The Role Of Strategic Entrepreneurship, Dynamic Capabilities, And Government Policy To Improve Pdam’s Performance In Indonesia

Tamin M. Zakaria Amin, Dyah Budiaustuti, Idris Gautama So, Muhtosim Arief

Abstract: This research was conducted in order to minimize the developmental gap in Indonesia’s pipe drinking water supply system development. As of today, 383 of Regional Government Water Supply Companies in Indonesia, known as Perusahaan Daerah Air Minum (PDAM), are underperforming with only 36% of urban service coverage or 22.40% of national service coverage in average. This paper aims at examining the effect of the latent variables of strategic entrepreneurship, dynamic capabilities, and government policies to PDAM performance. The novelty of this research is the role of government policy as a moderating variable in the relationship between strategic entrepreneurship and dynamic capabilities as they relate to PDAM performance. The methodology used in this research is the quantitative method conducted through a descriptive and explanatory survey. The number of the sample is 120 respondents. Further data were analyzed using the SEM-PLS method with SmartPLS software. This research proved that dynamic capabilities influence PDAM performance, and indicate the need for a stronger government policy, one that would influence strategic entrepreneurship and dynamic capabilities relate to PDAM performance. These findings are intended to contribute to development of strategic management theory and a managerial implication, specifically that PDAM should apply strategic management for the improvement of their performance in order to actively participate in government programs for drinking water services.

Index Terms: Drinking water, Dynamic capabilities, Government policy, PDAM performance, Strategic entrepreneurship, Strategic management

1 INTRODUCTION

The main objective of a drinking water supply system is to provide a safe drinking water supply to the public, so that it can be protected from various contaminants. Thus piped drinking water services are intended to protect public health. In developing countries, including Indonesia, drinking water service coverage is generally very low. Today, the national piped drinking water service coverage in Indonesia is at only 22.40% [1]. The low coverage results in environmental degradation, compromised public health, and low productivity. The regional Government Water Supply Companies, known as Perusahaan Daerah Air Minum (PDAM), is a regional government owned locally-regulated water utility collective, with a primary objective to provide piped drinking water supply services to meet daily domestic needs, as well non-domestic, to support public activities in the service area. In addition, the formation of PDAM is expected to contribute towards regional income and to improve the regional economy. PDAM consists of a Head of Region as the shareholder, a Board of Supervisors, and Board of Directors.

