology allowed us to iteratively interrogate the roles and practices of the private sector critically and interpretively based on our theoretical framework (Dixon-Woods et al., 2006).

Definition of concepts

The private sector for this work was defined as a segment of a national economy owned, controlled and managed by private individuals or enterprises rather than the government and run with the intention of making profit (Imaga, 2003; Osemeke, 2011) while knowledge brokering was defined as a set of activities and processes used to facilitate the exchange of knowledge (demand, supply, generation, facilitation and use). A knowledge broker was defined as the person, institution or organisation that connects separate areas of a network

socially, economically, or politically, by virtue of their access to both valued information and resources from different areas of the network (Stovel et al., 2011).

Search strategy

We searched five electronic databases, six websites and knowledge platforms, and undertook reference chaining. Given the nature of the review questions, our broad and flexible search included a broad sweep of studies around knowledge brokering in the private sector (Charmaz, 2006; Dixon-Woods et al., 2006; Ako-Arrey et al., 2015). In searching electronic databases, we initially drew on conventional systematic review methods to develop or search strategies which include the population, intervention, comparison and outcome. We piloted this search strategy across some electronic data bases and found it to be inappropriate because it yielded a large number of hits (7,000,000 million on Web of Science for instance) and applying a time limit resulted in only 11 hits putting us a greater risk of missing relevant papers. We therefore developed a more iterative strategy which varied across databases and used it to search electronic databases and websites.

The search strategy modified as follows, varied across different databases:

TS= (private sector OR business OR 'for profit' OR entrepreneur* OR small and medium enterprise* OR companies OR company OR 'public private partnership')
AND
TI= (knowledge OR information OR Evidence OR Research OR findings OR Data OR results
AND
TS= (broker* OR intermediary* OR platform OR network OR 'policy dialogue' OR sharing OR co-creation OR network OR boundary OR engagement OR forum OR groups OR advocacy OR think tank OR coalition OR partnership OR 'structural hole')

Only studies conducted in Europe or Africa where private sector knowledge brokering activities were specified and specific outcomes of knowledge brokering as the main role were reported. Searches were conducted till January 2018.

Screening, extraction and synthesis

All papers retrieved from our search (with the exception of Google Scholar) were uploaded onto reference manager for screening. Google Scholar hits were screened within the database and only 25 pages were screened. All duplicates were removed. The inclusion criterion was applied by both primary reviewers (SNK and SC). Papers describing the same intervention were treated as one entity in order to avoid 'double counting' of interventions that have multiple related outputs.

Data were extracted from all included papers using a standardized data extraction template developed by the team. For the first twenty percent of included papers, data were independently extracted by two of the primary reviewers for purposes of quality control and calibration. The rest of the included papers were divided evenly between the reviewers and data were extracted independently by two researchers.

Data synthesis was conducted by both first author and second author by identifying the codes and themes emerging from the included papers to identify private sector knowledge brokering roles and their functions, summarized the challenges and facilitators of knowledge brokering, then shared the findings with the third.

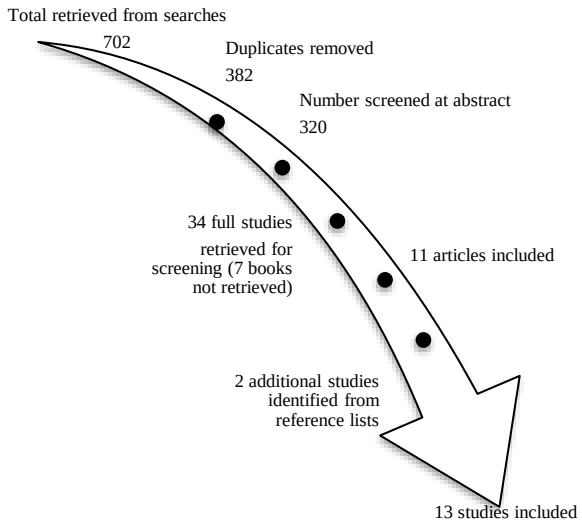

Figure 2: Flowchart of study selection

Results

Our sampling frame eventually totaled approximately 702 published records identified from our searches (see Figure2). Of the 320 articles screened at abstract level, 18 studies met our criteria. Of these 11 articles were retrieved but 7 books could not be retrieved. From the reference lists of the 11 articles two additional articles were found to meet our criteria making a total of 13 included articles. Figure 2 shows the studies excluded and included and why.

Of the thirteen studies included, nine were from Africa (Kenya South Africa, Uganda, Malawi, Zambia, Burkina Faso Ethiopia, Mali, Benin) and four were from Europe. Most of the studies were published only as far back as 2000 with the most recent published in 2017. The studies comprised a total of 44 case studies and two surveys. The number of case studies ranged from 29 case studies within a single paper to a single case study for several papers. The level of detail in the case studies varied greatly across the different papers with some providing a detailed description of private sector KB roles and others providing a summary. This synthesis is therefore not based on individual case studies but rather focuses on the overall perspectives communicated from each paper.

Cognitive component: private sector thematic areas and competences

The thematic areas covered by private sector brokering encompassed Agriculture, Mining, Health, Tourism, Security, Traffic, Environment, Land, Education and legislation. Specifically, the private sector in South Africa focused on disaster risk reduction and conservation of environment by commissioning research, funding and facilitating joint knowledge co-construction and production (Chikozho and Saruchera, 2015; Gysels et al., 2012; Sitas et al., 2016), while the agricultural private sectors in Europe and Netherlands focused on addressing malnutrition, connecting farmers and food small and medium enterprises (SMEs), fostering networks, and connecting farmers to hardware suppliers, funding sources and policy information (Sherrington, 2000; Van Kammen et al., 2006; Klerkx and Leeuwis, 2009; Dotti and Spithoven, 2017). The highest number of case studies were from Kenya cutting across biotechnology, security, agriculture, exports, manufacturers, mining, shipping real estate, tourism and health among others. Finally in Malawi, the focus was on advocacy, connecting agents to influence policy in sectors of agriculture and health (Hutchinson et al., 2011; Irwin and Githinji, 2016).

