

Original Article

# Exploring Social Value Prospects of Australia's Construction Industry Towards the Aboriginal Communities, Under COVID-19 Recovery Efforts

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**Abstract** - The COVID-19 pandemic has exacerbated pre-existing economic and social challenges throughout the world. The unemployment rate in Australia has skyrocketed due to the country's first recession in 40 years. Australia's governments have responded by investing heavily in construction projects that stimulate the economy by expanding into modern public procurement policies targeting specific groups, such as the conservative Aboriginal communities. However, a number of asymmetries exist between policy makers and practitioners regarding the implementation of social procurement policies. By surveying Aboriginal construction workers and correlating their social value expectations and employer preferences, the paper argues that private corporations can build social value prospects for conservative employees when they proactively introduce employment policies (such as rewarding remuneration and career development attributes) and cultural benefit strategies (such as all-inclusive and ethnically diverse workplaces). For ensuring a rapid recovery from the economic setbacks caused by the pandemic, it is essential to carry out such studies to estimate how enhanced infrastructure spending in Australia can contribute to sustainable social progress.

**Keywords** - Operations research, Construction engineering, Social impact, COVID-19, Employment generation.

## 1. Introduction

There has been a staggering intensification of complex problems in societies worldwide in the year 2020. The COVID-19 pandemic has caused Australia's first recession in 4 decades and has disproportionately affected racial and ethnic minority populations [1,2]. In December 2020, Australia's unemployment reached its 15-year high of 8.2%, and people who became suddenly unemployed had to contend with an inadequate financial-support system, making it extremely difficult for effective socio-economic participation in their local communities [3]. As a result, COVID-19 has adversely disturbed the lives and livelihoods of many vulnerable Australians, such as long-term unemployed individuals [4]. As many scholars have expressed, COVID-19 has compelled communities and societies worldwide to adapt to the 'new normal' social regulations, norms and lifestyles, be it working from home, keeping social distance, or practising self-isolation [5]. Due to a large number of job losses, these changes have transpired simultaneously with the overwhelming number of retrenchments, all of which have negatively impacted the nation's economy [6]. However, interestingly, the conservative Aboriginal Australians representing a secluded Indigenous heritage of the nation (comprising more than 10% of the country's total population, as depicted in Figure 1(a)), despite having faced an increased socio-economic threat

from the COVID-19 outbreak [7], have successfully managed the social ethos and responses needed from their frontline and essential workspace, to curb the further spread of this infectious disease towards the densely-populated locales of the nation (as portrayed by Figure 1(b), based on statistical PCA scores calculated by Karácsonyi et al. [8]; a lower score implies a reduced demographic susceptibility to economic downfalls caused by the virus outbreaks causing COVID-19 infection and resulting lockdowns).

It, therefore, becomes imperative for the country to increase support for innovations that improve social value prospects for the Aboriginal communities, based on their social value norms, to integrate them into the nation's mainstream economy and society in the attempts to minimize the brunt of COVID-19, and disasters alike, with concerted efforts [9]. Specifically, as described by Apostolopoulos et al. [10], the COVID-19 situation in Australia, and Oceania territories in general (e.g., New Zealand, Fiji, Samoa, etc.), has brought opportunities for fostering synergistic efforts that accrue social benefits. To ensure a rapid recovery and sustainable development in a post-COVID world, inspecting how social values can be created or generated through extensive and wide-scale engineering sectors, like construction, would be worthwhile. In reference to tackling Australia's COVID-19 disaster, the currently advancing



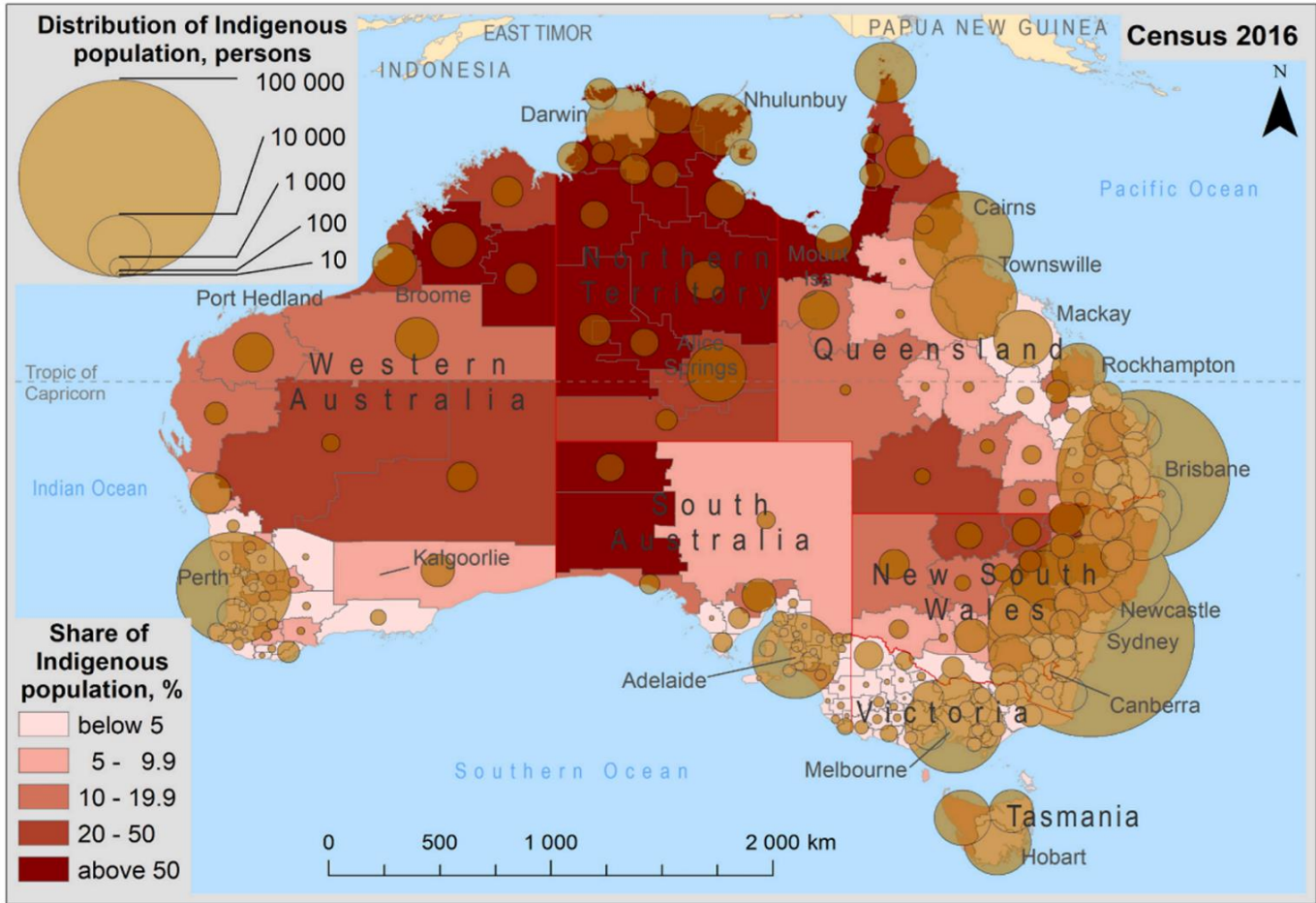


Fig. 1(a) Share and distribution of the Aboriginal population in Australia (adopted from Karácsonyi et al. [8], with copyright permission)

research endeavours on facilitating the socio-economic recovery for a post-COVID world can also profit from recognizing the Indigenous social values of Australia and the practices of implementing infrastructure projects, such as those underlying the successful interventions led by the Aboriginal Australians, in the time of this crisis.

Considering such a promising solution and the possibility that a substantial economic recovery of Australia may certainly be entirely achievable shortly, Australian governments, both state and federal, are strongly dedicated to continuing rapid investments in infrastructure projects to create more jobs and stimulate the country’s economy. The federal and state governments have each committed roughly 81 billion AUD (i.e., Australian Dollars) to infrastructure funding for ten years, starting with the 2020-21 base period [11–13]. This initiative involves some major new schemes, like (a) An investment package of 1.5 billion AUD for ‘off-the-shelf’ ready projects, such as key upgrades in highway and transportation infrastructures, to be implemented within the next two years; (b) A net expenditure of 12 billion AUD to finance the development of the Western Sydney Airport campus, in collaboration with the Government of New South

Wales; (c) Allocation of 49 billion AUD to the Queensland Economic Recovery Plan for the building of further new infrastructures; and (d) 16 billion AUD in infrastructure investments for the state of South Australia, to be made between 2020 and 2024, as well as establishing new manufacturing hubs in the state for the rapid recovery from the devastation caused by the COVID-19 crisis.

