

# Social Procurement in the Construction Industry

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## Abstract:

### ➤ Purpose

The aim of the study is to outline current analyses on social procurement in the construction industry and also offer guidelines in terms of numerous studies concerning subsequent academic projects. According to recent development in social procurement, the positive impact of construction organizations in every vicinity has become very essential in terms of people's welfare which needs to be examined. The construction industry is grossly under-presenting the emergence of the sector as an advanced and credible solution to this recent problem which is instead obscured.

### ➤ Methodology

Based on an analysis of papers on social procurement in the construction industry using Scopus database between 1990 till date, this study will entail an application of quantitative techniques utilizing science mapping procedures.

### ➤ Findings:

According to the analysis conducted, it was deduced that little researches have been previously carried out on social procurement in the construction industry. It was uncovered that companies going forward soliciting for major construction and infrastructure contracts will have to show not only efficiency for completion of projects but also how to impact fairly in the immediate environment where projects are ongoing.

### ➤ Research Implications/Limitations

Analysis was based on the extraction of subject information from the database which was conducted using Scopus that encompasses previously published papers.

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## I. INTRODUCTION

Social procurement entails the purposeful invention of social value through the purchase of good and services (Barraket, Keast & Furneaux 2016). Despite the fact that social procurement is not new (McCrudden, 2004), McNeil (2017) conceptualized it as a social transportation which reinforces the procurement roles as a means of approaching an establishment's social schemes using means of the creation of hybrid assemblages within organizations in the construction sector. Contrary to conventional construction procurement which focuses on delivering buildings and infrastructure within budget, on time, and with high quality (Greenhalgh and Squires, 2011), it endeavors to create value for society as a whole through procurement (Barraket et al., 2016). The social procurement field is proportionately recent, mainly in construction (Loosemore, 2016). An increasing aspect of study on social procurement in construction indicates that it is challenging to execute social procurement in construction. More than fifty years of research have been done on procurement practices in construction. Several hundred references to procurement have been identified in

peer-reviewed publications and conferences in eighteen leading international journals and Ph.D. theses from the past decade, including topics like procurement method, supply chain management, project delivery systems, and buying and purchasing practices (ARCOM, 2015). Despite the above trends, little is known about the concept of social procurement. Construction industry professionals do not yet fully understand what this means and how they can engage with this agenda more effectively. Murphy and Eadie (2019) cited the Irish construction industry as an instance of where social procurement will be difficult to accomplish due to the fact that it will entail adaptation of performance objective so as to evaluate social value as well new links creation connecting different organization roles such as procurement sustainability and human resources. In the context of Furneaux and Barraket's (2014) typology of social procurement, Loosemore and Reid (2018) deduced that, for the construction industry to comply successfully on recent policy conditions, it must prioritize building existing subcontractor's capacity in order to become a standard. The influence of minority of social benefit organization (like social enterprise) that are at the center of much social

procurement researched policy should be more fully recognized. Contrary to the dominant narrative, contractor's views are lacking from the current discussion of social procurement in construction. The findings of Loosemore et al (2020) also show that subcontractors in the Australian construction industry perceive social in buildings as a risk to quality, productivity, cost and safety.

Due to the fact that there is virtually little or no bibliometric analysis on social procurement in the construction industry before now, this research will help in more clarity concerning various studies with the application of scientometric analysis. According to the academic and policy literature review of Barraket and Weissman (2009), the progress in social procurement are in line with a "relation approach" to procurement that constitute a shift from tendering towards social impact and sustained supply chain interconnection. Hence, with the availability of previous articles, it aims to close gaps in the literature. Scientometric analysis will be incorporated to the comprehensive review of the data collected in order to ascertain the existing condition of social procurement in the construction, deduce articles in these regard and also suggest necessary directions for subsequent approaches of embracing construction procurement. Construction industry firms, client and consultants as well as local communities where projects are built will find the study essential. CM (2014) illustrated that building on time and within budget is becoming more and more secured. It is important for local authorities to establish their investment in their environment not just delivery of advanced amenities, even procedures of building and provision of internal training and jobs. By learning more about the construction industry as a whole, it will enhance the enormous, but till now untapped role which is important for a better society. More people are employed in construction worldwide compared to other sectors, it is predicted that the industry will grow by 70% to \$15 trillion world-wide in 2025 (WMI, 2010, GCP, 2013). In addition, given that the construction industry has extensive interconnections with other sector of the economy, the potential economic multiplier effect on one job could extend to other sectors. A prosperous economy is based on a combination of effective social infrastructure, such as, hospitals schools and libraries, and economic infrastructure such as highways and bridges which generate jobs and enable a structured movement of goods and services between businesses and their communities (Hansford, 2013). As of 2010, housing shortages are estimated to cost the UK £2.5 billion in health cost each year, £14.8 billion in crime cost, and two million lost hours per year resulting in higher levels of unemployment and reduced labor mobility (CIOB, 2014).