In Table 1, an overview is provided of the themes and geographical locations of the studies. For example, Mbadlanyana et al. (2011) has a continental focus, as does (Sherrington, 2000), while other cover multiple countries, such as the study by Hutchinson et al. (2011), or two countries, such as Van Kammen et al. (2006). We used an asterix to demonstrate the juxtaposition of theme and country. In the case of the environmental sector, we have broken it down into subsectors. More than one asterix indicates multiple studies. From this overview, we can draw a number of preliminary conclusions. First and not surprisingly, 13 studies are unable to give a complete and comparable geographical coverage. For example, South Africa is strongly represented with three studies, probably reflecting its relatively strong academic performance, while there are only three Francophone African countries included (Benin, Burkina Faso and Mali), probably a reflection that we covered only the English language literature. Second, the sectors of health, food and agriculture, nutrition and the environment are represented with multiple studies, while there were three non-sectoral studies which were focusing on think tanks and the knowledge economy more generally (See Table1).

Table 1: An overview by theme and country region

		Sectors									Studies
Region	Country	Health	Nutrition	Food and Agriculture	Environment					Non-sectoral	
					Climate change	Disaster risk reduction	Water	Forestry	Total environment		
Africa										*	Mbadlanyana et al. (2011)
East Africa	Ethiopia		*								Pelletier et al. (2018)
	Kenya[#]	*		*			*		*	*	Irwin and Githinji (2016)
	Malawi	*									Hutchinson et al. (2011)
	Uganda	*	*								Hutchinson et al. (2011), Pelletier et al. (2018)
	Zambia	*									Hutchinson et al. (2011)
	Region	**			*	*			**		Hare et al. (2014), van Kammen et al (2006)
Southern Africa	South Africa			*		*		*	**	*	Reyers et al. (2015), Sitas et al. (2016), Chikozho and Saruchera (2015)
West Africa	Benin			*							Moumouni and Labarthe (2012)
	Burkina Faso		*								Pelletier et al. (2018)
	Mali		*								Pelletier et al. (2018)
	Region	*									Hare et al. (2014)
Europe	Belgium			*	*				*		Dotti and Spithoven (2017)

	Netherlands	*		*							Klerkx and Leeuwis (2008), van Kammen et al (2006)
	Region									*	Sherrington (2000)

Relational component: roles and motivations

The private sector players covered in the included studies were diverse. They included business associations (Hare et al., 2014; Irwin and Githinji, 2016; Reyers et al., 2015; Sherrington, 2000), private universities and research organizations (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Hutchinson et al., 2011; Pelletier et al., 2018), Insurance companies (Reyers et al., 2015; Sitas et al., 2016), Lobbyists (Van Kammen et al., 2006) and those referred to as NGOs (Mbadlanyana et al, 2011). In some case studies multiple private sector players were mentioned but in only a few were their distinct roles distinguished (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Reyers et al., 2015; Sherrington, 2000).

The knowledge brokering roles and activities undertaken by the private sector players, including individuals as well as institutions, were analysed, endeavouring to identify the challenges they encountered in executing these roles. These roles were categorised according to the Glegg and Hoens (2016) model. The private sector played predominantly information and linking connector roles but also undertook capacity building and facilitator roles in some settings. A summary of these activities is provided in Figure 3 below.

In terms of the information role, the private sector was involved in the generation of research questions/ideas, highlighting evidence gaps through co-production, by conducting high quality research as well as harvesting it from research institutions, packaging evidence and disseminating it to users. But beyond providing research evidence, the information producer role included identifying and communicating opportunities for partnerships for funding and for fostering collaborations across their networks. Five studies indicated that knowledge brokering by the private sector helped in knowledge co-production to include developing knowledge products, and sharing of information (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Hare et al., 2014; Irwin and Githinji, 2016; Sitas et al., 2016). Private sector knowledge brokers generated evidence through conducting high quality research and two papers highlighted knowledge brokering helping evidence synthesis and policy analysis (Reyers et al., 2015; Van Kammen et al., 2006). This information producer role required the private sector to have personnel who are highly professional and competent, with the ability to quickly separate and package essential information from the bulk of evidence and to communicate appropriately and sometimes maintaining these professionals is costly (Reyers et al., 2015). Furthermore, in order to remain relevant, they need to be ahead of their clients

by anticipating their information needs. Therefore an "insider" strategy and relationships with stakeholders is required (Chikozho and Saruchera, 2015; Irwin and Githinji, 2016; Reyers et al., 2015).

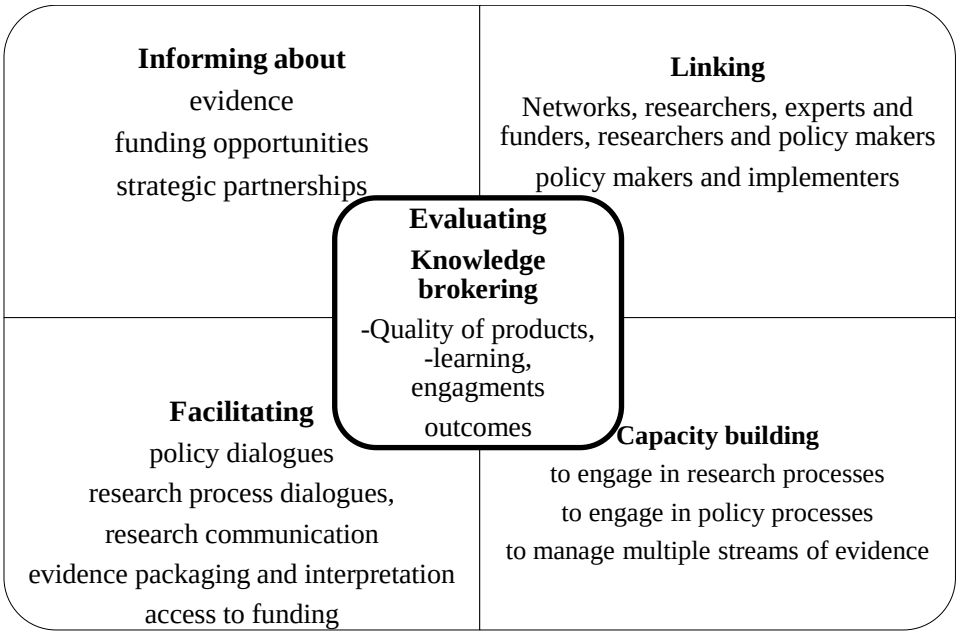

Figure 3: A summary of private sector roles in knowledge brokering

In terms of the linking connector role, the private sector acted by connecting critical stakeholders and networking them for strategic partnerships. For instance, implementers were linked with knowledge producer networks to disseminate information to actors and institutions at national and transnational levels (For example, institute for European environmental policy) (Chikozho and Saruchera, 2015; Reyers et al., 2015; Sitas et al., 2016). Private sector actors led the formation of new communities of practice and research networks, and they acted as bridges or mediators for connecting qualitative and quantitative models creating a better/common understanding of complex problems. The linking connector role also included connecting other knowledge brokers with research institutions for collaborative research and connecting experts to facilitate co-construction and coproduction of policy issues and evidence on best practices (Chikozho and Saruchera, 2015; Hutchinson et al., 2011; Moumouni and Labarthe, 2012). Private sector actors connected researchers to funders and to other organizations they can network with as well as to policy makers. In this way, they also influence funding decisions. In some instances, the differences in the pace of operations across different institutions was a source of challenge to getting multiple stakeholders move in unison towards agreed actions. However, instituting formal agreements enabled them to mitigate this challenge (Chikozho and Saruchera, 2015).