Consequently, construction activities increased substantially during the pandemic, mainly due to declarations of these government programmes that were directed towards boosting the country’s engineering sectors following the COVID-19 outbreak. Australia’s momentous investment plans have also allowed government agencies to connect its construction expenditure with new public procurement policies requiring contractors to generate or produce social value for the local and Indigenous communities [14]. Also, by partnering with private companies, governments have a chance to generate more social value through conventional market practices [15,16]. Public procurement elicits social value for communities when government bodies directly recruit crisis-stricken groups or indirectly incorporate social procurement clauses in their contracts with the supplier

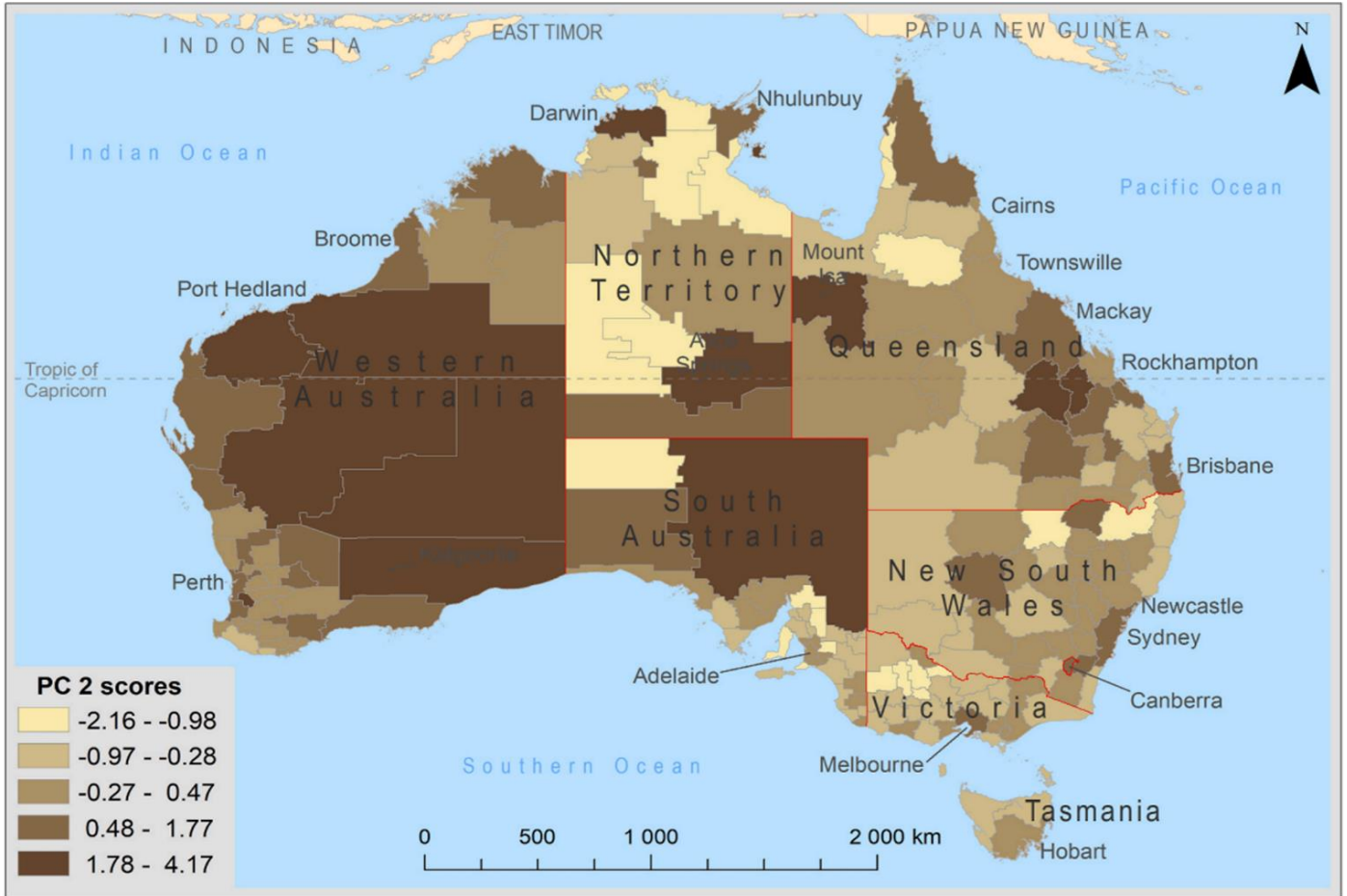


Fig. 1(b) Economic vulnerability of the Australian population to the COVID-19 crisis, as per Principal Component Analysis (PCA) scores (adopted from Karácsonyi et al. [8], with copyright permission). PCA is a machine learning tool to interpret a multivariate dataset as a smaller group of variables (e.g., summary indices) for observing statistical trends, jumps, clusters and outliers in data mining.

corporations [17,18]. Typically, contractors are required to engage or purchase from groups consigned by public procurement policies, such as the Aboriginal populace of Australia [19], Australian Disability Enterprises, or other social enterprises in general [20,21]. Since the introduction of the Australian Government's Indigenous Procurement Policy six years ago, Indigenous businesses have generated over 4.7 billion AUD in securing construction project contracts for themselves [22,23]. The social value concept in the construction industry generally refers to the cultural, monetary, and social impacts of a project's planning and execution, particularly on native nationals and local community groups of a nation [24], similar to the case of socio-economic progress of Aboriginal Australians that has materialized via the enhancement in business, entrepreneurship and employment opportunities by the Indigenous Procurement Policy of Australia [19]. As the major infrastructure projects pledged by the Australian federal and state governments are devoted to producing thousands of robust employment opportunities, as explained before, this paper tries to examine the social value avenues that the upcoming construction employment in Australia can

create. This article attempts to contribute to the sustainability objectives of the journal. It is aimed to demonstrate how construction businesses and minority-group employees can prosper through socially renewable strategies and practices.

## 2. Social value Prospects in Australia's Infrastructure Investments

Social value is a highly germane topic and has remained under-explored in academia. According to Ryan and Lyne [25], Kroeger and Weber [26], and Hall et al. [27], social value is intrinsically an arbitrary and malleable concept that is subject to individual interpretations, depending on one's morals and priorities. The importance of public procurement for social value generation is often undermined in practice, especially in construction sectors, where industry participants and stakeholders are uneasy about policy design, implementation schedules, information asymmetries, poor risk estimations and perverse incentives [28,29]. Generally, any construction industry, irrespective of its nationality or genesis, utilizes public procurement schemes inconsistently, as such practices are not internalized within the



organisations, and efficacious procurement services may only be feasible when the contractual requirements of social procurement are met [30,31]. Deriving social value prospects or returns via public procurement is also complicated by the paucity of direction and explications of the social value notion and the ways with which it can be attained, owing to the conflicting and competing interests of various stakeholder in achieving the social value targets [32,33]. It also creates the same difficulty for contractors and policymakers who sincerely pursue appraising and reporting on social value norms, perceptions and goals of a nation's workforce, as Mulholland [34] avidly noted. In the view of Shaw [14], the concept of social value has always remained ambiguous from a theoretical and operational standpoint. Therefore, it would naturally seem skeptical, as to whether the public procurement policies, that are supposed to be implemented under the Australian government's commitments described above, will substantially deduce social value and enable sustainable recovery from the COVID-19 catastrophe.

Yet, regardless of the abstract comprehension of the theoretical and functional aspects of the social value concept articulated above, a meticulous data-driven approach (qualitative or quantitative) is vital to understand COVID-19's social, cultural, and economic impacts, especially on minority ethnicities or races, as humanity's progress towards the vital United Nations Sustainable Development Goals gets tracked [35]. Without a perception of how construction jobs produced by the major infrastructure commitments made by the Australian state and federal governments can yield some social value, government endeavours to manage and mobilise the investments in construction sectors efficiently may be unsustainable, which would potentially repress other international recovery efforts. In light of this situation, this paper exclusively addresses Australia's construction industry, due to the significant rise in the governments' spending on infrastructure developments, in countering the country's COVID-19 situation.

Aboriginal people in Australia (as depicted in the representative photo depicted in Figure 2) belong to an ancestry of primordial communities of Oceania origin, with a legacy of esoteric religious ethos and cultural ideologies that span across biblical times of history [36–38]. Their conservative and orthodox ways of tackling disasters and health challenges, with a sense of kinship and humility towards nature and their communities, though admired by anthropologists and scholars [39–41], often get disregarded by bureaucratic policies that claim to aim at alleviating and bringing the socio-economic status of the people at par with contemporary mainstream societies [42–45]. Moreover, despite their astute intelligence and superior work ethics, Aboriginal people are often seen as expendable or inferior human resources by private corporations and businesses [46,47], with indifference towards their financial woes and

cultural sentiments [48–50]. Aiming to contribute to the progress of global recovery efforts after the COVID-19 crisis, this paper explores how construction procurement in Australia may deduce social value via employment generation, specifically for Indigenous communities such as the nation's Aboriginal population. With Australia's Aboriginal community as the subject instrument, this paper ultimately provides answers to the fundamental questions listed below:

- Question 1: What factors generate or derive social value for the Aboriginal groups through construction employment?
- Question 2: How do construction employment outcomes relate to the social value norms and returns for a society in general?

In addition to ensuring a sustainable restoration to normalcy from COVID-19's impacts on human, social, cultural, and economic welfare, this research serves to concert innovation towards trying to achieve the United Nations' Sustainable Development Goals. Moreover, conducting these kinds of studies is crucial, given the substantial role that infrastructure investments have in revitalizing economic activity post-COVID-19 [51]. As societies and economies recoup from the shutdowns and fatalities caused by the pandemic, answers to the above key questions will ensure that international businesses survive and flourish. In this paper, the following sections illustrate a holistic approach that provides empirical insights into the practicable creation or accretion of social value avenues via construction employments, particularly for Australia's Aboriginal people, which invariably differs from traditional econometric measurements, that are often simplistic or reductionist in making such an attempt. This analysis shall help to understand the true impact of social value practices on the people and, in turn, aid in developing better policies and procedures for the nation.



