

Possibility of Realizing Green Innovation by Urban Social Enterprises in Indonesia

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ABSTRACT

This study examines environmental innovation as a prominent strategic issue in the current development of business practices. According to preliminary studies, profit-based business practices are used to determine the success of environmental innovation as superior competitiveness. Countries in Asia prioritize business development based on economic development, with social and environmental functions included in other agendas. However, this is contradictory with the phenomenon of Surabaya, where environmental-based urban social enterprises actors actually complement the role of the city government by carrying out the function of a hybrid organization (profit and social) with environmentally friendly practices. Therefore, this study aims to determine the possibility of urban social enterprises in Indonesia to obtain green innovation. This is a systematic research with 4 (four) strategic factors and conceptual models that makeup 6 (six) propositions formulated based on the scope of knowledge management theory and resource-based view. This conceptual model that connects green knowledge sharing, entrepreneurial orientation, dynamic capability, and innovation performance is still relatively rare and needs to be tested to determine its theoretical resilience. The novelty of this model is formulated from contextual urban and regional social enterprises in Indonesia, therefore, it is expected to provide ready-to-test opportunities to be duplicated in other urban areas in the world that have the same contextual organizational functions and environmentally friendly business base.

Keywords: urban, social enterprises, strategic management, green innovation.

INTRODUCTION

Environmental or green innovation is a strategic approach that acts as an antecedent of competitive advantage and positively influences organizational performance [1,2,3,4]. Martinez [5] stated that in Asia, the prioritization of social and environmental aspects based on this approach is related to the country's economic development where the company operates. This result contradicts the phenomenon in the city of Surabaya, Indonesia.

Surabaya has been designated as one of the Global Green Cities by the United Nations (UN) on October 31, 2017. This is because the urban social enterprise roles and its citizens do not fully depend on the Local Government's economic development. The emergence of this motivation is determined by groups of environmental cadres or community members that constitute the civil society and acts as a complement or substitute for government functions. Urban environmental problems are a unifying value in realizing social and economic sustainability [6]. Social enterprises in Surabaya have a hybrid organizational function. This organization is profit-oriented and a subsidized commercial company that deals with beneficiary groups [7,8,9]. The social enterprise model includes 1) non-profit entrepreneurship, 2) the public sector, 3) social cooperatives, and 4) businesses (SME). Meanwhile, in terms of mission, it includes 1) integrated work, 2) social services, 3) ethical consumption/ecological products and social transition, and 4) poverty alleviation and social exclusivity [7].

Some of the empowerment programs carried out by urban social enterprises include the 3R (Reduce, Reuse, Recycle) campaign. Residents are not only expected to ensure that their villages are clean and beautiful, however its socio-economic potential also needs to be developed. The growing business fields include wastewater management, waste banks, waste product craft industry, micro-electric power generation, plant cultivation, fish farming, village tourism, etc [10]. Currently, Surabaya has approximately 14 villages in terms of economic, social, and environmental aspects of the society. The sharing of environmental insights with leaders, cadres, and residents is a determinant in creating awareness and motivating citizens' management capabilities and the development of other innovations [11]. These independent efforts are important social capital to maintain the sustainability of the program and realize socio-economic potentials.

Therefore, an interesting relationship exists between environmental-based knowledge sharing, entrepreneurial orientation, and the dynamic management ability to develop green innovation, a form of organizational performance. These strategic factors form a unique relationship that requires further research on knowledge management based on scientific views.

Therefore, the novelty of this study is not only in its objective as a hybrid organization and research location, rather it also aims to determine the gaps needed to realize green innovation. This study proposes a theoretical, conceptual model of strategic factors that influence green innovation performance of social enterprises situated in Surabaya. It investigated the relationship among strategic factors, which in several studies experiences gaps in developing green innovation. This study is summarized as follows: theoretical background, research methodology, discussion, proposed conceptual model, implication theory, future research, and conclusion.