The capacity builder role encompassed activities related to didactic training, to enabling

changes in systems, processes and infrastructure to facilitate knowledge brokering. The private sector appeared to engage in capacity building infrequently. When they did engage in it, they mostly strengthened the capacity of target institutions to manage information by enhancing the quality of knowledge products available for decision making and strengthening platforms available for formal and informal conversations, small group meetings, workshops, conferences, emails (Hutchinson et al., 2011; Irwin and Githinji, 2016; Reyers et al., 2015; Sherrington, 2000; Van Kammen et al., 2006). Only two studies indicated that the private sector strengthening national and regional capacity for knowledge translation and dealing with information (Van Kammen et. al, 2006; Irwin and Githinji, 2016). Private sector actors acted as mediators, coordinating meetings/workshops, building alliances and managing disagreements, and converting conflict to collaboration. They created platforms of communication which enabled them to scan existing needs and opportunities, scope and filter by deducing who can best meet the need and how, and ultimately match making relevant individuals and institutions towards a set goal. However building capacities of multiple stakeholders with diverse backgrounds, competencies, pre-conceived solutions and in grained mental models provided its own challenges (Chikozho and Saruchera, 2015; Hare et al., 2014; Irwin and Githinji, 2016; Reyers et al., 2015; Sitas et al., 2016). Creating competence involved the private sector proactively investing in knowledge brokering by hiring professionals, seeking knowledge from credible sources, building strategic partnerships, facilitating productive dialogue and investing in communication systems, which are adapted to the needs of their audiences. This proactive approach gave them prominence, credibility and relevance to their different stakeholders as competent and responsive agencies. This competence was also underpinned by the private sector's ability to constantly evolve to meet the needs of its stakeholders in order for their contributions to be viewed as adding value.

The private sector facilitator role involved in the creation of implementation teams, sectoral working groups, and formal alliances and collaborations, as cited in three papers (Klerkx and Leeuwis, 2008; Pelletier et al., 2018; Reyers et al., 2015). The facilitator role also involved the creation of platforms for dialogues and learning among stakeholders to foster collaboration by arranging conferences and events. They also initiated the creation or reform of institutions at national or subnational levels, such as implementation teams, sector working groups and formal alliances. In summary, they facilitated convergence and commitment of stakeholders by enhancing the alignment of products, processes and players. This role was constrained by frequently not knowing which stakeholders to convene and what their needs and motivations were (Chikozho and Saruchera, 2015; Irwin and Githinji, 2016; Sitas et al., 2016). However in some cases the private sector was lauded for its ability to provide a neutral space for dialogue especially in instances where no obvious conflict of interest was perceived (Sherrington, 2000; Sitas et al., 2016). The private sector was facilitated in this role through its positioning within relevant networks as well as geographical location (Sherrington, 2000; Sitas et al., 2016).

The evaluator role of the private sector was infrequently mentioned. Within this domain, the knowledge brokering by the private sector included evaluating the strength of generated and solicited evidence (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Hare et al., 2014; Sitas et al., 2016), which ensured the credibility of the evidence they provided. They also evaluated the quality of engagements to identify preferred modes of interaction across stakeholders (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Hare et al., 2014; Sitas et al., 2016) as well as learning (Hare et al., 2014; Reyers et al., 2015; Sitas et al., 2016) and the outcome of the KB activities (Hare et al., 2014; Reyers et al., 2015; Sitas et al., 2016). This evaluation role was challenged by the fact that sometimes the inadequacy of funding and unsynchronized funding and implementation cycles limited the execution of agreed plans (Irwin and Githinji, 2016; Reyers et al., 2015; Sitas et al., 2016). Furthermore, none of the outcomes could be solely attributed to the private sector due to the multiple players involved (See Table 2).

Table 2: Summary of Private sector Knowledge brokering roles

Sub themes	Description	Authors
1. Information Producer		
Knowledge co production	Help in developing knowledge products, dissemination and sharing of information for advocacy, describe best practices, identify gaps and solution, through professional networks, social media and Think Tanks websites.	Irwin and Githinji (2016) Sitas et al. (2016) Chikozho and Saruchera (2015) Hare et al. (2014) Dotti and Spithoven (2017)
Generation of evidence and finding information	KBs solicit evidence and help in finding information through conducting high quality research, participatory collaboration throughout, interviews, meetings, field visits and reviews of literature	Irwin and Githinji (2016) Reyers et al. (2015) Sherrington (2000) Van Kammen et al. (2006) Hutchinson et al. (2011)
Synthesizing evidence and policy analysis	Help in synthesizing and package evidence in a timely manner	Reyers et al. (2015) Van Kammen et al. (2006)
Use of evidence	Help in applying research for agriculture, fostering demand articulation, capturing technology needs and accessing funds	Moumouni and Labarthe (2012) Klerkx and Leeuwis (2008)
Access to information	Also ensuring access to information for funding from local buzz	Dotti and Spithoven (2017)
2. Linking Connector		