Fig. 2 Group photograph of a few Aboriginal construction workers gathered at a project site

### 3. Social value Perceptions and Prospects Associated with Australia's Society: An Overview

#### 3.1. Literature on Social Value Norms and Returns

##### 3.1.1. Status quo on Social Value Archetypes

Despite being an archaic concept [52,53], public or social procurement is often interpreted as a social innovation policy meant for creating or deducing social value through alliances between government, corporations, and civil societies [54]. Governments indirectly create social value by requiring mega and influential infrastructure project contractors to hire disadvantaged local residents, such as displaced communities or disadvantaged Indigenous groups, as workers on project sites or within supply chains [55]. As a result, contractors in the construction sectors are increasingly required to prove that they promote and establish social value prospects as an obligatory constituent of their tenders for government projects and private clients having a social conscience. Construction firms in Australia are progressively using social procurement policies due to four critical factors:

- (i) Public procurement has historically been used to achieve noble social goals [56], particularly in obstructing sociological retreat from the 'welfare state' phenomenon with regards to currently popular New-Public-Governance regime models in Australian public policy discussions [16];
- (ii) Since the global financial crisis of 2007-2008, there has been an increased emphasis on social performance measurements as means of gaining legitimacy with government funds [15];
- (iii) Construction sites frequently operate in areas of logistical intricacies, and therefore the acquisition of construction materials, contractors and other vital professional services in such conditions has a substantial capability to fix complex and unexplored social issues, which in turn creates social benefits [57-59]; and,
- (iv) The number of socially conscious private clients and corporate-social-responsibility undertakings has been on the rise since the economic deregulation and liberalisation of the Australian economy in the early 1980s [14].

In business and administrative communications throughout the corporate world, although it has become increasingly important to convey the prospects of social value produced by construction sectors, it is always difficult for clients and governments to calculate it accurately. The topic is of particular relevance in Australia, in light of the growing demands for social procurements in construction, which require companies to provide employment opportunities to target groups consistently, as some Indigenous communities do on their own, who belong to the ideologies or cultures that view the 'value' norm of social value aspects differently [60-68]. As a result, the social

value outputs of construction contracts can be quite intangible and miscellaneous [69-72], thus making it difficult for the procuring authorities to assess how well their contracts fulfil their intended objectives. This has emanated a multitude of definitions regarding social value norms, outputs or returns, and their creation mechanisms, that have made this novel concept to be operationally and conceptually difficult to fathom [14]. It means that many construction contractors are yet to attain the requisite proficiency over social value creation avenues as part of their policies of social procurement goals, as also argued by Gluch and Bosch-Sijtsema [73].

##### 3.1.2. Way Forward and Potential Avenues in Construction Industries

The above challenges have recently led to several further attempts to discern what social value ascribes to the construction industry fully. In the opinions of Rogers et al. [74] and Lin et al. [75], those in positions of economic power often decide the evaluation criteria for social value measurement. The perspectives, experiences, and challenges of those supposed beneficiaries of social value schemes are usually excluded. Mulholland [34], therefore, criticises other prescriptive measures, including social returns on monetary investments, or other fiscal metrics, for their reductionist and simplistic approach, aiming to turn social impacts into profiteering dispositions. In the view of Shaw [14] as well, traditional economic approaches to measuring and monetizing social value have inherent flaws, such as ignoring people's subjective notions of value. This again reflects the absence of a robust theory on social value. Haugh [76] and Ed-Daoui et al. [77] have argued that developing a rational sociologic approach would eventually lead to the implementation of noble practices in the domain of social sciences in general. As an example, Shaw [14] outlined a critical overview of social value experiments of different domains, leading to defining social value returns (or outputs) as the "social impact of any project, program, or organisation on its internal and external stakeholders". Palacios-Marqués et al. [78] suggested that social impact accounting can achieve social value by "framing the uncertainty we face with materiality, by engaging shareholders and stakeholders in ways that recognize the invaluable imbedded power of procedures, such as communicative actions". The Mulholland [34] study developed a tool that can be understood by involving multiple stakeholders in tandem. This tool or technique asserts that policies with public procurement drive generate significant social value for Indigenous groups if they genuinely support the people's cultural lineage and their innate ways of being comfortable and confident in executing the assigned tasks.

Using a hierarchical model that involves consultation with appropriate stakeholders at every stage of a project life-cycle, Sukumaran [60] also proposed a conceptual framework for planning, implementing and evaluating social

procurement. The theories-of-value (ToV) postulated by Walumbwa et al. [79], and Wright [80] are particularly useful for conceptualizing social value creation mechanisms in corporate sectors because they propose key components that act together in a value-determination process, namely the

- (a) the subject of value: a person who perceives the social value enabled by social provisioning schemes or the construction work opportunities that the public procurement policies bring forth;
- (b) the object of value: the employment job opportunities provided by the social provisioning policies that will give and receive social value norms;
- (c) essentiality-judgement: an assessment of the interconnection between the object of value (say, construction engineering jobs) and a person's personal and cultural traits that determine the quality of the social value returns enabled by the social provisioning policies and;
- (d) sense of value: a person's quantitative perception of the social value prospects that the construction jobs yield based on the affiliation of an object of value (i.e., a job) with the existence-judgment parameter.

While these propositions are useful for conceptualising value, they have not been developed in the domain of science or engineering fields [81], which has primarily been discussed in the subsequent sections of this paper with regard to social procurement policies aimed at creating employment opportunities for socially weak and disadvantaged groups in Australia. In fact, these theories neglect to account for the fact that the 'labour benefits' and 'cultural prosperity' aspects of employment in construction play a vital role in determining the 'value' norm of a job [82]. In terms of tangible benefits, it includes arrangements like training sessions, autonomy provisions, and fair wages. According to Khedher [83], the 'cultural-welfare' success of employment includes good relationships with workplace and colleagues, employee autonomy, organizational culture, company values, and the organisation's commitment to local communities and their cultural components like appreciation of workers' cultural heritage, and promoting culturally-supportive work-environments.

In certain studies of well-running employment plans for Indigenous groups such as the Aboriginal population of Australia [84], the 'cultural prosperity' gains of employment prospects have been found to consist of 'values' such as:

- (a) safe and culturally supportive environments;
- (b) the existence of explicit career development pathways for the staff;
- (c) positive engagement with employee assets, family and local community, and;
- (d) increased employee confidence, autonomy, self-efficacy, identity and resilience.

**Table 1. Fundamental EP attributes for Australia's Aboriginal people, as per Ouimet and Tate [96]**

Attributes	In short-run	In long-run
Tangible	<ul style="list-style-type: none"> <li>• Basic pay</li> <li>• Annual incentives</li> <li>• Health insurance coverage</li> </ul>	<ul style="list-style-type: none"> <li>• Stock licenses</li> <li>• Profit-sharing avenues</li> <li>• Pension schemes</li> </ul>
Intangible	<ul style="list-style-type: none"> <li>• Work-life harmony</li> <li>• Recruitment practices</li> <li>• Guiding new recruits</li> </ul>	<ul style="list-style-type: none"> <li>• Work culture and environment</li> <li>• Supervisor's conduct</li> <li>• Trust in leadership</li> </ul>

Social norms on family, communities, and one's duties to societal commitments, differ invariably across the cultures in Australia [85,86]. In these sociological backdrops, the social value solution created through employment often meets the livelihoods and culture of those assuaged by these policies, for which an 'Employer-Preferability' (EP) research may provide some insights on tailoring the theory onto a construction environment setting. Based on the efficiency wage theory of econometric engineering studies, the EP concept refers to the philosophy that workers prioritize and 'value' their preferences on work-types, work-locations and environments, and fulfilment of such norms can return varying degrees of job satisfaction and professional success outcomes. Therefore, workers often choose to work for organizations whose values and commitments are aligned with their own [87]. They also perform at their best when their skills are put to the best use, and their 'values' and the organization's 'values' are both in harmony [88].

**3.2. Role of Private Corporations in Enabling Social Value Returns for Conservative Employees**

Some earlier findings of EP studies indicate that employer-choice attributes include disparate combinations of many different sociological factors [89-96]. In an attempt to demonstrate how companies or corporations can successfully become EPs for introverted recruits and job seekers, Ouimet and Tate [97] explored a few thematic attributes based on short-term, long-term, tangible and intangible gains, as illustrated by Table 1.