THEORETICAL BACKGROUND

Green Knowledge Sharing

Knowledge sharing plays an important role in improving the performance or competitiveness of a company [12]. This also occurs in the context of green knowledge, regarded as the general awareness about facts, concepts, and all things related to the natural environment and ecosystems. It offers great potential in improving company performance or competitiveness [13,14].

Organizations that engage in ecological practices indulge in its orientation as well. Fong and Chang [15] described this phenomenon as intra and inter-organizational green knowledge sharing. Furthermore, intra-organizational green knowledge sharing is executed within the company to achieve set goals and facilitate new ecological awareness. Meanwhile, inter-organizational permits companies to always learn and share ecological knowledge with their external partners in supply chain management. Furthermore, according to Rumanti et al. [16], knowledge sharing is a learning process that involves the ability to contribute, communicate and interact with both internal and external co-workers.

The success of this innovation process is influenced by access to external and internal sources at each stage of the green knowledge-sharing procedure [17]. In addition, the application of intra and inter-organizational collaboration for green efforts through structural changes and pollution prevention investments ultimately determines the performance of several companies [18]. Therefore, the external role that is the key source of knowledge for several Asian companies is a determining factor for the success of its absorption internally [19]. This trend emphasizes the importance of internal organizational behavior towards orientation and creating new insight [20].

Therefore, it was concluded that green knowledge sharing involves exchanging ideas concerning environmentally friendly practices in organizations.

Green Entrepreneurial Orientation

Ribau, Moreira, and Raposo [21] stated that entrepreneurial orientation is the key ability of an organization to take risks during the process of recognizing and exploiting opportunities in the market. However, in an ecological context, green entrepreneurship is market-oriented and addresses environmental issues in order to gain a competitive advantage [22]. This suggests its dominance in social and environmental orientations and strategic decision-making during organizational operations that prioritize proactive efforts and risk-taking [23].

However, green entrepreneurial orientation is a proactive strategic approach associated with risks to excel in terms of environmentally friendly business initiatives, which generates economic and ecological benefits in a competitive market [24,25]. This is in line with the recent studies carried out by Habib, Bao, and Sainsdeen [26] as well as Guo, Wang, and Chen [27] which stated that it is regarded as part of a resource-based view related to the scope of dynamic capabilities associated with 3 sets of organizational processes, namely innovation activities, proactive actions, and risk-taking involving environmentally friendly policies.

Based on these opinions, it was concluded that this proactive strategic approach involves risk-taking in developing green practices for economic, social, and environmental benefits.

Green Dynamic Capability

This perspective was first proposed in several studies carried out by Hamel and Prahalad [28]. Teece et al. [29] emphasized the terms 'dynamic capability and reported that it implies an updated competence to achieve conformity within the changing or competitive market environment. This demonstrates the company's ability to integrate, develop, and restructure internal and external competencies in order to cope with the rapidly changing market environment. It is part of a company's resource-based view (RBV), mainly associated with the

concept of 'routine' in the organizational evolution theory [30]. A collection of routinely learned behaviors and organizational policies are characteristic of dynamic or 'first-order' capabilities. Meanwhile, the ability to perform the same activities on a daily basis is referred to as operational, ordinary, or 'zero-order' capabilities.

Green dynamic capability or ecological nature is the ability of a company to integrate, develop, and rearrange internal and external competencies to cope with market changes and product design through environmentally friendly activities [14,31]. In a further development, it is divided into several dimensions, namely internal and external resource integration, resource reconfiguration, and environmental insight capabilities [32]. This is also in line with the study carried out by Zhang et al. [33], which stated that it is divided into 3 aspects, including capabilities of environmental sensing, seizing, and reconfiguring environmental resources. Future research on dynamic capabilities oriented towards sustainability and environmental context is expected to explore different skills and new processes continuously [34].

Based on these opinions, it was concluded that green dynamic capability is an organization's ability to actively build and develop its environmentally friendly practices in response to the rapidly changing market or business partners' needs.