Research purpose, material collection, and eligibility criteria was reviewed. Quantifying and analyzing selected data is done with the assistance of computer-aided tools (Yalcinkaya and Singh, 2015). Science mapping which was used for analysis which constitutes of respective authors, specialties and region (Small, 1999). It describes and analyzes current researches and delivers directions on subsequent approaches on the social procurement in the construction industry. The major aim of the research is to outline latest

advances in the field using a quantitative approach. Researchers often find bibliometric analysis essential in gaining extensive vision in particular research fields, but others severely queries the reliability of this approach. To strengthen the development and intellectual form, it will involve exploring established research and scientific disciplines. (Noyons et al., 1999b).

#### A. *Comprehensive and Extensive Review*

Social procurement is not a new practice but has just been re-visited lately and as a result of that, an extensive review was used in the evaluation. The study will be examined in five measures according to Lu et al (2018), which are:

- *Choosing of data source*
- *Initial research implementation on the subject*
- *Preference selection of the subject papers*
- *Prioritizing of data in the construction industry.*
- *Distinguishing preferred articles*

#### ➤ *Step 1- Choosing of Data Source*

Considering acquiring articles for the subject topic which is social procurement in the construction industry, Scopus was chosen for the extraction of necessary details on the study. It contains construction management and economics articles, engineering construction and architectural management, proceeding of institute of civil engineers management procurement and law, and construction innovation which was considered during the process but focus was more in the construction industry. Scopus database was chosen for the bibliometric analysis simply because it contains latest journals and articles compared to other contemporary sources like web of science (Chadegani et al., 2013). In many scientific fields, Scopus is the most common database for literature searches (Guz and Rushckitsky, 2009). The data are regularly updated and also the largest searchable source of citation and abstract (Chadegani et al., 2013).

#### ➤ *Step 2- Conduct Introductory Search*

In order to improve the standard of the initial search, journal articles that were peer-reviewed were selected which would be more analyzed with a timeline from year 1990 till date. Conference papers and books were excluded because more explicit information is gotten from journal publications in the field of construction which will be used for the analysis. The initial search criteria were centered on social procurement. The research key words chosen through the search engine was ("Social Procurement"). The result was manually filtered to remove document not related to construction industry. The search surveyed the necessary documents based on the title, abstract or keyword, language and subject area in order to distinguish suitable articles.

#### ➤ *Step 3- Filter Social Procurement Papers*

More selection criteria were inputted on the extracted papers by making use of search titles such as engineering Construction and Architectural Management, Construction Management and Economics, Journals of construction Engineering and Management etc. Because social

procurement is very extensive, data gathered needed to be streamlined by making sure unrelated topics were removed using further selection criteria as stated.

➤ *Step 4- Prioritize Social Procurement Papers Distinctly in Construction Industry*

Additional specified criteria to ensure the article papers selected are focused more in the construction field. Source type like books, conference proceeding, reports were excluded focusing more on journal articles. After necessary sorting of the extracted document, 36 articles were distinguished for review for the research.

➤ *Step 5- Identifying Research Articles*

36 number of article journals were eventually extracted which is the basis of the connected subjects of the research. The bibliometric data were obtained as a CSV file and subsequently imported into VOS viewer in order to scientifically map out the research of social procurement in the construction industry. The search words used was (“Social Procurement”). The result gotten was scrutinized to make sure the document is in the construction industry. Further search criteria were used before the final documents were chosen which is explained below:

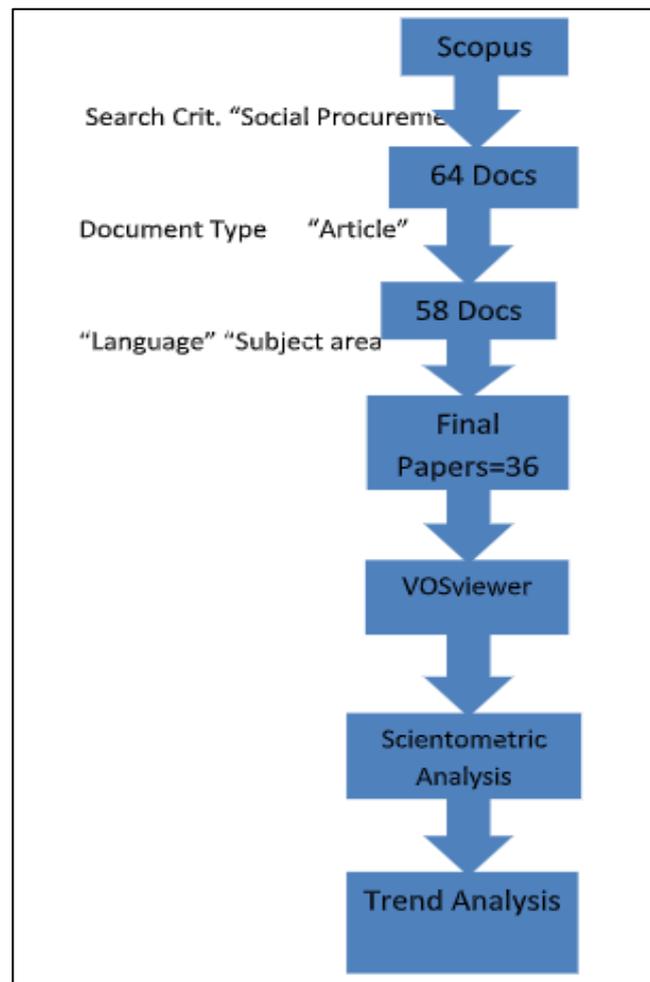


Fig 1: Flow Chart

*B. Science Mapping and Scientometric Analysis*

The main procedure that was utilized for this analysis was science mapping which measure specific systems and samples especially with a vast bibliometric data (Cobo et al, 2011). Using science mapping, it is easier for research to systematically link several literature views which would be difficult to carry out with a manual concept (Su and Lee, 2010). It helps to solve the difficulties that would be encountered if a manual analysis is used due to large data that is involved in the research information about countries, keywords and in a specific field (Su and Lee, 2010). According to Hosseini et al (2018), a scientometric analysis makes use of bibliometric data, techniques and procedures to scientifically map out literature.

*C. Selection of Database*

In this study, Scopus was used for analysis because of its broad reporting scheme. Meho and Rogers (2018) stated that Scopus is the largest database suitable for associative scientific literature compared to other databases like web of science and Google scholar.

*D. Tool Selection Data Acquisition*

In order to establish networks and patterns, VOS viewer was used for investigating, visualizing and generating bibliometric maps. There are other programs that analyze text units and similarities matrices, but VOS viewer focuses primarily on visualization (Van Eck and Waltman, 2014). It features an interactive effectiveness that gives a tactile experience, and provides options for surveying network data such as co-occurrence and citation counts, relationship among terms and concepts, and so on. Through VOS viewer, users can download publications directly from Scopus, web of science etc.

**II. RESULTS AND DISCUSSION**

*A. Author Co-Citation Network*

The overview of the top 10 most cited paper on social procurement in the construction industry spanning from 1990 till date is as shown below:

Table 1: Author Co-Citation Network

S/N	CITATION	ARTICLE	AUTHOR & YEAR	KEYWORDS
1	198	Social procurement in UK construction industry	Loosemoore (2016)	CSR; Social Enterprise; Social Procurement; Social value
2	52	Rhetorical strategies to diffuse social procurement in construction	Troje (2018)	Diversity; Social Procurement
3	38	Integrating indogenous enterprises into the Australian construction industry	Denny-Smith & Loosemoore (2017)	Labour Utilization; Procurement; Small Enterprise; Social Progress
4	33	Co-creating social value through cross-section collaboration between social enterprise and the construction industry	Barraket & Loosemoore (2018)	Cross-Section Collaboration; New Public Governance; Social Enterprise; Social Value; Social Procurement
5	32	Employment requirement in Swedish construction procurement- Institutional perspectives	Troje & Kadefors (2018)	Social Procurement; Social Value; Construction Procurement
6	24	Populating the social realm: new roles arising from social procurement	Troje & Gluch (2020)	Employment requirements; Social Procurement; Professional roles
7	16	The risk and barrier to social procurement in construction: a supply chain perspective	Loosemoore, Alkilani & Mathenge (2020)	Diversity; Gender; Employment; Social Procurement; Social Value
8	16	Social procurement and employment requirements in construction	Petersen & Kadefor (2016)	Institutional Change; Employment requirements; Social Procurement
9	15	The social procurement practices of tier-one construction contractors in Australian	Loosemoore & Reid (2019)	CSR; Social Enterprise; Social Procurement; Social value
10	10	Reintegrating ex-offenders into work through construction: a case study of cross-sector collaboration in social procurement	Loosemoore, Bridgeman & Keast (2020)	Collaboration; Construction; Social Procurement; Social Value