Shet [98], Khan et al. [99] and Pawirosumarto et al. [100] further examined the attributes of employer choice from four perspectives: economic, psychological, functional, and organizational. Described as follows, these characteristics include:

- (a) Economic: high salaries, generous reward systems, and appropriate work hours;
- (b) Psychological: a supportive corporate culture, effective and welcoming for teamwork, excellent employee

**Table 2. A summarized EP characterisation of the Aboriginal Australians, as per Chawla [88]**

EP traits	Characterisation
The attractiveness of the organization	a) Prospective employees' perception of a company's attractiveness b) Individuals differ in their needs, and companies that satisfy those needs will attract them to create social value
Profile of the job and organisation and the employee-organisation fit	a) Employer-oriented companies have similar values and management styles b) Characteristics typical of a cooperative working environment include ethical standards, high salaries, career-growth prospects, worksite location, monetary compensation, training sessions, and culture development possibilities c) When the company's values and working methods support that of the employee, a good-fit job builds social value
A company's public and corporate image	a) Positive perceptions of an organization's brand increase the organisation's appeal by signaling positive aspects of the organization and thus increasing the volume and quality of job applicants b) Companies having a good reputation attain a greater likelihood of establishing themselves as Eps because their employees take pride in working for the company's reputation
Image of the employer	a) A company's prominence as an employer is what is known as an employer's image b) A company's corporate image can differ from its reality when people join a company and find that, for example, worksite conditions do not correspond to how they were advertised earlier or the company's culture does not align with what they expected
Branding by employers	a) Employee recruitment and retention can be improved through employer branding, along with increased productivity b) With good employer branding by organisations or corporations, employees feel satisfied and enjoy their work, which is likely to build social value

relations, objective and unbiased evaluation of target-achievements and work-fulfilments;

- (c) Functional: training, professional growth, professional development, and utilizing employees' knowledge and skills; and,
- (d) Organisational: position in the market, management and leadership style, international operations, and brand reputation.

A separate study by Chawla [88], who examined the pertinency of employer brands to attain an EP status, considered five traits, as elucidated serially in Table 2. Bellou et al. [101], Bac and Thanh [102], and Carlini et al. [103] recently conducted new experiments which found that workplace characteristics are also critical to EP success. These characteristics ensue 'norms' or 'values' such as:

- (a) Personal development: that is, the company promotes self-expression, offers career counselling and coaching, encourages knowledge sharing, and focuses objectively on the skills' development;
- (b) Brand image: that is, from the point of view of the business, the corporation is financially sound, has innovative products, and is market-oriented. In terms of social responsibility, this means that the company cares about its environment and is deeply dedicated to social well-being initiatives;
- (c) Recognition: that is, inducting and orienting new employees, making them feel welcomed, maximizing their creativity, cultivating a sense of importance within themselves, and providing them opportunities for

applying the knowledge they possess towards the organisation's progress;

- (d) Relationships: that is, employees have constructive and successful relationships with one another; there is deeply rooted in respect, honesty, trust and open communication among them, while the managerial heads also practice a culture of meritocracy and recognition of employees' contributions; and,
- (e) Monetary benefits: The company offers additional non-financial benefits, attractive compensation packages, and above-average salaries.

According to Aboul-Ela [104] and Hosain et al. [105], another set of four dimensions can judge whether a company can be labelled as an Employer-Preferability (EP) organisation when deciding whether to enrol at a company:

- (i) 'Blossom' represents factors that transcend organizational boundaries. Prospective and existing employees are likely to notice this point about the employer. This dimension covers the employer's prominence, public image and ability to keep up a positive reputation, core values, mission and vision, corporate-social-responsibility ventures, international presence, stature as a leader in the market, online web reach, the affordability and range of its services and products, and its capacity to distinguish itself from other competitors or corporations;
- (ii) 'Live' refers to the workplace environment in which employees work. Essentially, it pertains to the conditions necessary for facilitating comfortable working

conditions so that the allotted tasks can be appropriately performed. As part of the ‘Live’ dimension, an employer should provide a decent wage, bonus rewards, fair leave grants and adequate compensation policies, adequate retirement provisions, a dynamic business process, a work-life balance, and promote an appreciative corporate culture and occupational health safety programs for the employees;

- (iii) ‘Bridge’ looks at the interactions between the organisation and an employee. In addition to existing employee strength, this dimension sometimes spreads outside the organisational barriers, and to exterior communities, through verbal chats, conclaves and marketing campaigns, and also enables existing employees to present a positive image to the public. Concern for employees’ wellbeing, a holistic understanding of their teamworking skills, a management style and synergy with employees, beside fulfilment of the fundamental responsibilities towards the employees, are all parts of the ‘Bridge’ dimension of an organisation;
- (iv) ‘Advance’ is defined as the capability of an employee to increase his or her contribution to the organisation. This aspect encompasses various career development schemes for an employee, be it expecting an equitable evaluation of his or her technical expertise from the managerial head, receiving objective feedback on his or her performance, and attaining job security for sustainable growth.

Based on an affirmative groundwork of Rampl [106] in marketing studies, it has been found that undergraduate and graduate students do identify EPs by job content and job culture aspects. While job content refers to the core job activities, job culture alludes to the work-environment and employee relations [107]. It has been further confirmed by Pacheco and Webber [108]. Wikhamn [109] states that participatory decision-making increases job satisfaction, thereby ultimately resulting in a satisfactory or better worksite environment and more contented workers. Additionally, Mahato et al. [110] and Varshney [111] also note that young workers (e.g., millennial workers) prefer working for employers who provide more employee engagement and liberties to test their skills and knowledge on the job, which leads to the better job profile and work-environments for the workers. Due to the fact that social value trends are typically perceived on account of admittance or rejection of the EP-attributes by job seekers, it is therefore imperative to understand their relative importance to other introverted workers as well, such as the Indigenous workforce of a nation. Likewise, as Hunter [112] and Higashida [113] have also pointed out, the research attempts the finding the correlations between the social procurement target populations (e.g., Aboriginal communities in Australia) and non-government recruiters or employers are quite rare in academia. Furthermore, EP-based literatures have never looked into specific industries like construction, which are deemed to be commissioned into social procurement policy planning, the world over, in due course.

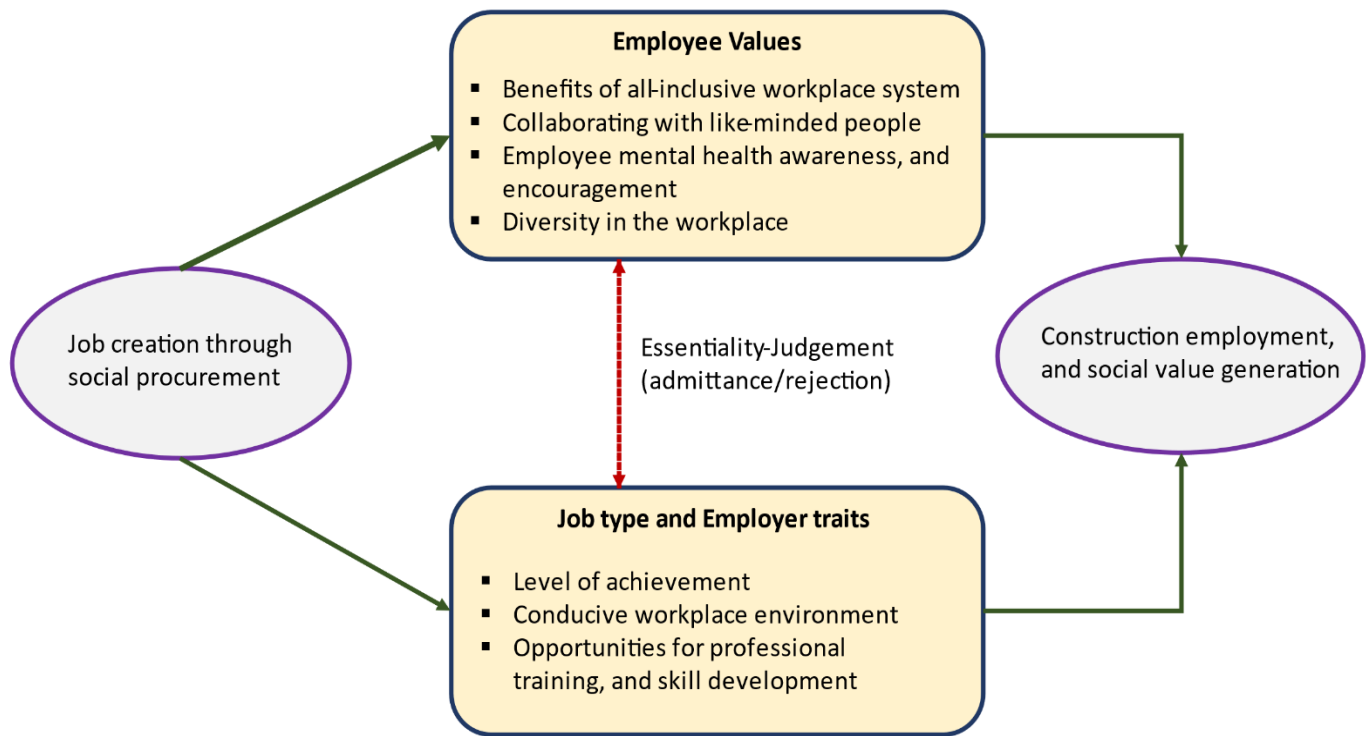


Fig. 3 Construction employment as a context for exploring social value creation



#### 4. Exploring EPs of Aboriginal people for Employment in Australia’s Construction Sector

With a rigorous review of the afore-cited literature on EP traits and attributes, featuring the social value avenues for conservative employees, along with the work-profile and employer characteristics pertinent for the employer in obtaining an EP stature, Figure 3 below summarizes the concept framework for evaluating social value norms and returns discussed so far, in this paper. Based on all the social value theories and research studies outlined in the sections before, Figure 3 schematically illustrates how workplace-culture, cordial relationships with colleagues, an inclusive work-environment, etc., are all likely to generate social value returns for the Aboriginal employees and job seekers. In the figure, the characteristics of EPs that build social value norms are listed below the workers' values, such as income levels, work-environments, and employment training opportunities offered to employees. Under the current circumstances of nationwide economic uncertainty, the construction sector remains one of Australia's most stable and reliable industries. In fact, for the last several decades,

the construction industry has been a highly productive sector in Australia’s economic growth [114]. It is expected to remain a promising avenue for ensuring the socio-economic prosperity of the nation, as indicated by the GVA (i.e., Gross Value Added) data of primary employment sectors of the nation highlighted in Figure 4. GVA is a measurement of the economic value created by an industry that helps the industry to cover wages, profits, interests and leases, etc., besides the expenses for services, materials, and intermediate products. GVA data serve as a proxy for an industry's economic significance and volume. Fixed-capital consumption, namely depreciation and degradation of assets used for producing goods and services, is not considered in the GVA calculation. Nonetheless, as evident in the above breakdown of the literature on ‘values’ and ‘social values’, EPs may contribute to generating social value with construction employment by providing benefits to workers and their cultural lineages or traditions. The subsequent sections present a description of the methodology used to interview Aboriginal construction workers to determine the importance of social value variables in construction-job recruitment.