Green Innovation Performance

Green innovation is a strategic need for companies that offer great opportunities to meet customers' demands without harming the ecosystem. Its performance refers to hardware or software innovation related to green products or processes. This also includes technologies involved in energy saving, pollution prevention, waste recycling, environmentally friendly product design, or ecological management [35]. Another performance issue is to reduce or avoid environmental damage while protecting the surroundings and enabling the company to meet new consumer demands, create value, and increase revenue [1,36,37].

According to Nanath and Pillai (2017), green innovation performance is divided into green products and processes. Furthermore, green product is related to environmental innovation. Conversely, it is associated with energy saving, pollution prevention, waste recycling, or toxicity reduction [38].

In relation to the research carried out by Singh et al. [39] and Cloud et al. [40], green process and product innovations are organizational resources needed to improve its environmental performance, thereby gaining goodwill among key stakeholders. Other measures are based on lesser use of raw materials, energy, environmental impact, and the fulfillment of environmental requirements [41].

Based on these opinions, it was concluded that this approach is a measurable performance of the organization's innovative efforts through products and processes in reducing or preventing environmental damage while meeting consumer demands, creating value, and increasing income to meet set goals.

RESEARCH METHODOLOGY

A literature review serves as the basis for knowledge development, creates guidelines for policies, provides evidence, and generates new ideas and directives for a particular field [42].

This procedure is carried out in accordance with certain criteria involved in identifying problems related to knowledge management, resource-based view, green knowledge sharing, green entrepreneurial orientation, green dynamic capability, green innovation performance, and urban social enterprises. The grand theory-building has been excavated since its inception until the latest update. Meanwhile, empirical studies carried out in 2017 are regarded as supporting evidence. Furthermore, the findings are reviewed from the title, abstract, and content until a synthesis supporting the problems and research objectives is obtained [43]. Analysis of previous studies' theoretical relevance involving substantial evidence on the selected topic is a commonly used scientific approach [44]. The literature review mapping is depicted in Figure 1.

The main theoretical studies include those carried out from 1964 to 2016, especially on knowledge management theory and resource-based view. Meanwhile, several main theories developed as strategic factors were recently explored in 2017, although the green innovation performance factor was reviewed in 2013 [35] and 2016 [36].

All the realized results are further linked with sources related to the urban social enterprises' aspect and Surabaya as a phenomenal city. The conceptual model was proposed to resolve the gaps between the strategic factors in realizing green innovation performance in urban social enterprises located in Surabaya, Indonesia.