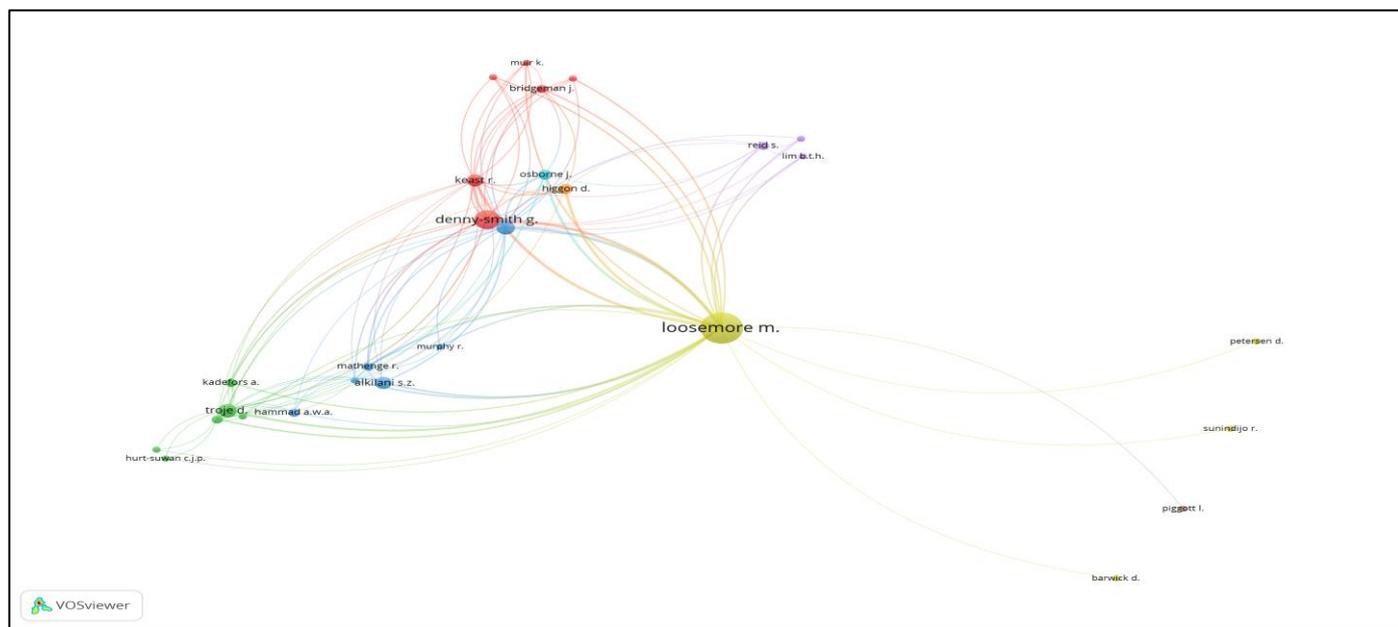


Fig 2: Author Co-Citation Network

The top five influential studies were by Loosemoore (2016), Troje (2018), Denny-Smith and Loosemoore (2017), Barraket & Loosemoore (2018) and lastly Troje & Kadefors (2018). According to the overview of the research, social procurement’s re-emergence in recent years as an important mechanism for determining public policy in many countries in a way for government to tackle rising social problems and bias (Barraket et al. 2016). Government often sees the construction industry as focus for new social procurement

policies as a result of its scope and economic multiplier effect. Essentially government spending on construction and infrastructure can unleash significant untapped social value potential by requiring construction firms to reciprocate to the society been built (Loosemoore, 2016). The highest cited study by Loosemoore (2016) deduced that the numerous changes are needed to the prevailing procurement implementations in For more social enterprises to be involved in construction projects, It is further noted that clients have

the critical leadership role to bringing about the major changes with bigger firms starting to engage more in social enterprise sector, the small firms will resist the adoption unless they are encouraged to do so. The study by Barraket and Loosemoore (2018) focused to address newly emerging value chains remain a mystery, and there are unresolved questions regarding how and why different types of construction companies work together to create social value. The construction industry's social procurement practice shows little or no cross-collaboration. It was indicated that, in jurisdictions where social procurement legislation is legal but not mandated, firms do not enjoy significant implementation or competitive advantages from social procurement policies. The general geographical location of the authors are in developed countries which shows that social procurement

practices are more predominant in that part of the world (McCrudden 2014).