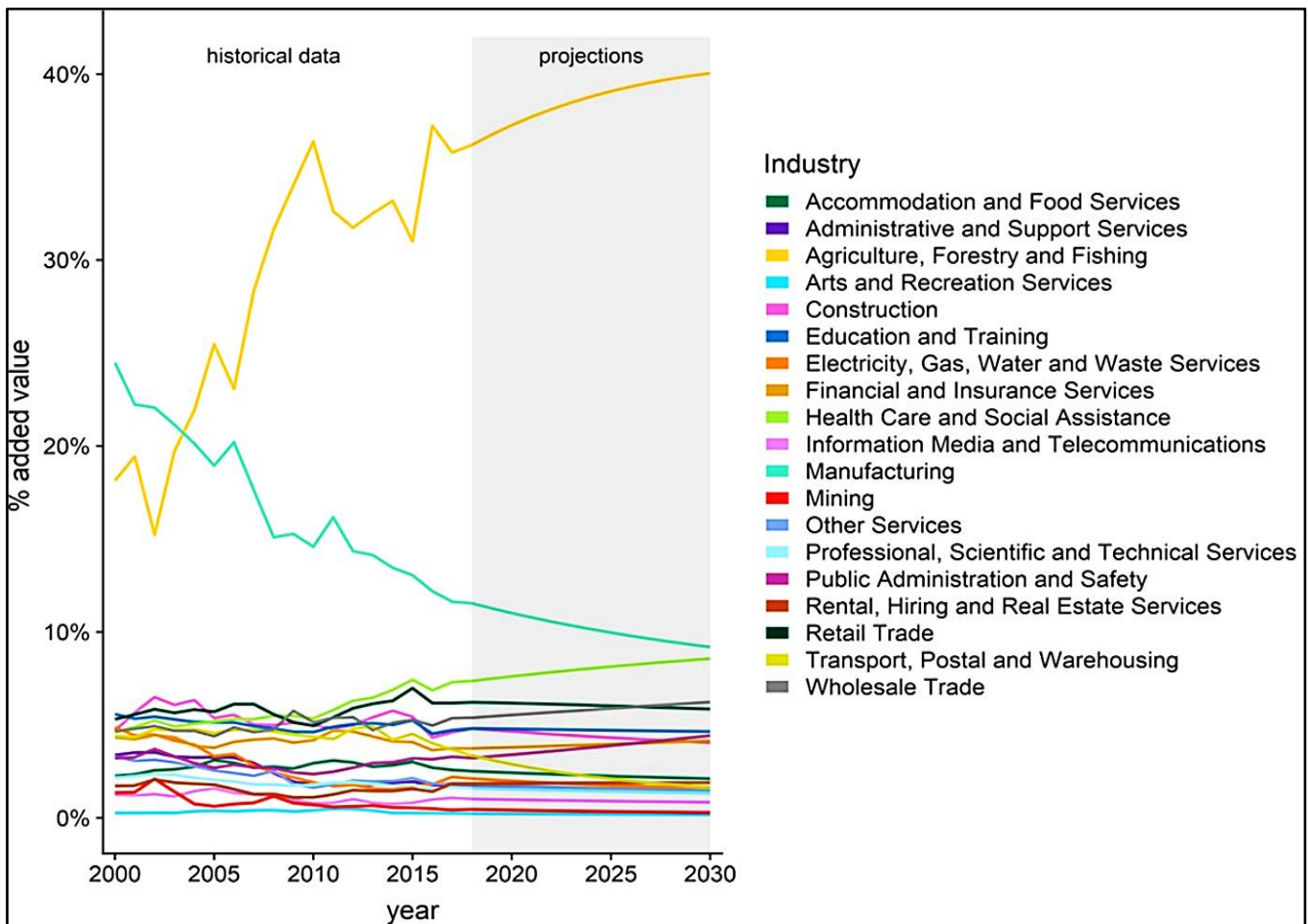


Fig. 4 Projections in GVA of Australia’s key industries (adopted from Measham et al. [115], with copyright permission). As expected, construction is predicted to remain a stable industry in the times ahead.

It is important to note, however, that only the Indigenous social ethos of Australia, such as ‘reciprocity, respect, and integrity’ [116,117], have shaped the design, structuring, and reporting of this research, owing to Australia's heightened focus on incrementing Indigenous employment via social procurement strategies. This research design readily incorporated stakeholders' comments as a sign of respect. Through the dissemination of the preliminary findings of this study, reciprocity was also demonstrated. This does not insinuate that the perception of the value of other minorities shall be excluded from such research, as they can certainly be assimilated in future studies and scaled with the conclusions of this paper.

#### **4.1. Data acquisition through an online survey**

Based on the EP parameters described above, as deduced from the extensive literature review on social value norms and avenues, a formal online survey of Australian construction workers of Aboriginal ethnicity was conducted with the assistance of five industrial partners of this research (duly acknowledged at the end of this article), who have been exploring the conditions that create the most social value prospects in the construction engineering market of the country, especially for the social value norms and archetypes of Indigenous communities. The organisations are core engineering companies executing heavy-duty civil works such as building construction (residential and non-residential), public infrastructure establishment (e.g., bridges, dams, railways, highways, water or wastewater and utility distribution, etc.) and industrial installations (e.g., refineries, power plants, chemical processing, mills and manufacturing plants, mining and quarrying, etc.). They are headquartered in Australia's state of Queensland. Detailed consultations were made with the companies before selecting the survey mode. Because the industry partners have project outlets outside Australia (i.e., in the Oceania islands), this methodology was able to maximise the extent of the recruitment-data collection strategy for this research. Online communications reduced the time and cost of collecting the survey-responses from geographically diverse sites in the regional rural or urban locales of Australia (where the employees resided), thereby magnifying the survey coverage towards the remotely located Aboriginal workers as well. This approach revealed beforehand that the companies share ‘values’ with employees, which include workplace and interpersonal relationships, as well as the employers’ relationships with society in general. In the survey, three different segments were examined, with respondents being identified and contacted with the help of partner corporations.

Confirming the demographic details regarding age, cultural heritage and identity, and region of dwelling or employment constituted the first segment of the survey to address Question Number 1, elucidated in the Introduction section. As a routine survey protocol, respondents were also

asked about their educational qualifications, work experiences, and job-profile preferences. The second segment of the survey followed the theories-of-value (i.e., ToV, defined earlier in Section 3.1.2) arguments, which state that the ‘values’ are vital in creating social value. To answer research Question Number 2, it was critically important to evaluate respondents' values and draw inferences about workplace values that could facilitate social value creation. Based on a 5-point Likert Scale, the third segment or component of the survey requested respondents to prioritize and rank the worthiness of their EP characteristics. 5-point survey-scales are used in forced-choice questionnaires to let the respondents choose the ‘for’ or ‘against’ option towards a question [118,119]. Enabling respondents to select a definitive response minimizes the liability of social desirability prejudice [120] and assists them in noticing the interconnections among questions. Withal, the questions outlined in this portion of the online survey were consistently adapted, refined and optimized to account for the other miscellaneous socio-cultural variables identified in past research [121,122] as being important in assessing social value. In realization of the subjectivity in social value notion, as elucidated in the earlier sections of the paper, and the dearth of quantitative measurements on the gains that construction employees may expect from an EP, an open-ended question was also incorporated for allowing respondents to input variables that were not a part of the closed-ended questions. A convenient and timely survey completion helped obtain objective information on social value classifications in the construction worksites. Upon processing the acquired data on various social value inputs, the industry partners were approached for further consultations on the collection and management of data. A joint consensus was reached with industry stakeholders for designing the survey format, and the content thus needed to probe social value components from the perspective of construction employment, thereby increasing the survey's credibility. It was agreed that the data would be lodged and handled in line with the confidentiality guidelines mandated for socially sensitive survey-based experiments [123].

#### **4.2. Sampling technique for conducting the survey**

As explained above, an extrapolative survey on exploring social value development in construction was conducted among Aboriginal construction employees to draw a representative sample. The questionnaire was distributed amongst a randomly chosen group of 370 Aboriginal people in Australia working for this research project's industry partners. A non-probabilistic purposive sampling technique ensured that the survey reached most workers and officials in the construction sectors.

As a means of maximizing response rates, each respondent received an invitation letter (via email) that fully assured confidentiality in the data retrieval and processing and permitted them to revert back further questions to the

author, as well as withdraw their participation at any time. The data-collection efforts resulted in 241 valid survey responses (i.e., 65%) used to produce the sample described in Table 3.