Connecting all critical stakeholders to create networks	Help connecting all critical stakeholders, players and relevant actors in specific implementation contexts (for example disaster management), to form networks, communities of practice so as to understand complex problems, co-construct and coproduce evidence.	Irwin and Githinji (2016) Reyers (2015) Sherrington (2000) Sitas et al. (2016) Hare et al. (2014) Dotti and Spithoven (2017) Pelletier et al. (2018) Klerkx and Leeuwis (2008)
Connecting implementers to evidence/knowledge	KB also links implementers to evidence and knowledge networks	Reyers et al. (2015)
Connecting researchers to policy makers	Connects research institutions to Think tanks for collaborative research, and also links users of evidence to producers through formation of National platforms	Chikozho and Saruchera (2015) Hutchinson et al. (2011) Moumouni and Labarthe (2012)
Connecting researchers to funding	Links (risk and disaster) researchers to funding and to other organizations	Dotti and Spithoven (2017)
3. Capacity builder		
Capacity for knowledge brokering	Strengthened national and regional capacity for knowledge translation and dealing with information	Irwin and Githinji (2016) Van Kammen et al. (2006)
Capacity to understand policy	Enhanced understanding of MSN through informal conversations, small group meetings, workshops, and conferences	Pelletier et al. (2018)
Capacity for disaster risk reduction	Strengthened global and national capacity	Hare et al (2014)
Capacity to use resources	The researchers trained agriculturalists on agricultural technologies and they in turn trained them on agricultural needs	Moumouni and Labarthe (2012)
Building additional skills	Building additional skills and new budgets was an outcome	Reyers et al. (2015)
4. Facilitator		
Facilitating dialogues and engagements	Facilitated dialogues and engagements with stakeholders, and arranged conferences and events	Irwin and Githinji (2016) Sherrington (2000)

Facilitated collaborations and partnerships	Facilitated the creation of implementation teams, sectoral working groups, and formal alliances. collaboratively designed actions for disaster risk reduction for instance	Reyers et al. (2015) Pelletier et al. (2018) Klerkx and Leeuwis (2008)
Secure funding	They help secure funding for their stakeholders	Dotti and Spithoven (2017)
Facilitated learning	Enhance learnings and improve awareness on various issues	Pelletier et al. (2018) Klerkx and Leeuwis (2008)
Management of processes	Play a role in management of processes including alignment and mediation of the different stakeholders	Klerkx and Leeuwis (2008)
5. Evaluator		
Knowledge products	Quality of knowledge products developed and shared through different platform	Sitas et al. (2016) Chikozho and Saruchera (2015) Hare et al. (2014) Dotti and Spithoven (2017)
Engagements	Evaluating the quality of engagements between partners	Sitas et al. (2016) Chikozho and Saruchera (2015) Hare et al. (2014)
Learning	Evaluating lessons learned from KB activities	Sitas et al. (2016), Hare et al. (2014) Reyers (2015)
Outcomes	Evaluating the outcomes of knowledge brokering	Sitas et al. (2016), Hare et al. (2014) Reyers (2015)

Interaction across knowledge brokering roles

In general, all roles were inter-linked although not all private sector players undertook multiple roles. The synthesis revealed that the extent to which the private sector player undertook multiple roles was driven by their ultimate goal as well as the availability of resources. The private sector invested in generating better information by convening actors to generate this information and to support its utility (Hare et al., 2014; Sitas et al., 2016). Limited resources and time also meant that they sometimes could not build capacity or invest resources for additional knowledge brokering. Those who aimed at influencing decision making and practice tended to invest widely in information systems, professional expertise, interaction platforms and build partnerships (Chikozho and Saruchera, 2015; Dotti and Spithoven, 2017; Irwin and Githinji, 2016; Pelletier et al., 2018; Reyers et al., 2015). For example Pelletier et al. (2018) describes four case studies across Africa where a private

northern university funded knowledge brokering to influence multi-sectoral nutrition policies. In these cases, the private sector provided fora and learning platforms for discussion at regional levels, which were cascaded to district and sub-county levels in some countries. It also facilitated integration of nutrition indicators in district development plans, they also trained national actors in Mali on participatory evaluation, strategic planning and group facilitation. Dotti and Spithoven (2017) describe the efforts of think tanks based in the EU to influence policy by strategically locating themselves, spreading information about published calls, setting up transnational consortia of appropriate partners, supporting administration of projects, and disseminate results. These think tanks invested long term in systems to foster communication among peers, promote research and science dissemination, represent professional interests and provide policy advice. They achieved this by making use of their location within the EU to obtain information about upcoming funds and linking this information to appropriate stakeholders (Dotti and Spithoven, 2017). Hare et al. (2014), on the other hand, describe an initiative where the private sector partners with other sectors to reduced natural hazards. However, despite co-construction of core issues and co-production of actions to address them, the initiative was challenged by low investment, poor coordination and poor follow through.

Motivations for knowledge brokering

To the extent that it was mentioned, the drivers of private sector involvement ranged from more altruistic/selfless concerns for the welfare of others, to clear self-serving motives and a delicate balance of achieving both. For instance, the majority of studies indicated that the private sector's predominant motive was to ease decision making processes by providing well packaged information and bringing in stakeholders who were critical for making things happen. They aimed to provide robust evidence for informed policy making (Chikozho and Saruchera, 2015; Irwin and Githinji, 2016; Sherrington, 2000) and collaborative decision making towards better practices (Hare et al., 2014; Reyers et al., 2015; Sitas et al., 2016). Others primarily sought to reduce partner risks (Hare et al., 2014; Reyers et al., 2015; Sitas et al., 2016) although clearly by reducing these risks they also ultimately reduced their own risks. In South Africa, for example, insurers benefited from knowledge brokering by identifying and fostering mechanisms to reduce disaster related risks but also benefited their clients (Reyers et al., 2015; Sitas et al., 2016). Other studies indicate that some private sector actors are simply motivated by business survival (Dotti and Spithoven, 2017; Reyers et al., 2015). Figure 4 provides an overview of motivations.