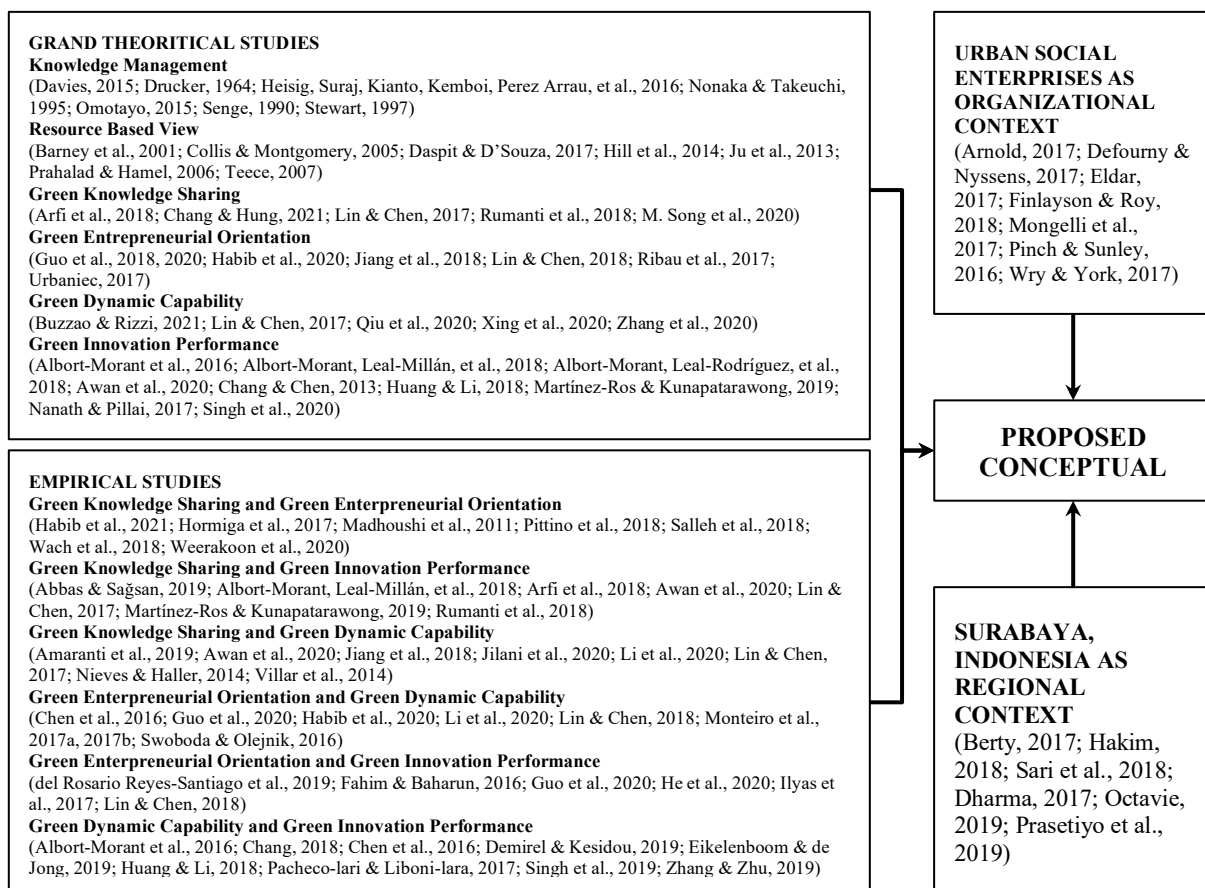


Figure 1: Literature Study Mapping

DISCUSSION AND PROPOSED CONCEPTUAL MODEL

Green Knowledge Sharing and Green Entrepreneurial Orientation

However, due to the lack of analyses on the relationship between green knowledge sharing and green entrepreneurial orientation, it is appropriate to define green as an environmentally friendly business practice in line with the main variables, namely knowledge sharing, and entrepreneurial orientation. Several studies have proven that a positive relationship exists between entrepreneurial orientation and knowledge sharing [45,46,47]. In a recent study related to the green concept, Habib et al. [48] further reported that entrepreneurs seek to acquire appropriate knowledge through market orientation and take proactive steps to innovate new products and gain a competitive advantage. This simply means that green entrepreneurial orientation has an influence on knowledge management concerning the market.

In contrast, Pittino et al. [49] reported that entrepreneurial orientation is due to the knowledge-sharing process in the context of a Spanish family company. This is in line with the research carried out by Wach et al. [50] on various internationalized business scales in Poland. Meanwhile, a combination of knowledge that influences green entrepreneurial orientation was discovered in 112 social companies in Australia [51].

Based on previous studies and potential inconsistencies in the relationship between green knowledge sharing and green entrepreneurial orientation, it is feasible to test the following hypothesis.

P1. Green knowledge sharing affects green entrepreneurial orientation.

Green Knowledge Sharing and Green Innovation Performance

The research on the effect of green knowledge sharing on green innovation performance is an interesting topic, considering that it is a new variable discovered by Lin and Chen [14] and a derivative of the studies carried out by Chennamaneni and Teng [52]. Differences in knowledge sharing indicators, especially in an environmentally friendly context reported in the studies carried out by Albort-Morant et al. [1], Lin and Chen [14], Jiang et al. [25], Rumanti et al. [16], and Wang and Wang [53] shows the need for an in-depth causality testing of the effect of this new variable on green innovation performance in various business sectors.