The Vosviewer does more than calculate the co-citation of the authors. The system also generate a co-citation map as shown below that “visualizes similarities” in the knowledge of authors. Each node indicates the number of author co-citations and a lager impact are exhibited in the larger nodes. Scholars are connected together by ‘links” which specify the number of times they have been co-cited by other scholars.

*B. Countries Research of Social Procurement in the Construction Industry*

The classification of documents in terms of countries and citations of social procurement in the construction is as shown below.

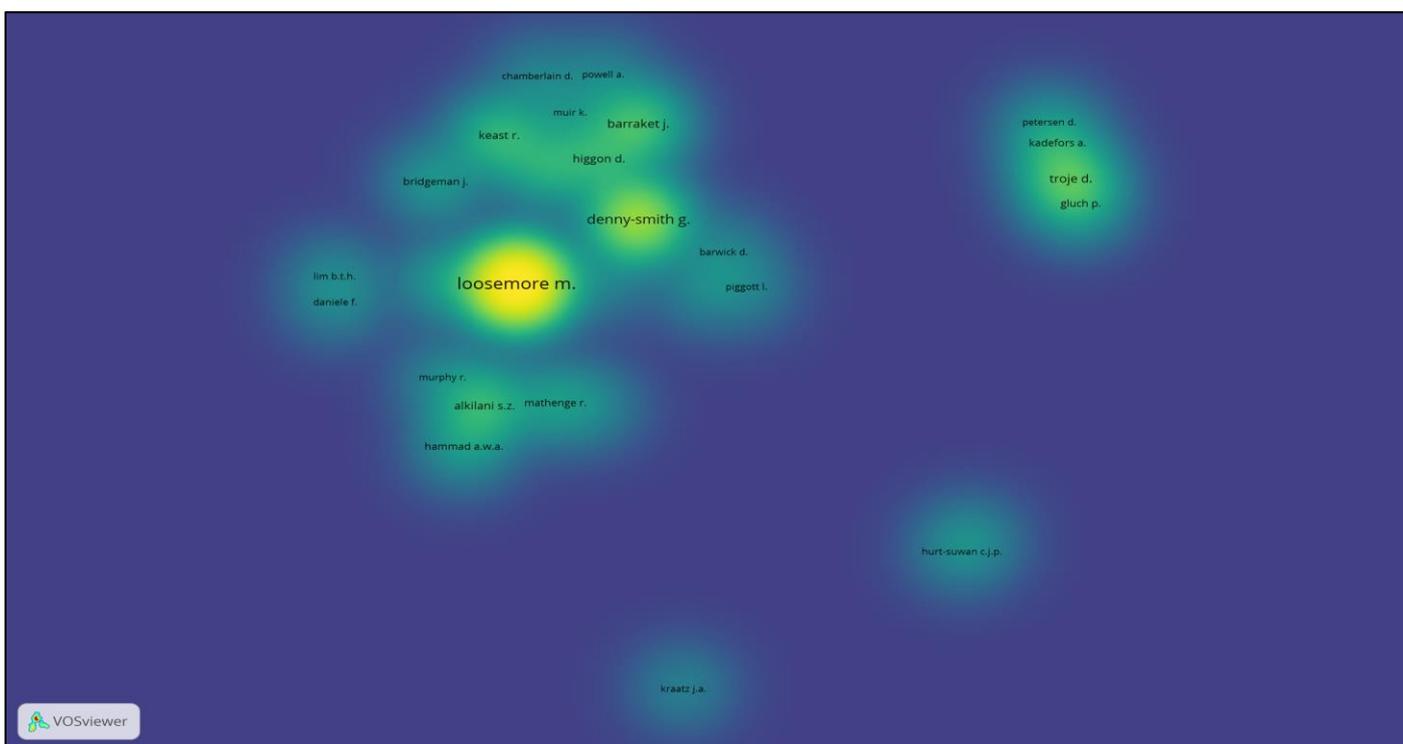


Fig 3: Countries Research of Social Procurement in the Construction Industry

Table 2: Country, Document, Citations and Total Link Strenght

S/N	COUNTRY	DOCUMENT	CITATIONS	TOTAL LINK STRENGTH
1	Australia	28	201	3
2	Sweden	6	68	0
3	United Kingdom	3	10	3
4	New Zealand	1	1	0