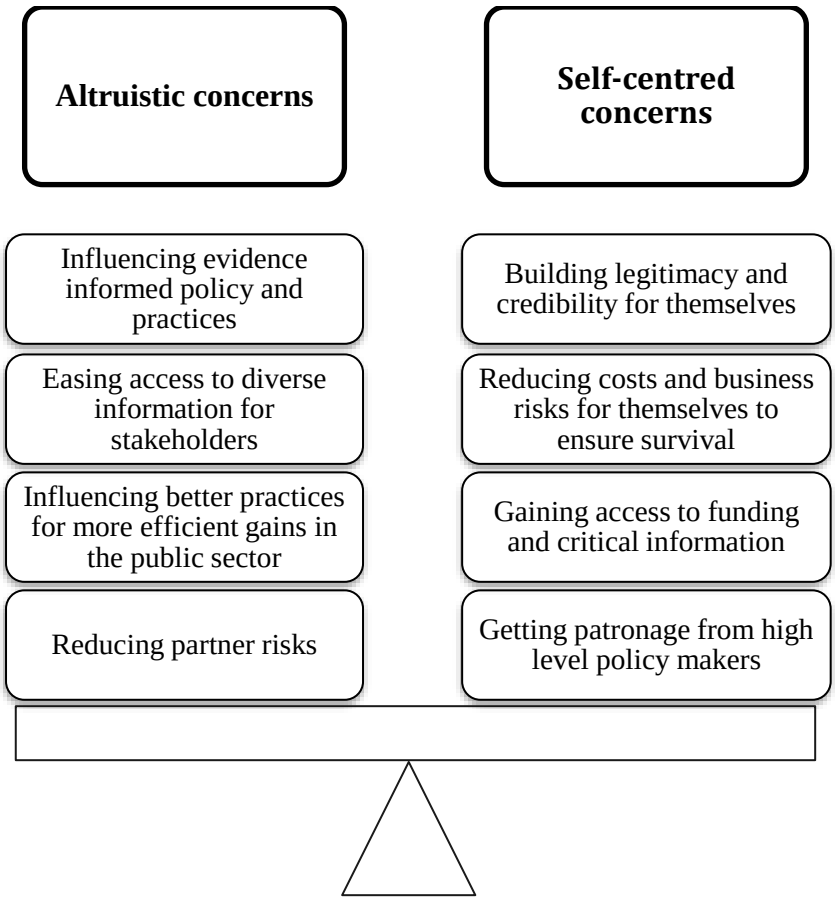

Figure 4: Motivations for knowledge brokering in the private sector

Structural challenges facing the private sector

The challenges which constrain private sector knowledge brokering tended to be either intrinsic or extrinsic. Extrinsic factors included context (both political and institutional), hidden interests, reversed policies, attrition of champions, limited funding, conflicting timelines, poor co-ordination, and lack of stakeholder capacity. Intrinsic factors included the lack of knowledge of stakeholder positions, lack of follow up, and lack of funding. The private sector actors' own conflicts of interest, overt or perceived by partners, frequently constrained their knowledge brokering efforts (Irwin and Githinji, 2016; Mbadlanyana et al., 2011; Sherrington, 2000; Sitas et al., 2016).

Country and institutional contexts also constrained knowledge brokering activities. For instance, political contexts presented a challenge because decisions tended to be driven by direct lobbying rather than evidence, and the private sector players did not always know which players had competing interests (Klerkx and Leeuwis, 2008; Irwin and Githinji, 2016). Institutional contexts also constrained knowledge brokering because progress was limited by the lack of institutional capacity, bureaucratic processes, lack of funding and poor infrastructure, such as limited communication systems (Chikozho and Saruchera, 2015;

Klerkx and Leeuwis, 2008; Moumouni and Labarthe, 2012; Pelletier et al., 2018; Sitas et al., 2016). Other constraints included unknown vested interests across stakeholders, conflicts of interest and, sometimes, overt competition (Chikozho and Saruchera, 2015).

Discussion

Diversity and versatility of private sector actors

The first challenge encountered in synthesizing the role of the private sector is the diversity in the private sector itself. The selected studies embodied the diversity within the private sector with players ranging from individual knowledge brokers to partnerships/associations and from small to large multinational enterprises. The studies encompassed professional and trade associations as well as universities across diverse contexts. This diversity of private sector players with limited information available within the papers to further characterize them, made it particularly challenging to synthesize our data. Di Bella et al. (2013) highlight the diversity and complexity of the private sector in terms of entities involved, scope of operations, geographical location, services provided and partnerships among other things, make characterizing the private sector a challenge. Moreover, the papers reviewed did not clearly state their corporate goals for us to assess their alignment with the SDGs.

The private sector's versatile role in knowledge brokering depicts its flexibility, willingness and ability to evolve in order to connect people, resources and ideas. In this sense, it is somewhat a chameleon, adapting to its environment. The private sector extends its knowledge brokering role beyond merely providing research evidence to providing added value to multiple stakeholders, wherever necessary and in the form needed by stakeholder. For instance, when the private sector connects experts to policy makers and to research groups, it has the potential to facilitate better research and better policies through the process of knowledge co-creation. By connecting researchers and implementers to funding sources, it is able to facilitate the conduct of research and the implementation of policies. The private sector's advantage here might be inherent in its access to funding and limited bureaucratic red tape when it comes to instituting changes (Chikozho and Saruchera, 2015).

The private sector does not undertake knowledge brokering in an ad hoc manner but rather invests strategically in infrastructure, systems and experts to enable it to succeed. For example, private sector actors in Brussels are strategically locating themselves geographically within policy making locales (Dotti and Spithoven, 2017). Further, the private sector is willing to invest in high quality professionals in order to build credibility and information management systems such as e-platforms in order ultimately becoming the 'go to' persons for all sorts of information for their diverse partners (Hutchinson et al., 2011; Irwin and Githinji, 2016; Reyers et al., 2015; Sherrington, 2000; Van Kammen et al., 2006). They invest in communication platforms and package their evidence for multiple groups and host platforms which enable stakeholders to hold engagements (Hare et al., 2014; Irwin and Githinji, 2016;

Reyers et al., 2015; Sherrington, 2000; Sitas et al., 2016; Van Kammen et al., 2006). Moreover private sector knowledge brokerages continuously evolves in primary in order to fit prevailing trends and those that fail to evolve may become obsolete (Sherrington, 2000).

Barriers: contexts, motives and resources

The successful engagement of the private sector actors was moderated by the context. Contexts that tended to be heavily political presented challenges because of the hidden interests of other players and these made the terrain difficult to navigate. In these instances, private sector actors found that evidence and processes did not matter. They learned that what ultimately mattered was credibility, trust, access to power and legitimacy. Some articles (Chikozho and Saruchera, 2015; Irwin and Githinji, 2016; Reyers et al., 2015) highlight the value of investing in expert personnel and communication systems to build credibility and trust and as well as having 'insider' knowledge. On occasion, the private sector's motives were questioned by their partners and this threatened their influence. This conflict of interest, whether real or perceived, tended to manifest early in the engagements but sometimes dispelled once trust was established.