At the national level, the performance of PDAM presents some serious deficiencies. Aside from low service coverage, there are other disappointing indicators such as a high level of non-revenue water (NRW) at 33%. In addition 74% of PDAM have not yet reached a full-cost recovery (FCR) level [2]. A common feature of public water utilities in developing countries is their lack of a commercial orientation. As a result, many utilities find themselves locked in a cycle of poor corporate performance – with low coverage of services, huge amounts of NRW and insufficient funding for maintenance and expansion [3]. In the water industry, NRW is a major problem since it leads to water loss [4]. Identifying the complexity of issues is the first step in addressing them. First, inefficiency in water utilities is the major cause of low access to drinking water services in developing countries. Because about 33% of produced drinking water is lost (both physically and commercially), there is insufficient revenue to cover operating costs. Second, many water utilities in developing countries have a poor management information system (MIS), a tool necessary to the adequate monitoring and evaluation activities. Many of them rarely collect data systematically, a step needed to assess their performance and establish operational improvements. Third, water utilities in developing countries faces issues related to utility management in general. Most utilities, despite having a legal mandate to supply drinking water to all residents, lack of a clearly articulated in vision and mission, effective management structures, and human resources capability to enable them to fulfill their mandate [3]. An efficient water utilities operation will benefit to the customers by providing a low water tariff and high service quality. The system will become sustainable, promoting further expansion of distribution networks, and best practice implementation by most water utilities [5]. Yet PDAM exhibits institutional and management issues related to inefficiency, a lack of human resource competencies, and lapses in supportive organizational culture, entrepreneurship, business strategy and intelligence; it is an operating system suffering leadership without vision [6]. PDAM has not shown optimum effort in identifying and seizing market opportunities for several reasons such as a lack of entrepreneurial and management.
skills among Board of Directors. Capturing opportunities involves entrepreneurial and managerial activities [7]. Entrepreneurship is the ability to sense opportunity and to seize it to create wealth and growth, and this is what PDAM needs for the company to provide effective drinking water services to the public. However, entrepreneurs often explore opportunities regardless of the existing condition of the resources which often causes failure. As ref [8] pointed out, the common mistakes of entrepreneurs include getting too excited about their new ideas, ignoring markets, and failing to assess the target groups for new products and services. Therefore, entrepreneurship (opportunity-seeking behavior) must be integrated with strategic management (advantage-seeking behavior). Integration of these two disciplines produce the much desired strategic entrepreneurship. Once a new opportunity (technology or market) is perceived, it must be addressed through new products, processes, or services. This often requires investment in development and commercialization activities [9]. However, untapped, profitable, and growing opportunities are hard to catch for capturing opportunities effectively requires keen preparation which entails investment of scarce resources in the expectation of future benefits [10]. With a growing urban population, the development urban areas, and further industrialization, and the ultimate expectation of a better quality of life, water utilities in developing countries must be align to minimize service gaps, by lowering NRW, increasing revenues to cover operational costs, and expanding services for the urban poor. In addition, utilities must adapt towards their institutional changes and conditions [3]. In recent years, the water supply business has changed significantly, although the changes have seemed sluggish compared to faster-moving industries. For example, changes in the United States reflect a shift from a centralized, government-dominated, and supply-side industries to a more distributed and flexible industry model with increased demand management and new opportunities available to the private sector [11]. Besides that, policy support from the shareholder of PDAM (Governor/Regent/Mayor) is necessary. Without policy support from the shareholder, it is impossible for the management entity to carry out its duties successfully. It can be said that the PDAM’s improvements are determined by the local government leader. Other than that, central government policies set forth in the regulations can create an environment conducive for PDAMs to grow and improve. The central government undertakes at least 3 (three) key roles: policy making, capacity building, and control [11]. In providing services to the community, PDAM is currently inseparable from various environmental challenges such as climate change, raw water pollution, urbanization, economic growth, and an increasing number of middle economic communities [12]. All of these challenges require PDAM to be prepared to improve both coverage, as well as quality of their services to the public in a sustainable way. This research is necessary in order to minimize the lag of Indonesia’s water supply system development. If this condition is not addressed, environmental degradation will occur, public health will be threatened, poverty will increase, and the viability of the workforce will be detrimentally affected thus making it difficult for Indonesia to compete successfully in the current and future global economic arenas.

2 LITERATURE REVIEW

STRATEGIC ENTREPRENEURSHIP

Strategic entrepreneurship is a newly recognized field of interest which, not surprisingly, emanated from strategic management and entrepreneurship fields. This term and practice formally appeared in 2001 in strategic management journal on “strategic entrepreneurship”; and the first strategic entrepreneurial journal was published in 2007 [13]. Strategic entrepreneurship is an entrepreneurial act with a strategic perspective, and has also been defined as entrepreneurial action with an entrepreneurial mindset (including insight, vigilance, and the flexibility to use appropriate resources). In short, strategic entrepreneurship is the integration of entrepreneurship (opportunity-seeking behavior) and strategy (advantage-seeking behavior), a dual perspectives in developing and taking action to create wealth [13]. Strategic entrepreneurship highlights the leader’s role in identifying opportunities as well as doing something with those opportunities that are conducive for wealth creation [14]. External motivators such as consultants or donors may help build needs, but triggering service requires the leadership needed to take action and overcome obstacles [11]. In this research, strategic entrepreneurship is an act of entrepreneurship in a strategic perspective that identifies opportunities and exploits them for value creation toward superior performance over the long term. Indicators used: entrepreneurial mindset, culture, and leadership [15].