**4.3. Drawing correlations between obtained data**

Version 25 of the world-renowned SPSS (i.e., Statistical Package for Social Sciences, developed by IBM Corporation of United States) software application was used to analyse the survey data. In order to determine the top-ranked social value variables (i.e., basically the norms and prospects) and to test the relationships between EP parameters (as noted in Tables 1 and 2) and the variables, a bivariate correlation analysis was performed on the collected data. Explained below are the findings of this analysis.

**4.3.1. Contributive Factors in Promoting Social Value Returns for Aboriginal Construction Workers**

Considering the theories of value (i.e., ToV, described earlier in Section 3.1.2) and the role that job characteristics portray in calculating social value, this section presents the ranked scores for the first and second segments of the survey that deal with these variables. In this analysis, only the key variables of social value have been identified within Australia's construction contracting sphere.

With 65% complete responses, the data corroborate the popular Central Limit Theorem [119] and hence can be inferred to be distributed normally. Accordingly, Table 4 below reflects the social value norms (or simply, 'values') of the respondents ranked according to mean scores.

As per the Table, the four highest values were: (i) taking care of my family; (ii) learning on my own; (iii) ensuring I have enough to survive and prosper; and (iv) respecting my seniors and learning from them. The variables with the most ratings also displayed a lesser standard deviation than those with lower ratings, indicating high levels of agreement between the Aboriginal employees on their social value norms.

Likewise, Table 5 shows the respondents' EP preferences, arranged serially by mean scores. As per the Table, the EP preferences with the lowest amounts of standard deviations indicate that these preferences were consistently ranked the most important by respondents. Interestingly, all EP parameters had mean scores above 4, which means that all respondents rated the EP variables as significant for implementing or achieving their social value norms in the workplace.

**Table 3. The framework of the survey conducted on Aboriginal employees with a minimum work experience of 2 years and having attained a college-level Honours degree in science or engineering subjects**

Category	Answer/Entity	Frequency	Percentage	Age group	Work experience (in years)
Living in Australia	No	13	5.4	27-29	4-6
	Yes	94	39.0	24-31	2-6
State or territory in Australia	Australian Capital Territory	5	2.1	26-28	3-4
	New South Wales	78	32.4	26-30	5-6
	Queensland	10	4.1	25-28	4-5
	Victoria	6	2.5	26-29	5-6
	Tasmania	23	9.5	24-28	3-6
	Western Australia	8	3.3	26-28	2-4
	South Australia	4	1.6	26-28	3-5

**Table 4. A mean ranking of the 'values' of Aboriginal construction workers**

Value	Mean	Rank
Taking care of my family and sharing assets with them	6.83	1
Discovering things on my own and learning as I go	6.72	2
Ensure I have adequate for today	6.57	3
Knowing myself and my history	6.49	4
Respect for my elders and seniors and what they teach me	6.39	5
Investing in the future (tomorrow and beyond)	6.37	6
Connecting with my wider family and community	6.25	7
Exploring the world and traveling widely	6.21	8
Taking care of my community, and sharing resources	6.17	9
Keeping tradition, ritual, and practice alive	4.87	10
Extra gains and bonuses	4.74	11
Having assets (e.g., car, house, fashion and home decor items, etc.) that display my status	4.47	12
Keeping in touch with my birthplace or hometown	4.44	13
Letting people know what I have accomplished	4.28	14

4.3.2. Associations between Employment Performance in Construction and Social Value Returns

Pearson correlation coefficient (i.e., commonly termed as Pearson’s r) was used to test whether the social value variables (obtained in the second and third segments of the online survey) were correlated. As a measurement of association, Pearson’s r represents the probabilistic range under which survey respondents are significantly aligned on a set of their responses [124], whereby the rigidity of association between the datasets can be slight ( $r \geq \pm 0.10$ ), medium ( $r \geq \pm 0.30$ ) or large ( $r \geq \pm 0.50$ ) [125].

In this study, Pearson’s r enabled this research to test the relationship between the respondents’ values (i.e., the social value norms, as in Table 4) and their EP preferences (as listed in Table 5). Overall, there were 9 large associations and 57 medium associations in which the correlation was found to be somewhat significant ( $p < 0.05$ ). In Table 6 however, only those associations are mentioned where  $r >$

0.35. This is because there were numerous other associations where  $r \ll 0.35$ , and such a large degree of volatility would deter the correct interpretation of stronger associations. Interestingly, the associations listed in Table 6 are highly significant (i.e.,  $p < 0.005$ ), thus confirming that, by and large, the response data obtained are not haphazard in nature and can be safely assumed to be valid and interrelated to a great extent.

This technique also helped derive the job recruitment and cultural-gain tallies that can positively affect employment in the construction industry. In Table 6, although the strongest correlation occurs between capitalist and individualist variables (i.e., in terms of monetary earnings for both the employer and employees), there are also a few variables which are not related to the fiscal outcomes, such as promoting the traditional rituals and practices of the employees and helping the employees stay in touch with their culture.

Table 5. Rating of EP attributes for the Aboriginal construction workers, based on the mean score

EP prerogatives	Mean score	Rank derived
Excellent working relationships	6.84	1
Vision and understanding of tasks' overall purposes	6.77	2
Having a positive reputation	6.75	3
The safe and secure physical environment	6.72	4
Acquiring knowledge on-the-job	6.70	5
Managers emphasizing leadership and energy at work	6.67	6
Clear paths to advancement in the organization	6.66	7
Working with co-workers who share similar values and attitudes	6.65	8
Offering work performance feedback	6.63	9
Employee contribution is recognized and encouraged	6.61	10
Flexible working hours at the workplace	6.60	11
Feelings of security and protection within the organisation	6.59	12
Employers who support my sense of self-worth	6.58	13
Workplaces where people are passionate about what they do	6.57	14
Training programmes at the workplace	6.56	15
Utilizing new and latest technologies	6.55	16
Commitment to work at the high workplace	6.54	17
Working at a relaxed place where people can enjoy social interactions and have fun	6.52	18
Being able to influence day-to-day business decisions	6.38	19
Workplaces that care about the environment	6.36	20
Managers who specialize in administration and management	6.19	21
Having a high salary and income	6.17	22
High-quality workplace accommodation and design	6.12	23
Maintaining my cultural connection in a workplace	6.11	24
Salary-based remuneration, with set annual income figures	6.09	25
The manager who understands and respects my heritage, culture, and values	6.04	26
Participating with members of my local community	5.93	27
As part of my job, I travel to different locations	5.65	28
(Paid or unpaid) overtime	5.41	29
The pay is determined by the hour	5.18	30
Membership in a union	4.76	31



**Table 6. Important work values and culture values estimated by Pearson's correlation coefficient**

<b>Work value gains</b>	<b>Cultural prosperity</b>	<b>Pearson's <math>r</math></b>	<b>Significance level (<math>p</math>)</b>
Having a high salary and income	Being able to make a lot of money	0.721	0.002
Contributing to my local community	Serving my community by sharing and looking out for it	0.744	0.001
An environment where I feel united with my culture	Ensuring that customs and rituals are upheld	0.696	0.001
The manager who understands and respects my heritage, cultural lineage and values	Sharing and listening to my community	0.677	0.003
Contributing to my local community	Keeping tradition, ritual, and practice alive	0.642	0.002
An environment where I feel united with my culture	Participating in and protecting my community	0.610	0.001
Being in a position where managers appreciate my culture and heritage	Assuring the continuity of traditional practices and rituals	0.609	0.001
Workplaces that care about the environment	Contributing to my community and looking after it	0.554	0.004
The workplace is furnished to a high standard, professionally	Ensuring the continued existence of rituals, practices, and traditions	0.545	0.002
Participating in the local community	Maintaining my relationship with relatives and the community	0.527	0.001
Income and pay are high	Owning things (such as a car and home decor) to express my happiness	0.524	0.002
Being paid by-the-hour	Keeping traditions, rituals, and customs alive	0.522	0.001
A high income and salary	Ensuring I have enough to last me today	0.517	0.001
With a set monthly salary and annual income	Keeping my achievements in the public eye	0.503	0.001
Good facilities that stand-out at the workplace	Being an active member of the community and looking after it	0.494	0.001
Being a union member	Taking steps to ensure the continuation of traditional practices and ethos	0.473	0.002
An environment where workers are highly committed	Being a part of and taking care of my community	0.471	0.004
Being ready to have a high degree of commitment at work	Upholding traditional practices and rituals	0.466	0.003
Eco-friendly workplaces which aim to protect the environment	Ensuring the continued existence of rituals, practices, and traditions	0.468	0.001
Having the curiosity to learn on-the-job	Maintaining traditions and customs	0.461	0.001
Hourly pay	Possessing property (such as a car, home, fashionable items, etc.) to express my status	0.457	0.001
Receiving and providing feedback on performance at work	Making my own discoveries and learning on-the-job	0.454	0.001
Earnings are high, and pay is high	Experiencing the world by traveling widely	0.452	0.002
A supervisor who takes into account my culture and heritage	Maintaining a close relationship with my hometown	0.447	0.003
Stability and a sense of protection from the organisation	Assuring the preservation of traditions, customs, and practices	0.441	0.001

Inclinations to keep the rituals and customs alive imply that one prefers predictable and dependable employment, which must imbibe social provisioning policies, as also observed by Nielsen et al. [126]. By reassessing the social value perceptions and prospects associated with Australia's society, as discussed earlier in Section 3, Table 6 thus attests to the fact that non-financial factors do have a noteworthy

influence on employee motivation, performance and productivity. As an additional interesting result, the 'ability to be vocal in what affects day-to-day work' ranked in the bottom half of EPs' traits for the Aboriginal employees and was not connected to the job satisfaction levels the same way as Pacheco and Webber [108] and Wikhamn [109] hypothesized.