The resources (human resources, funds, time) possessed by the private sector institution was a constraint in that minimal resources limited the capacity of the private sector to engage. This reduced their ability to pay fees of professionals, their capacity to build robust communication systems and the provision of platforms to facilitate policy dialogue. Moreover, the timelines of policy making tended to conflict with the timelines of the private sector and the private sector often did not have adequate time to achieve their outcome. For example, by the time the private sector established links, facilitated engagements and drew up implementation plans, the disaster risk management projects had run out of time and funding for implementation (Reyers et al., 2015; Sitas et al., 2016). External funding provided by development partners also proved to be a source of contention. The argument was that governments perceived externally funded knowledge brokers as conflicted and pursuing external agendas and therefore mistrusted them, although they did not have the funding to support the projects (Mbadlanyana et al., 2011).

Success: strategic alliances and outcomes

Creating competent, strategic alliances and positive relations with power facilitated the engagements in knowledge brokering. The private sector created competences by hiring professionals, seeking knowledge from credible sources, building strategic partnerships, facilitating productive dialogue and investing in communication systems, which adapt to the needs of their audiences. This proactive approach gave them prominence, credibility and relevance to their different stakeholders as competent and responsive agencies. For example, Irwin and Githinji (2016) highlighted the importance of staying ahead of policy processes in order to provide timely and relevant inputs by anticipating demand and actively filling the

gap, while Reyers et al. (2015) emphasized the value of filling the gap between policy and knowledge by actively playing the mediator role.

The outcomes of knowledge brokering activities ranged from policy and practice influence, generation of funding for implementation, building of capacity, to establishment of engagement platforms and learning networks. Reyers et al. (2015) for instance reports that the KB activities resulted in the establishment of learning networks across different groups which yielded multiple benefits such as improved response to disasters job creation program to achieve improved water yield, decreased pumping costs, new investments in eco systems services, shifts in policy and practice and new collaborations in eco system disaster risk reduction. In general the new partnerships led to pooled resources and resulted in shift from short term to longer term disaster management (Reyers et al., 2015). Sitas et al. (2016) report on the establishment of communities of practice with increased knowledge production but limited time resources and institutional capacities to achieve intended goals. In Kenya, multiple case studies reported influencing shifts in policy and practice although some policy shifts were later overturned (Irwin and Githinji, 2016). This might imply that unless those most affected by the issues play a major role in assuring that the solutions are culturally and contextually appropriate, they are unlikely to succeed (Manzini, 2015). In order to successfully navigate the ever changing policy development terrain and to ensure that private sector knowledge brokers remain relevant, the private sector would need to employ human centred design approaches to knowledge brokering. This would entail identifying and engaging the intended users in the process of co-producing context appropriate knowledge products as well as evaluating these products against user needs (Manzini, 2015).

Reflections on the theoretical framework

This synthesis attempts to operationalize social capital and integrate it with the Glegg and Hoens (2016) meta-framework. It established that social capital was a valuable addition because it became easier to explicitly focus on and distinguish between the relational, structural and cognitive components of knowledge brokering. Glegg and Hoens (2016) meta-framework, and many of the models and frameworks on which is it based, tend to emphasize the relational components of knowledge brokering at the expense of the structural and cognitive components. This is not to say that the relational aspects and the categories of roles are not important – indeed, in working with different types of actors, intrinsic to brokering, they may be predominant – but that the overt focus on relational aspects might obscure the importance of institutional structures in hindering or supporting knowledge brokering. In addition, the advocacy/lobbying role has been added to the Glegg and Hoens (2016) meta-framework, enriching the different roles.

This study found evidence of the importance of personal relationships and trust as a basis for knowledge brokering, closely related to the relational component of social capital. For example, Chikozho and Saruchera (2015: 285) consider that 'the existence of personal

relationships between individuals in these institutions usually acts as the main catalyst for long lasting collaboration on research and policy engagement' while Hare et al. (2014: 2161) establish that 'there can be no substitute for creating opportunities for allowing network members to meet in person, for instance, through workshops. Such meetings create trust and bonds, and support the sharing of knowledge'. Future research should incorporate closer reference to these additional elements of advocacy/lobbying and of relational, cognitive and structural social capital. This has led us to develop a new theoretical framework, specifically focused on knowledge brokering with the private sector.

Limitations of the study

The study establishes that there is a very limited published literature focusing on the knowledge brokering role of the private sector. Many studies mention working with the private sector; which was why they were selected by the literature search in the first place – but that, in reality, this amounted to a sort of 'name dropping' but not actual engagement, possibly because of the current emphasis on the private sector within the discourse on international development which implies that referring to the private sector is socially desirable.

There are a number of possible explanations for this paucity of published literature. First, we suspect that the bulk of literature on the private sector's knowledge brokering activities might exist in unpublished grey literature but this literature was not visible in the references we studied, indicating that there is no real body of interconnected knowledge in this field. Second, as we observed earlier in this article, we consider that the private sector is not writing up its experience of knowledge brokering because scientific publication is very low on its list of priorities. Third, another possibility, and we think this is most likely, is that working with the private sector in knowledge brokering is happening at program level and therefore under the scientific radar it is likely that examples are very dispersed and fragmented. For this reason, our next step will be to examine the current practice of working with the private sector by empirical research of multi stakeholder partnerships which are focused on knowledge brokering as we briefly discussed above. Other papers have also proposed that consulting experts to examine practices is a valid scientific approach when no literature is available on a certain subject (Cummings et al., 2019).

Given that the synthesis is only based on 13 studies, is it scientifically valid? Two mutually reinforcing perspectives support the scientific validity of the current study. First, the methodology has facilitated in depth analysis of the literature, providing a nuanced perspective on the role of the private sector and, thus, has an intrinsic scientific validity. Second, the analysis not only resonates with the meta-framework of knowledge brokering but has added to this theory in a way which will be useful for other researchers, and which adds more depth to the concept of knowledge brokering.

Conclusions

The private sector is playing an increasingly prominent role in service delivery and policy influencing. Despite this, the understanding of the role of the private sector in knowledge brokering within international development is very fragmented. This synthesis therefore represents a useful approach to better understand the role of the private sector in international development. It has developed and tested a theoretical framework for developing insights into the private sector in knowledge brokering which will be further tested in empirical research.

One of the problems with analysing the role of the private sector in international development more generally, rather than only knowledge brokering, is the use of the term private sector which covers such a diversity of institutions with very different objectives. For this reason, we suggest that additional research should take a more nuanced approach to examine how the discourse of the private sector is being employed in the international development sector, and implications of this for working with the private sector in multi stakeholder partnerships.