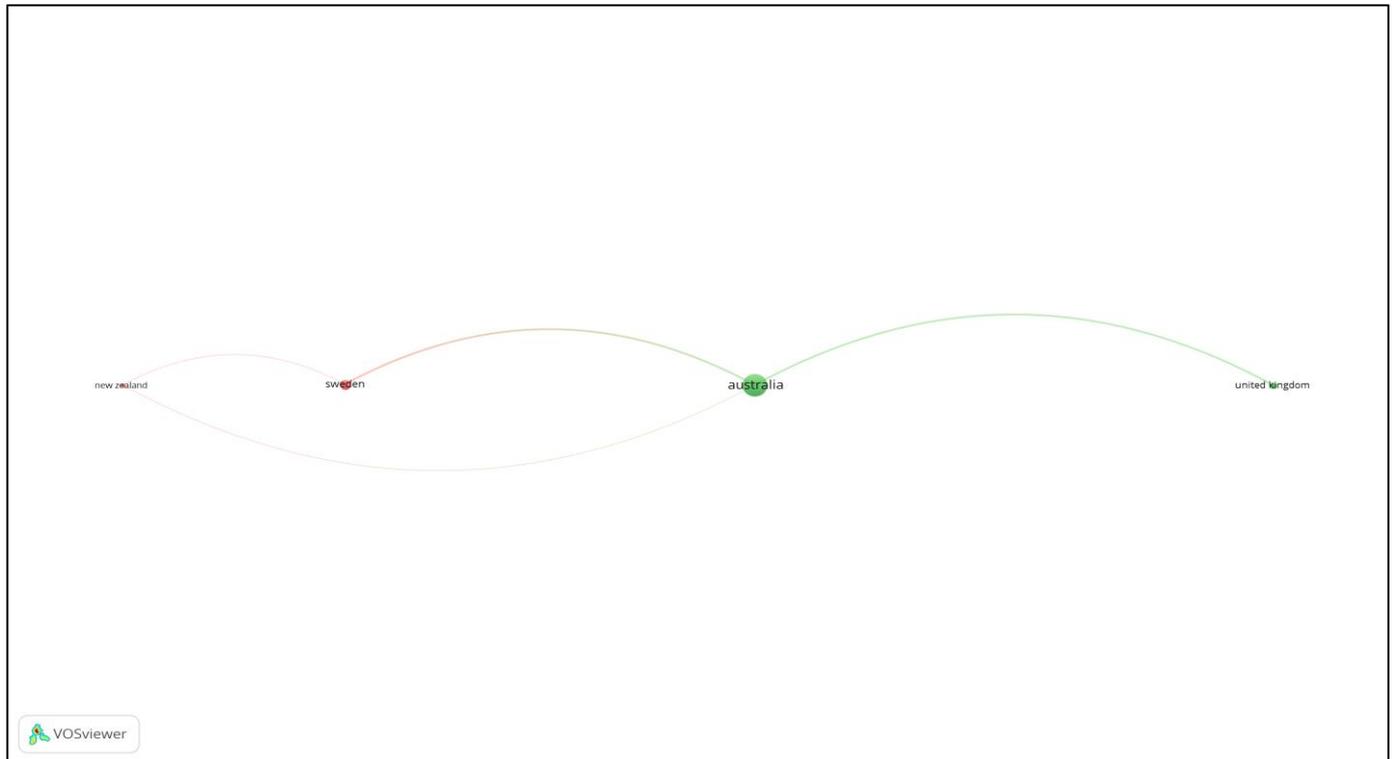


Fig 4: Country, Document, Citations and Total Link Strenght

It can be deduced that the published articles journals of social procurement are emerging from developed countries like Australia, Sweden, United Kingdom and New Zealand which strictly shows that the practice is more common in those regions of the world. As shown in the table, Australia

had the highest publication of 28 documents with the highest citation of 201. Also, the second highest is Sweden with the total document of 6 and 68 numbers of citations. A significant observation is the exclusion of African continent which denotes that social procurement is not yet a regular practice.