Alongside these observations, Pearson's correlation test also enabled examining the 'structural validity' of research. This refers to measuring the construct or framework's authenticity [123]. For instance, if specific questions in the survey measure the same or closely related things, they are likely to be structurally correlated in general. As verifiable in Table 6, some identical variables and parameters have an affirmative correlation, such as 'high incomes and wages' being strongly correlated with 'making a lot of money', etc. Similarly, the pronounced correlation between 'being involved in my local community' and 'sharing and caring for my community' also certifies the survey responses' reliability. Operationally, 'adequate wages and income' means the level or grade of pay construction workers receive to satisfy their fundamental needs. An 'adequate wage' also means that employees receive a fair wage and are not exploited for less. This paper recognizes beforehand that most construction companies can already meet this requirement. Respondents preferred to have or be encouraged with the freedom and autonomy to work independently to complete allotted tasks. A balance between autonomy and desire for instructive rules is also seen in the respondents' preference for workplace benefits associated with construction engineering work. Generally speaking, this research on Aboriginal employee-satisfaction schemes also contributes to the EP's understanding of what makes a great employer. Results such as these also support Tanwar and Kumar [107], who concluded that EPs of job seekers could be identified by the content of their job-profiles and the atmosphere in which they are assigned. These findings indicate that job benefits such as adequate income, compensation and employee autonomy are intrinsically associated with positive job content. Working with local communities, addressing employees' mental health issues, and developing an inclusive office (or worksite) culture is essential for creating a positive work culture.

Furthermore, and at odds with Carlini et al. [103], these findings highlight the importance of personal development, workplace relationships, and monetary remuneration to EP attributes. Based on the Indigenous societal values that underpin this study, these characteristics confirm that employees also generate social value by devoting their efforts and mindset to the company's growth through high performance and productivity, and employers requite readily by spending on their wellbeing and career development. These guidelines can be applied to companies both in Australia and overseas.

#### 4.3.3. Answers to the Open-Ended Question

158 respondents responded to the survey's open-ended questions. Respondents were asked to share additional factors that they thought could add social value while answering the open-ended question. Data thus obtained were systematically sequenced using the very popular NVivo software (version 11, developed by Australia's QSR

International Pty Ltd.) to identify their social-value-based themes inductively. Table 7 provides a summary of three overarching themes identified by this process. It is interesting to note in Table 7 that despite some responses stating the indispensability of 'recognition of contribution' and 'diligence and sincerity', no response exclusively mentioned receiving commensurate wages during the initial years of employment. Though this research's sample size primarily consisted of young engineering professionals (aged below 32) who had not worked in the construction engineering industry for a long time (i.e., about 5 years or more), they may have been eager to see some financial rewards as an impetus for motivation. On a similar front, the latest research in China has found that the recruits there also suspect that they do not receive an adequate or deserving wage [127]. According to an observation by Oyewobi et al. [128], higher starting wages are used only as a bargaining chip to force Australian construction workers to work for longer hours, which is often detrimental to their work-life balance. Therefore, the identified clues to work-life balance in the 'mental health' theme (i.e., workshops, training sessions, counselling services to encourage work-life harmony) may indicate that paying a substandard wage is not the foremost route in building social value prospects in construction, and that non-monetary rewards are quintessential in enabling an essential socio-cultural outcome that may ultimately contribute to social value prospects. Usually, the 'work stress and safety' aspect is also perceived as a major theme in human resource management studies [129,130]. However, Table 7 does not include any critical discussion on 'stress' or 'safety' responses, as very few such clues were found in the survey responses, thereby indicating that the respondents were fearless and upbeat about working in harsh environments and construction sites.

## 5. Relationships Inferred from Correlated Social Value Variables and EP Parameters

A careful observation of the above-derived results shows that recurring variables strongly impact social value outcomes. The emphasis on the 'cultural prosperity' of construction work was strongly associated with construction jobs that were sensitive to employees' cultures. Moreover, norms or values, such as preserving traditions, rituals, and other customary practices, were strongly associated with many 'workplace benefits' such as physical security and emotional stability, while also being merrily engaged with the day-to-day life of their local communities. In support of Lin et al. [131], who found that transparent communication, with a sense of affinity or belonging, are essential value for Chinese or Taiwanese migrant construction workers (that leads to higher employee retention when this value is instituted in the worksites), these revelations on Aboriginal Australian workers also imply that positive communications (e.g., respecting my seniors and elders, and the lessons and wisdom they offer), with a sense of kinship (e.g., sharing

with, and caring for my family), are also very important for building social value in a construction-work setting. In adding social value prospects, the corollary of this study reinforces the socio-cultural significance of different job characteristics, such as:

- (i) good quality of work relationships;
- (ii) opportunities to learn on-the-job;
- (iii) a job-profile sensitive to the workplace;
- (iv) a relaxing and sociable job; and,
- (v) understanding the higher purpose of allotted tasks.

In light of these findings, policymakers can oblige contractors to undertake certain training programmes and project planning-and-control initiatives within upcoming major infrastructure projects [132].

This study recommends that construction companies aiming to build social value through regular recruitment should not simply focus on providing jobs for local residents but also invest and entrust in the financial and cultural well-being of their workers and partake with the local communities in which (or for whom) they intend to build social value avenues.

**5.1. Addressing the Fundamental Objectives of the Research**

These results provide information that helps answer the research questions posed in the study. For the first question, the research results indicate that construction jobs enhance social value through both cultural and work benefits. As estimated by the statistical measurement of survey responses, the top five social values for Aboriginal employees are:

- (i) ‘sharing with, and caring for my family’;
- (ii) ‘figuring out problems, and learning on my own’;
- (iii) ‘having enough for today’;
- (iv) ‘knowing myself, and where I come from’; and,
- (v) ‘respecting seniors and elders, and their knowledge’.

By the bivariate correlation analysis, a ‘positive working relationship’, ‘seeing and discerning the objective of a job’, ‘maintaining a good reputation’, ‘physical safety’, and ‘knowledge acquired on the job’ are the top five employer characteristics that can gratify the social values of the Aboriginal construction workers. At macro levels, to begin with, this information can be incorporated as contractual stipulations with contractors by policymakers.

**Table 7. Themes emerging from the responses to the sociometric survey and their contents**

Identified theme	Helping clue	Response count	Text in responses
Provision of operational support in the workplace	Texts that described management practices which promote better workplaces, with amiable instructions and guidelines	87	<ul style="list-style-type: none"> <li>• Regular occurrence of informal events</li> <li>• Assisting staff with their daily tasks</li> <li>• Setting realistic goals</li> <li>• Allowing the team to perform its tasks autonomously</li> <li>• Clear instructions for completing the task</li> <li>• Clearly defined growth and career development path</li> <li>• An environment that permits independence at work while adhering to a clear set of objectives to help get the task done safely and within the allotted schedule and budget</li> </ul>
Psychological well-being in the workplace	Mental health-related issues were mentioned in the text	48	<ul style="list-style-type: none"> <li>• Strategies, policies and programmes to promote mental health among all employees</li> <li>• Practices to manage mental health, such as building counselling services and expanding emotional intelligence</li> <li>• Awareness of mental health and encouragement to be open about it and not assume it as taboo</li> <li>• Providing training sessions, workshops, and other briefings to strengthen work and family balance</li> </ul>
Culture of the workplace	Texts about workplace culture	106	<ul style="list-style-type: none"> <li>• Practices that accommodate diversity and inclusion</li> <li>• Ability to communicate openly with colleagues and to work well as a team</li> <li>• Friendliness in the workplace</li> <li>• Encouragement and support with equal treatment of all team members, opportunities for rotation of routines and duties among the members of the team</li> </ul>

Based on the results from the third segment of the survey, it appears that work payoffs and cultural compliments do have discernible impacts on the social values advocated by construction work. Those who recognize the professional and cultural benefits are bound to establish positive social values based on the aforementioned theories-of-value concept. By endorsing the employer preferences and social value variables of the Aboriginal Australians, as listed in Tables 5 and 6, respectively, policy makers can dramatically amplify the social value prospects they raise and help achieve the goals that the policies are designed to support the socio-economic health of a nation. Therefore, Question 2 of this paper's objectives is addressed by arguing that construction recruitments in Australia can certainly provide robust employment opportunities and cultural compliments, creating or adding to social value returns.

### **5.2. Social Value Creation by Public Procurement in the Construction**

Policymakers and practitioners interested in creating or adding social value through their public procurements to counter the COVID-19 calamity can benefit from this research by learning more about how social value gets created within the current construction engagements that they support. Numerous cultural compliments are associated with culturally inclusive jobs, with non-financial features of an EP (e.g., on-the-job learning, emotional stability, and involvement in local neighbourhoods and communities) bearing more signification than the financial aspects. This view supports the contentions of Hurt-Suwan et al. [133] that corporations must emphasise creating jobs 'for the people' and 'by the people' through new construction employment. This goal can certainly be accomplished by familiarizing newly hired employees with the company's routines and encouraging them to participate in employee training, development, and community involvement. In fact, the study's findings are consistent with other recent research attempts, which suggest that building social value prospects need the holistic support of those who wish to gain from such social sourcing practices [62,69].