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References

Ako-Arrey, D. E., Brouwers, M.C., Lavis, J.N. and M.K. Giacomini (2015) 'Health systems guidance appraisal—a critical interpretive synthesis', Implementation Science 11(1), 1–20. DOI: 10.1186/s13012-016-0373-y

Barnett-Page, E. and J. Thomas (2009) 'Methods for the synthesis of qualitative research: a critical review', BMC medical research methodology 9(1), 1–11. Available at: https://doi.org/10.1186/1471-2288-9-59

Charmaz, K. (2006) Constructing grounded theory: A practical guide through qualitative analysis, Sage Publications: London. Available at: http://www.sxf.uevora.pt/wp-content/uploads/2013/03/Charmaz_2006.pdf

Chikozho, C. and D. Saruchera (2015) 'Universities and think-tanks as partners in the African knowledge economy: Insights from South Africa', African Journal of Science, Technology, Innovation and Development 7(4), 286-300

Cummings, S., Seferiadis, A. A., Maas, J., Bunders, J. and M. Zweekhorst (2019) 'Knowledge, Social Capital, and Grassroots Development: Insights from Rural Bangladesh', The Journal of Development Studies 55(2), 161–176. DOI: 10.1080/00220388.2017.1417584

Cummings, S., Kiwanuka, S., Gillman, H. and B. Regeer (2019) 'The future of knowledge brokering: perspectives from a generational framework of knowledge management for international development', Information Development 35(5), 781–794. Available at: https://doi.org/10.1177/0266666918800174

Di Bella, J., Grant, A., Kindornay, S. and S. Tissot (2013) Mapping private sector engagements in development cooperation, The North-South Institute: Canada. Available at: https://www.researchgate.net/publication/330923606_Mapping_Private_Sector_Engagements_in_Development_Cooperation

Dixon-Woods, M., avers, D., Agarwal, S., Annandale, E., Arthur, A., Harvey, J., Hsu, R., Katbamna, S., Olsen, R., Smith, L. and R. Riley (2006) 'Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups', BMC medical research methodology 6(1), 1–13. Available at: https://doi.org/10.1186/1471-2288-6-35

Dotti, N. F. and A. Spithoven (2017) 'Spatial perspectives on knowledge brokers: Evidence from Brussels', Environment and Planning A 49(10), 2203–2222. DOI: 10.1177/0308518X17724442

Dumitriu, P. (2016) Knowledge management in the United Nations system, Joint Inspection Unit, United Nations: Geneva. Available at: https://www.unjiu.org/sites/www.unjiu.org/files/jiu_document_files/products/en/reports-notes/JIU%20Products/JIU_REP_2016_10_English.pdf

Egger, M., Smith, G. D. and A. N. Phillips (1997) 'Meta-analysis: principles and procedures', British medical journal 315(7121), 1533–1537. DOI: 10.1136/bmj.315.7121.1533

Entwistle, V., Firnigl, D., Ryan, M., Francis, J. and P. Kinghorn (2012) 'Which experiences of health care delivery matter to service users and why? A critical interpretive synthesis and conceptual map', Journal of health services research & policy 17(2), 70–78. DOI: 10.1258/jhsrp.2011.011029

Fernandez, R. M. and R. V. Gould (1994) 'A dilemma of state power: Brokerage and influence in the national health policy domain', American journal of Sociology 99(6), 1455–1491

Ferreira, S. M. (2009) 'The new enlightenment: a potential objective for the KM4Dev community', Knowledge Management for Development Journal 5(2), 94–107. Available at: https://doi.org/10.1080/18716340903201470

Glegg, S. M. and A. Hoens (2016) 'Role domains of knowledge brokering: a model for the health care setting', Journal of Neurologic Physical Therapy 40(2), 115–123. DOI: 10.1097/NPT.0000000000000122

Graham, I. D., Logan, J., Harrison, M.B., Straus, S.E., Tetroe, J., Caswell, W. and N. Robinson (2006) 'Lost in knowledge translation: time for a map?' Journal of continuing education in the health professions 26(1), 13–24. Available at: https://doi.org/10.1002/chp.47

Gysels, M. H., Evans, C. and I. J. Higginson (2012) 'Patient, caregiver, health professional and researcher views and experiences of participating in research at the end of life: a critical interpretive synthesis of the literature', BMC medical research methodology 12(1), 1–17. DOI: 10.1186/1471-2288-12-123

Hare, M. P,Van Bers, C., Van Der Keur, P., Henriksen, H.J., Luther, J., Kuhlicke, C., Jaspers, F., Van Scheltinga, C.T., Mysiak, J., Calliari, E. and K.Warner (2014) 'Brief Communication: CATALYST-a multi-regional stakeholder think tank for fostering capacity development in disaster risk reduction and climate change adaptation', Natural Hazards and Earth System Sciences 14(8), 2157–2163. DOI: 10.5194/nhess-14-2157-2014

Haworth-Brockman, M. (2016) Translating Knowledge to Practice: The Case for Knowledge Brokering, The National Collaborating Centre for Infectious Diseases: Canada. Available at: https://nccid.ca/translating-knowledge-practice-case-knowledge-brokering/

Horn-Phathanothai, L. (2013) The Private sector and International Development: A love affair or cold feet, World Resources Institute: Washington, D.C. Available at: https://www.wri.org/blog/2013/03/private-sector-and-international-development-love-affair-or-cold-feet

Hutchinson, E., Parkhurst, J., Phiri, S., Gibb, D.M., Chishinga, N., Droti, B. and S. Hoskins, (2011) 'National policy development for cotrimoxazole prophylaxis in Malawi, Uganda and Zambia: the relationship between context, evidence and links', Health research policy and systems 9(1), 1–10. Available at: https://doi.org/10.1186/1478-4505-9-S1-S6

Imaga, E. (2003) Comparative Management System: Nigeria and some Selected Countries, Rhyce Kerex Publisher: Enugu

Irwin, D. and M. Githinji (2016) 'Business associations in Kenya: the success factors', Journal of Public Affairs 16(2), 162–180. DOI: 10.1002/pa.1573

Jackson-Bowers, E., Kalucy, L. and E. McIntyre (2006) 'Focus on knowledge brokering', Primary Health Care Research and Information Service (4), 1–16. Available at: http://doi.org/10.1517/14712598.2011.582463

Kazimierczak, K. A., Skea, Z.C., Dixon-Woods, M., Entwistle, V.A., Feldman-Stewart, D., N'dow, J.M. and S.J. MacLennan (2013) 'Provision of cancer information as a "support for navigating the knowledge landscape": Findings from a critical interpretive literature synthesis', European journal of oncology nursing 17(3), 360–369. Available at: https://doi.org/10.1016/j.ejon.2012.10.002