Meanwhile, the differences were also found to be relevant in the green product and process innovation performance dimensions [1,14,16,40]. This is inconsistent with the studies carried out by Abbas and Sağsan [54], on the green technology innovation dimension and green management innovation. A recent study carried out by Cloud et al. [40] reported that knowledge-driven by external sources had a better effect on green product innovation than that of the process. This is also supported by a research carried out by Martínez-Ros and Kunapatarawong [41].

Based on the previous studies, inconsistent indicators and the role of the variables, the relationship between green knowledge sharing and green innovation performance requires in-depth testing which led to the following propositions

P2. Green knowledge sharing has an effect on green innovation performance.

Green Knowledge Sharing and Green Dynamic Capability

Several preliminary studies related to these 2 strategic factors reported many inconsistencies. Some stated the existence of a positive relationship between knowledge sharing and organizational dynamic capabilities [12,55]. This is also related to the research on the impact of green knowledge sharing in the context of environmentally friendly practices on green dynamic capability carried out by Lin and Chen [14]. These inconsistencies are due to the presence of mediating variables, such as absorptive capacity which has potential and realized dimensions [56]. Meanwhile, the research carried out by Jiang et al. [25] used knowledge sharing and dynamic capabilities as moderators with opposing forces in terms of investigating the effect of green entrepreneurial orientation on environmental and financial performances.

Knowledge resources as antecedents play a role in triggering dynamic capabilities in terms of developing a company or organization [12,14,40,55,57,58]. The knowledge sharing factor is carried out between individuals and their colleagues [14,55,58]. Meanwhile, this approach is also a form of collective process found in the dissemination, transfer, donation, and knowledge models [12,40,55,56]. Based on these studies and considering the potential inconsistencies, it is feasible to test the relationship between green knowledge sharing and green dynamic capability by developing the following proposition.

P3: Green knowledge sharing has an effect on green dynamic capability.

Green Entrepreneurial Orientation and Green Dynamic Capability

Several studies have reported a positive relationship between entrepreneurial orientation and dynamic capabilities, including companies in the green or environmentally friendly sector [24,26,27,59,60]. In addition, numerous other studies also reported otherwise [58,61,62]. Meanwhile, the dynamic capability was also discovered to have an indirect relationship with entrepreneurial orientation. However, it served as a moderator in the relationship between green entrepreneurial orientation and environmental performance [25].

Consequently, various preliminary studies reported several inconsistent conditions related to the variables, dimensions or indicators, and contextual presentations. The concept of green creativity alluded to in the research carried out by Chen et al. [59] reported the similarities between innovative and dynamic capabilities. According to Breznik and D. Hisrich [63], this is possible by describing innovative ideas to create, integrate, modify, and encourage new change. This shows that the proactive concept of green entrepreneurial orientation positively affects green creativity, which is similar to green dynamic capability. This is in line with the studies carried out by Monteiro et al. [60], Lin and Chen [24], Guo et al. [27] and Habib et al. [26].

Meanwhile, Jiang et al. [25] discovered that this variable is indirectly related to green entrepreneurial orientation regarding green dynamic capability. However, it serves as a moderating variable in the relationship between green entrepreneurial orientation and environmental performance. Based on previous studies and potential inconsistencies, it is feasible to test the relationship between green entrepreneurial orientation and green dynamic capability by developing the following proposition.

P4. Green entrepreneurship orientation has an effect on green dynamic capability.

Green Entrepreneurial Orientation and Green Innovation Performance

According to several studies, entrepreneurial orientation, which includes risk-taking, proactive business processes, and innovation promotion, determines factors that drive organizational performance [64,65]. Besides, it was reported that a positive relationship exists between entrepreneurial orientation and green innovation performance, including companies in the green or eco-friendly sector [24,25,27,66,67]. Meanwhile, Lisboa et al. (2016) [68] reported that entrepreneurial orientation has a special effect on product innovation. Therefore, it is regarded as an antecedent of organizational performance.