In summarizing the superior outcomes of this survey-based research, Figure 5 highlights an elementary framework of integrating workplace harmony and Aboriginal employees' cultural norms, which Australian construction companies and policy makers can use to create positive social impacts. This figure also illustrates how public provision policies create construction jobs for economically disadvantaged groups. There is a correlation between financial and cultural factors that create more jobs in construction, indicating that employment leads to additional socio-economic benefits, while people's attitudes or apprehensions on employment opportunities get shaped by their values and preferences. As greater employee engagement leads to better work-environments, higher autonomy and career development result in a more inclusive job profile [134].

In fact, other secondary jobs created in the Australian construction engineering industry founded on these social value perspectives may concurrently facilitate the sociological recovery of the COVID-19-affected population, especially for people who lost their jobs during the pandemic or had been facing employment difficulties before the pandemic. Due to the Australian government's newly planned social procurement provisions in the wake of the pandemic, those who land construction jobs, in particular, will not have to depend on customary unemployment benefits for their daily needs. These guidelines can also be exerted to make government and contractors aware of the Indigenous communities' concerns. Various other stakeholders can also benefit from these findings, including those involved in implementing their own social procurement schemes.

Australia's revival from COVID-19 will be greatly helped by these social-value evaluation criteria when replicated across other non-technical industries, such as telecommunications, banking services, retail and healthcare sectors, etc. The social value prospects of being employed in construction works, as shown in Figure 5, can be accomplished by incorporating provisions into contracts that obligate contractors to implement the necessary practices. In addition, contractors can draw on this framework to inform social procurement behaviour or to evaluate their prevalent practices. With this, contractors, for instance, can also verify whether their recruitment practices and work-environment generate the kinds of benefits that contribute to the Indigenous societies; some of them being the training and orientation favours they provide, as well as the new suppliers and networks that they establish in their supply-chains, with time. As a result, local communities would be well-equipped to utilize Australia's currently sweeping construction boom to uplift their cultural heritage's sociological status.

### **5.3. Limitations of this research**

An obvious drawback of this sociometric research is that, in its current form and scope, it is unable to provide a universal blueprint for evaluating or creating social value prospects. Thus, this research cannot be applied globally, and it is acknowledged that this research is only confined to Australia and focuses on a limited sampling group. The applicability and validity of the findings may vary extensively for other nations that have encountered the COVID-19 crises incongruously, such as New Zealand, that has witnessed fewer casualties, while the United Kingdom, United States, India and Brazil, have seen far more deaths. In addition, future investments in the green sectors and renewable energy projects that create additional job opportunities in due course to reduce the economic brunt of COVID-19 and its aftereffects [135,136] may produce different social value avenues than those delineated in this research. Although this also restricts the importance of the theoretical framework opted in this paper, it will become



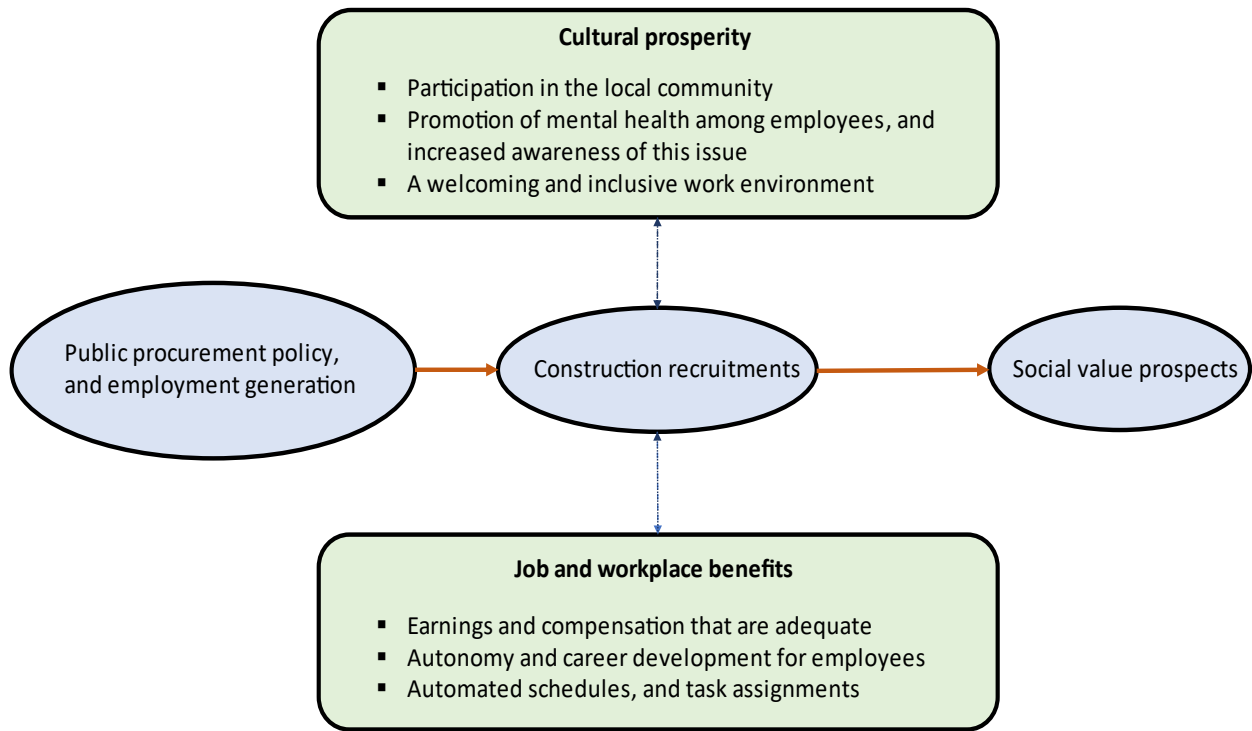
more robust as it is further studied and calibrated over time. The methodology administered for this study is nonetheless replicable for other industries, in deciphering how social value can be built more emphatically at nationwide scales.

Applying this framework to the old infrastructure projects in Australia may encounter some challenges initially. Some conservative contractors and subcontractors still see some Indigenous social groups alleviated by public procurement policies as major safety, cost and productivity risks [126]. Conversely, while social procurement continues to create new roles and duties for construction professionals, social procurement practices have also not converged much in Australia’s engineering sectors [30,73] due to reasons like:

- (a) the practices are still in the inception stages, are not yet fully internalized within organizations and projects;
- (b) the incentives for non-profit thinktanks engaged in advising social procurement planning are not often encouraging enough;
- (c) bureaucrats working at the strategic and operational levels are inexperienced to enact social procurement proceedings; and,
- (d) governments’ maintenance mechanisms to formalize sustainable practices are weak.

## 6. Conclusion

Worldwide, COVID-19 has had calamitous social and financial impacts across societies. Australia's response has been to raise its spending on public infrastructure, which is supposed to galvanize the economy and use public procurement policies meant to pull the country out of this grave crisis [137,138]. Meanwhile, the concept of procurement has expanded to encompass social and economic objectives enforced by government clients [139,140], which has shifted the roles of contractors towards improving the well-being of Indigenous communities [35,141]. With a case study on Australia, this paper tries to offer a substantive theoretical and practical guide on building social value prospects for the country’s Aboriginal people, with the help of construction-job recruitments, to reform the country’s infrastructure investments aimed at healing societies from the dreadful COVID-19 catastrophe. The article argues that construction jobs can certainly build social value prospects when private corporations, employers and managers provide good wages or salaries, the requisite training and personal development opportunities, as well as the crucial cultural amelioration, encompassing employee empowerment and all-inclusive workplace provisions. To sustain the social value avenues thus generated, employee participation and a holistic view of socially responsible expenditure are key factors.



**Fig. 5 Summary of the key correlations between social value prospects and employer preferences of the Aboriginal people that are considered significant while seeking a job in Australia’s construction companies**

Through commissioning analytical frameworks and sociometric methodologies, like the one formulated by this paper, and utilizing them to identify how workplaces have responded so far to the COVID-19 crisis, research and innovations can improve the data needed to achieve the UN Sustainable Development Goals. The social value avenues explored and verified in the sociometric study described by this paper can certainly be incorporated into Australia's governance schemes that may eventually become obligatory contract clauses for private corporations. For instance, the guidelines thus derived can be exercised in encouraging Aboriginal Participation in the Construction Policy of the Government of New South Wales [142,143] or the Victorian Social Procurement Framework [144,145], which will mandate the reporting on community engagement or mental health promotion efforts, within the workforce. It is also likely that clauses such as these will instigate bottom-up-approach-based collaborative programmes that are considered most effective for attaining the desired social outcomes and societal aims that the social procurement actions are originally envisioned to achieve [146].

Additionally, the findings of this paper reflect upon the recent advancements in the operationalization of the social value concept in construction industries [80,147–160]. Government agencies and private corporations in other parts

of the world can leverage this research to create social value via construction employment generation, thereby contributing to social recovery from COVID-19's devastation.

### Conflicts of interest

The author declares no conflict of interest. This paper is the author's independent and original work and complies with all publishing ethics. No financial or institutional support is involved in any form in preparing this paper.

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