Klerkx, L. and C. Leeuwis (2008) 'Matching demand and supply in the agricultural knowledge infrastructure: Experiences with innovation intermediaries', Food Policy 33, 260-276. Available at: https://doi.org/10.1016/j.foodpol.2007.10.001

Klerkx, L. and C. Leeuwis (2009) 'Establishment and embedding of innovation brokers at different innovation system levels: Insights from the Dutch agricultural sector', Technological forecasting and social change 76(6), 849–860. Available at: https://doi.org/10.1016/j.techfore.2008.10.001

Manzini, E. (2015) Design, when everybody designs: An introduction to design for social innovation. MIT press: Massachusetts

Markoulakis, R. and B. Kirsh (2013) 'Difficulties for university students with mental health problems: A critical interpretive synthesis', The Review of Higher Education 37(1), 77–100. DOI: 10.1353/rhe.2013.0073

Mbadlanyana, T., Sibalukhulu, N. and J. Cilliers (2011) 'Shaping African futures: think tanks and the need for endogenous knowledge production in Sub-Saharan Africa', Foresight-The journal of future studies, strategic thinking and policy 13(3), 64–84. Available at: https://doi.org/10.1108/14636681111138776

Merino, S. S. and I. de los Ríos Carmenado (2012) 'Capacity building in development projects', Procedia-Social and Behavioral Sciences 46, 960–967. Available at: https://doi.org/10.1016/j.sbspro.2012.05.231

Moumouni, Ismail and P. Labarthe (2012) Institutionalization of knowledge sharing platforms in the last three decades in Francophone Sub Saharan Africa, In Proceedings of the 10th European IFSA symposium, Aarhus, Denmark, Jul 2012. Available at: https://hal.archives-ouvertes.fr/hal-01019881/document

National Collaborating Centre for Methods and Tools (2011) PARiHS framework for implementing research into practice, Hamilton, ON: McMaster University. Available at: http://dev.nccmt.ca/resources/search/85

Osemeke, M. (2011) 'Problems and prospects of private sector organizations in Nigeria', International Journal of Business and Management 6(4), 178–187. DOI: 10.5539/ijbm.v6n4p178

Pelletier, D., Gervais, S., Hafeez-ur-Rehman, H., Sanou, D. and J. Tumwine (2018) 'Boundary-spanning actors in complex adaptive governance systems: The case of

multisectoral nutrition', The International Journal of Health Planning and Management 33(1), 293–319. Available at: http://doi.org/10.1002/hpm.2468

Reyers, B., Nel, J.L., O'Farrell, P.J., Sitas, N. and D.C. Nel (2015) 'Navigating complexity through knowledge coproduction: Mainstreaming ecosystem services into disaster risk reduction', Proceedings of the National Academy of Sciences 112(24), 7362-7368

Rogers, E. (2003) Diffusion of Innovation, 5th edn, Free Press: New York

Scheyvens, R., Banks, G. and E. Hughes (2016) 'The private sector and the SDGs: The need to move beyond "business as usual"', Sustainable Development 24(6), 371–382. Available at: https://doi.org/10.1002/sd.1623

Shaxson, L., Bielak, A., Ahmed, I., Brien, D., Conant, B., Fisher, C., Gwyn, E. and L.W.A. Klerkx (2012) Expanding our understanding of K*(Kt, KE, Ktt, KMb, KB, KM, etc.): a concept paper emerging from the K* conference held in Hamilton, Ontario, Canada, April 2012. Available at: http://colinmayfield.com/public/PDF_files/OriginalDpdfs/KStar_ConceptPaper_V3.pdf

Sherrington, P. (2000) 'Shaping the policy agenda: Think tank activity in the European Union', Global Society 14(2), 173–189. Available at: https://doi.org/10.1080/13600820050008430

Sitas, N., Reyers, B., Cundill, G., Prozesky, H.E., Nel, J.L. and K.J. Esler (2016) 'Fostering collaboration for knowledge and action in disaster management in South Africa', Current Opinion in Environmental Sustainability 19, 94-102

Spangenberg, J. H. (2017) 'Hot air or comprehensive progress? A critical assessment of the SDGs', Sustainable Development 25(4), 311–321. Available at: https://doi.org/10.1002/sd.1657

Stovel, K., Golub, B. and E. M. M. Milgrom (2011) 'Stabilizing brokerage', Proceedings of the National Academy of Sciences 108(Supplement 4), 21326–21332. Available at: https://doi.org/10.1073/pnas.1100920108

Stovel, K. and L. Shaw (2012) 'Brokerage', Annual review of sociology 38, 139–158. Available at: https://doi.org/10.1146/annurev-soc-081309-150054

Taylor, T. L., Killaspy, H., Wright, C., Turton, P., White, S., Kallert, T.W., Schuster, M., Cervilla, J.A., Brangier, P., Raboch, J. and L. Kališová (2009) 'A systematic review of the international published literature relating to quality of institutional care for people with longer term mental health problems', BMC psychiatry 9(1), 1–30. DOI: 10.1186/1471-244X-9-55

UK Department for International Development (2011) The engine of development: The private sector and prosperity for poor people. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67490/Private-sector-approach-paper-May2011.pdf

UN (2015) Transforming our world: The 2030 agenda for sustainable development, United Nations General Assembly. Available at: https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E

Van Kammen, J., de Savigny, D. and N. Sewankambo (2006) 'Using knowledge brokering to promote evidence-based policy-making: the need for support structures', Bulletin of the World Health Organization 84, 608–612. DOI: 10.2471/blt.05.028308

Wigboldus, S., Nigten, V. and A. Altaf (2019) Synthesis of a consultative stocktaking process to inform: The Dutch DGIS Strategic Knowledge and Innovation Agenda in relation to SDG2, Contributing to sustainable and inclusive food systems in low and middle income countries through knowledge and innovation, Food & Business Knowledge Platform. Available at: https://knowledge4food.net/wp-content/uploads/2019/10/191008_fbkp-consultation-minfa-fns-skia_online-report.pdf

WRI/IIED (2013) Summary notes: Multi-donor roundtable on understanding and improving the private sector's contribution to sustainable development. Unpublished paper, accessed 6th/10/2017 at: http://pdf.wri.org/summary_notes_roundtable_on_private_sector_contribution_to_sustainable_development.pdf