C. Co-Authors Citation by Institution

Below are the institutions according to the number of documents and citations as evaluated by the Vos tools

Table 3: Co-Authors Citation by Institution

S/N	ORGANIZATION	DOCUMENTS	CITATIONS	TOTAL LINKS
1	Faculty of the built environment, University of New South Wales, Sydney, Australia.	4	113	83
2	Centre for social impacts, Swinburne University of technology, Hawthorn, Australia.	1	28	31
3	University of New South Wales, Australia.	1	28	31
4	Division of service management abd logistics, department of technology management	1	23	19
5	School of built environment, University of technology, Sydney Australia.	6	22	42
6	Asia Pacific international College, Sydney, Australia	2	17	25
7	Department of construction and property management, University of New South Wales, Australia.	1	11	19
8	School of Business and Tourism, Llamau, Cardiff, United Kingdom.	1	7	18
9	Damajo, Sydney, Australia	3	4	25
10	Multiplex, Sydney, Australia	2	4	18

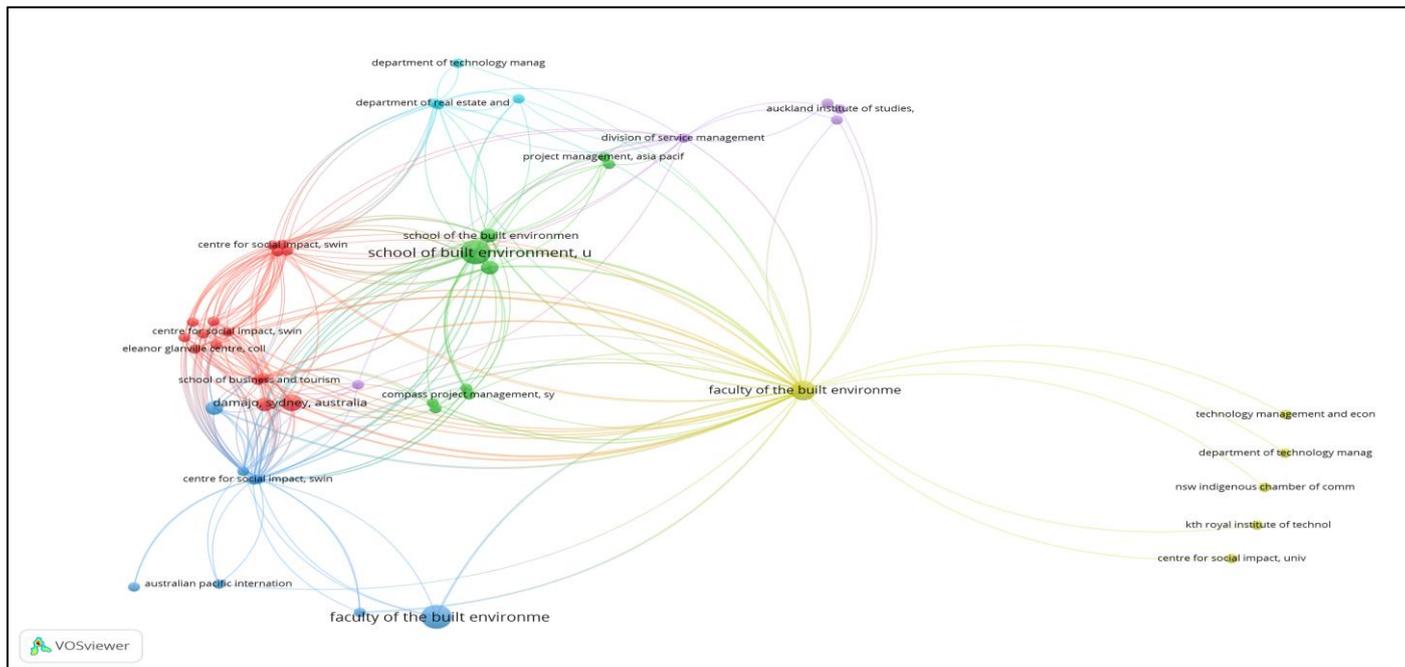


Fig 5: Co-Authors Citation by Institution

The main aim of the analysis was to ascertain the organizations that have mostly contributed to the publications in regards to social procurement in the construction industry. According to the institution analysis, faculty of built environment, University of New South Wales, Sydney had the most cited publication with 113 and 4 documents, Centre for social impact, Swinburne, University of technology, Hawthorn, Australia and University of New South Wales had the joint second most citation with 28 and 1 document and division of service management and logistics, department of technology management with citation of 23 and 1 document. As observed from the analysis, the countries where the organizations are located are developed countries which show the extent of social procurement scheme observed in the region.