However, this variable does not necessarily have a consistent direct effect on innovation performance. Several potential mediators promote inconsistencies in the relationship between green entrepreneurial orientation and green innovation performance. They include knowledge management [46], ability to absorb new knowledge [64], supply chain learning [23], green relational quality [24], and supply chain learning [27].

Regarding the understanding of green innovation performance, some findings, such as green radical innovation and green incremental innovation [27], eco-innovation and environmental performance [66], or the green development environmental quality [67] were also reported. Based on previous studies and taking into account potential inconsistencies, it is feasible to test the relationship between green entrepreneurial orientation and green innovation performance by developing the following proposition

P5. Green entrepreneurship orientation affects green innovation performance.

Green Dynamic Capability and Green Innovation Performance

Theoretically, dynamic capabilities are the driving force that triggers increased innovation in environmentally friendly organizational practices. Pacheco-lari and Liboni-lara [69] succeeded in formulating a comprehensive literature review on the relationship between the 2 variables from 2011 to 2015, which amounted to relatively 16 studies. This was also supported by other studies that discovered that green dynamic capability is the main driver of green innovation in green products and processes [38,59,70-73].

Meanwhile, Albort-Morant, Leal-Millán, and Cepeda-Carrión [36] studied the relationship between green dynamic capability, consumer relationship learning ability as an ordinary competency, and green innovation performance. The results showed that both the direct and indirect effects of dynamic and ordinary capabilities on green innovation performance are positive and significant. It also increases the prediction of innovation performance in Spanish manufacturing companies. This model was also applied in a different cultural context relating to 249 Manufacturing SMEs in Malaysia, and consistent results were obtained [74]. Meanwhile, the research carried out by Mahmud et al. [75] stated that the dynamic capability of eco-friendly SMEs acts as a moderator in the relationship between environmental management and product exploitation. Based on previous studies, the relationship between green dynamic capability and green innovation performance is developed as follows:

P6. Green dynamic capability has an effect on green innovation performance.

Conceptual Model

The relationship between the strategic factors involved in improving green innovation performance of urban social enterprises in Surabaya is shown in figure 2.

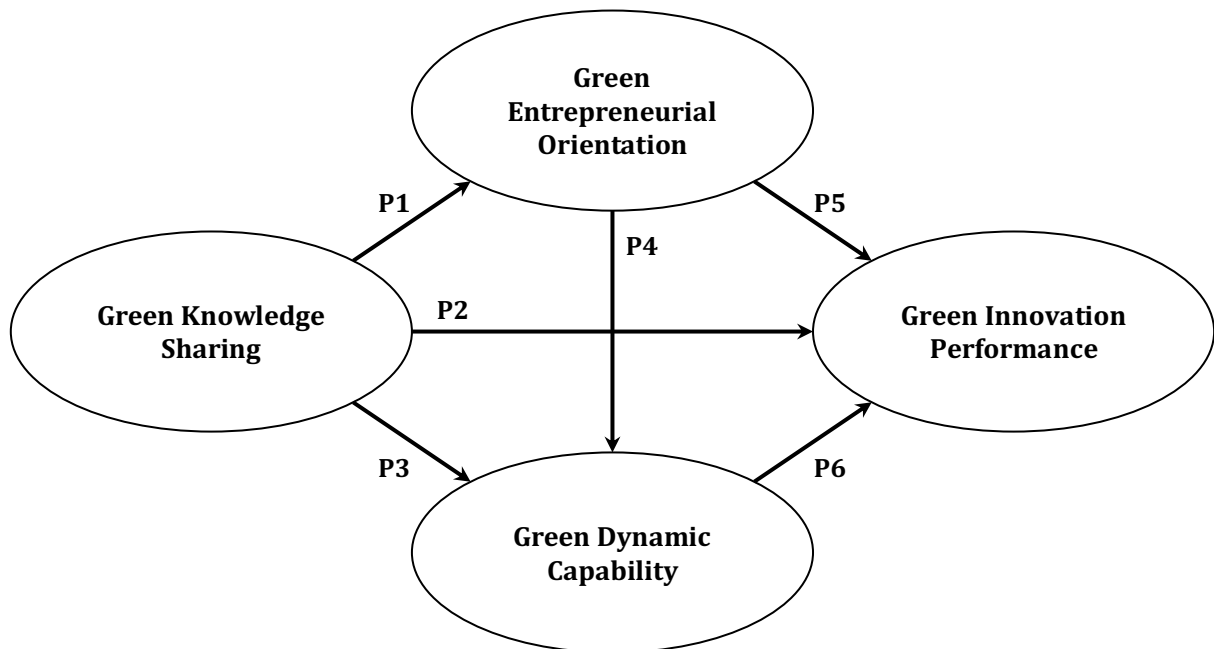


Figure 2: Conceptual Model

IMPLICATIONS AND FUTURE RESEARCH

Theoretical Implications

This study provides theoretical implications for the development of strategic management science. Strategic factors detected in this conceptual model, such as green knowledge sharing, essentially function as intangible resources that aids to achieve green innovation organizational performance compared to that of the tangible ones [76]. However, when closely examined, it was discovered that the role of other strategic factors, such as green entrepreneurial orientation and green dynamic capability, are core competencies for organizations to improve green innovation performance. Its contribution is part of the potentials based on the dynamic capability view (DCV) theory developed by Prahalad and Hamel [77], Teece [78], Winter [79]. The entire proposed model serves as a reference for further analysis to address the sustainability of hybrid organizations that function in accordance with an ecological basis through the development of strategic management theory, especially knowledge management and dynamic capability views.

Limitations and Scope for Future Research

This study designed a limited conceptual model which lacks contributions and discussions based on empirical evidence. Strategic issues related to the green concept are rare and relatively new, especially the scope of social enterprises in Asia. Some of the difficulties encountered are empirical data extraction during the COVID-19 pandemic and the absence of a formal arrangement related to the existence of an urban social enterprise population in Surabaya. The majority of the available official data are macroeconomic in nature and not specific. This challenge needs to be addressed by defining the unit of analysis according to Defourney and Nyssens [7].

Meanwhile, future studies are expected to ensure that the proposed conceptual model is empirically validated through confirmatory factor analysis. It is imperative that the theoretical

model is operationalized to suit the difficulties of population determination and sampling. The Structural Equation Model (SEM) development as a current analytical tool needs to pay attention to the minimum sample size [80-82]. The construct developed is empirically validated by identifying statements or indicators for each proposed strategic factor based on literature items, including green knowledge sharing, green entrepreneurial orientation, green dynamic capability, and green innovation performance. The proposed conceptual model needs to be tested for construct, convergent, and discriminant validities and composite reliability.

CONCLUSION

The fact that environmental innovation is also generated by urban social enterprises, such as in Surabaya, Indonesia, was proven by the proposed conceptual model. The strategic factors or potential constructs tend to be developed as effective operational variables to test the accuracy of this model.

The phenomenon that Surabaya is recognized as one of the global green cities has been proven in terms of its feasibility. In addition, urban social enterprises in this city contradict the research carried out by Martinez [5], which stated that social and environmental development is highly dependent on the country's economic growth. These enterprises are concrete proof of citizens' concern, which complements the governmental function and independent efforts, as Sari et al. [6] and Prasetyo et al. [11].

This conceptual model provides potential solutions for these strategic factors supposing a social organization's desires to be independent by placing the environment as the basis for its sustainability rather than economic competitiveness. The function of urban social enterprises as a hybrid organization serves as an alternative to empower an organization by not accepting a role in the economic sector (profit) as well as providing social benefits driven by the environment. This has the potential to be duplicated in other environmentally friendly urban areas in the world.

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