*D. Co-Occurring Keywords Network.*

By following the network of co-occurring keywords in the documents, the concepts of the research can be reflected (Wuni et al. 2019). Consequently, a combination of chart was created to identify the most relevant keywords and their combination. After necessary evaluation of the co-occurrence keywords of the 36 documents analyzed, the outcome is as shown below. The top 10 repeatedly used keywords are explained based on total link strength and occurrences. The extent of the keywords reveals the number of times the keywords surfaced as author keywords in the article. As an example, keywords like social procurement, construction industry, social value, project management, and employment possesses more nodes than the other keywords used in the article.

Table 4: Co-Occurring Keywords Network

S/N	KEYWORDS	OCCURRENCE	TOTAL LINK STRENGTH
1	Social Procurement	31	419
2	Construction Industry	29	393
3	Social Value	22	320
4	Project Management	20	282
5	Social Values	16	218
6	Employment	12	174
7	Supply chain	12	174
8	Corporate Social Responsibility	8	124
9	Economic and Social Effects	7	107
10	Procurement Policy	6	104



useless for creating indigenous social value. In construction projects, there have been degrees of marginalization, racism, and discrimination directed towards minority groups (Wong and Lin 2014), which may have detrimental consequences for indigenous people employed in the field. Furthermore, because construction is essentially a site-specific, project-based activity (Dubois, Gadde 2002), it places indigenous people in a position of drifting, which clashes with traditional concepts about kinship and locations in the world. If one job is at the expense of cultural values; the characteristics of construction projects can have a negative impact on the interaction between value objects (a work opportunity) and existing judgments (indigenous cultural values). The largely commercial necessities that drive the construction sector may cause tensions for indigenous people. People are regarded as less than human (Dainty and Loosemore 2013), which makes it difficult for indigenous people to maintain their cultural ideals of remaining linked to their homeland and community. Furthermore, construction is a very "calculated" process in which workers work under severe cost and schedule constraints. According to a survey of performance measurement frameworks in construction by Bassioni et al. (2004), the majorities of frameworks depend mainly on financial measurements and pay little consideration to how a company is rewarding its employees.

#### D. Cross-Collaboration in Social Procurement

According to Barraket et al. (2016), cross-collaboration involves embedding collaborative activity that creates social value into the practice business operations, including customer intervention and supply chains. The idea seems relevant from the perspective of commercial construction organization, since it closely corresponds to how they are increasingly seeking. By cooperating with social entrepreneurs and other third-party groups to adhere to expanding social procurement directives and non-price factors in bids, you can gain a competitive edge (Loosemore, 2016). Similarly, the social value chains strategy is in line with how social entrepreneurs in the construction industry are attempting to expand up by collaborating with larger organizations (Loosemore and Higgons, 2015)

#### IV. CONCLUSION AND RECOMMENDATION

The research proffered scientometric analysis of social procurement in the construction industry and publication on social procurement was used as extracted from Scopus search engine. The study was spanned from 1990 till date and the article journals were offered to all region of the world. The study revealed that construction management and economics, engineering construction and architectural management, building research and information, international journal of project management and journals of public procurement are the most cited and significant study channels on social procurement in the construction industry. The review indicated that "social procurement", "construction industry", "social value", "project management" and "social values" were the author keywords primarily utilized during the search of social procurement in the construction industry.

Considering countries where social procurement in the construction industry is predominant, Australia (28), Sweden (6), United Kingdom (3) and New Zealand (1) appeared to be the location where is mostly practiced. This denotes that the developing countries are still struggling when it comes to this scheme. In spite of the fact that the construction industry has been advancing in social procurement in recent time, it is still marginalized in the bigger discussions. There is weak theoretical foundation when it comes to project management as a result of the requirements imposed by social procurement policies. Social procurement both internal and external field of construction is inadequately acknowledged (Troje and Gluch, 2019).

According to study as reported by Wong and Lin (2014), there have been issues of racism and marginalization on construction projects towards smaller groups in the sector. To stimulate the commitment of more social enterprise in construction projects, several substitute of existing procurement practices are required. Clients have a crucial role to play in driving these changes. The majority of big firms are not involved with social enterprises yet, and there is a very long list of smaller companies that will oppose change unless they are encouraged. This study has shown, however, that social enterprise can provide clients and firms in the construction sector with an advanced and has yet inactive chance to better engage with their communities and help the environment and the most disadvantaged in the society through meeting new social procurement requirements including UK's social value acts and Australia's indigenous procurement policy. Researches that are project based are required in order to know and differentiate the obstructions to social procurement which prevail there and prospective functions that social enterprise can play in leaving an effective outcome for upcoming generations. Subsequent papers should be written on emergence of social procurement in the developing countries where welfare of people needs to be a priority.

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