Hypothesis 1: Strategic entrepreneurship affects PDAM’s performance

Dynamic Capabilities

The dynamic capabilities approach focuses on internal organization as the key to achieve company’s success [14]. The dynamic capabilities approach relates to the manner in which firms identify opportunities, create new knowledge, disseminate information internally, embed in new business model and/or new goods or services, and launch new products and service on the market [7]. The dynamic capabilities model comprises three core organizational and managerial processes, which are: coordination/combining, learning, and reconfiguration are as core elements of dynamic capabilities [7], [16]. “Coordination capability” relates to how managers within a firm coordinate and integrate internal activities. “Learning” refers to the use of repetitions and experiments to improve organizational process. “Reconfiguration” describes a firm’s ability to identify external opportunities through scanning, and modify firm’s asset structure to take advantage of opportunities [17]. Contribution of dynamic capabilities to firm performance can occur in several ways. First, positive dynamic capabilities can affect a firm’s performance by allowing it to identify and respond to opportunities through the development of new processes, products and services that have the potential to increase revenue. Second, other dynamic capabilities can improve the speed and efficiency with which a firm operates and responds to changes in the environment. The ability to improve effectiveness and efficiency of the response in dealing with environmental changes can positively affect firm performance by allowing it to take advantage of attractive revenue opportunities and adjust process to cut costs. And third, dynamic capabilities offer options not available to the firm previously, therefore making available for
greater performance contributions such as revenue or profit [18]. Dynamic capabilities reflect those systems that sense, seize and transform accumulative knowledge into improvements in firm activity. Hence, they are critical for activating and sustaining strategic and entrepreneurial processes to balance advantage-and opportunity-seeking behaviours. The integration of iterative learning practices into the strategic entrepreneurship process overcomes its static limitation and better conceptualizes how firms might sustain wealth creation over the long term through this process [14]. In this research, dynamic capabilities refers to how companies renew their competencies in order to improve the effectiveness and efficiency of their regular operations, as well as how they develop innovations in process to respond to rapid shifts in industrial environments in the pursuit of superior and sustainable performance. Indicators used: coordination, learning, and reconfiguration [7].

**Hypothesis 2: Dynamic capabilities affect PDAM’s performance**

Government Policies

Water governance involves policy, capacity building, and control [11]. The government employs policy instruments to foster an entrepreneurial culture [19]. Public policy seeks to increase the number of new entrepreneurs, thereby improving attitudes towards entrepreneurship at an effective level [19]. The development of good government policies for Small and Medium Enterprises (“SME”) is an integral component of most economic growth strategies and has certain significance [20]. Governance is sharing responsibility among levels of government and water management organizations, and controlling water managers to ensure all perform their duties [11]. At present, the involvement of the central government has shifted from project development to policy making and regulation [11]. Instead of the government working on all aspects of water supply and providing service, it assumes the role of organizing and monitoring it. With this separation of responsibilities, the government can focus more on meeting the needs of communities where investment companies may be less willing to provide services. Government regulation serves as a moderator for entrepreneurial orientation and performance variable relations [21]. Deregulation and re-regulation are being used to promote private sector involvement, to reach FCR, and to eliminate dependence on regional local government [22]. An additional result of note is that the public water utility seems more efficient compared to that owned by the private sector [23]. Policies should be developed that encourage firms to achieve a goal profitability rather than those that urge firms to see growth as the primary goal. Firms that demonstrate high profitability often grow as a result and still enjoy above-average profits; therefore policies that help firms become more profitable will also lead to more growth [24]. In this research, the meaning of government policy is any action that aims to regulate and improve business conditions in the form of policy support, implementation, and funding by the government. Under this definition, government policies associated with entrepreneurial practices are focus on encouraging entrepreneurship by creating a favorable environment for employers. Indicators used: policies support, implementation of policies, and funding by the government [25].

**Hypothesis 3: Government policy strengthened the effect of strategic entrepreneurship and dynamic capabilities towards PDAM’s performance**

PDAM’s Performance

Nowadays, firm leaders deal with overwhelming performance pressure as it is immensely hard to maintain a competitive edge. Leaders strive focusing on profitability and value creation. The basis for a firm’s performance measurement is to upgrade current performance in the pursuit of new opportunities internally and externally, redesign strategies or action plans, increase overall business performance and capability improvement, and also gain sustainable growth over the long run. Therefore, performance encompasses the financial and non-financial[20]. Performance can be expressed as any form of relevant concern for the organization, for example, better financial indicators or market growth or increased competitive advantage [26]. Performance domains that utility managers must meet include improvement of standard quality, efficiency of operation and maintenance costs, reduce tariff for end users, fulfillment environmental legal standard [27]. For the water supply system, it supports the service provider in order to fulfill firm’s goal to become a highly reliable service while retaining the ability to excel in both financial and service level performance [28]. The main objective of drinking water supply system is to enable the provision of safe and good drinking water that obtained customers trust [29]. To achieve this end, service providers should aspire to provide safe, aesthetically pleasing, water for drinking purposes in sufficient quantities at a cost considered a good value for money [28]. In this research, performance is the end result of activities expressed in the form of fulfilling the ideals of firm to become a service with high reliability while maintaining the ability to excel in both financial performance (return on asset, return on equity, and return on sales), and non-financial performance (growth of service coverage) [20].

3 MATERIAL AND METHODS

Quantitative research was applied for the purpose of this study with particular reference to an empirical survey. The total population of the study was 296 respondents and sampling technique resulted in a total number of 120 respondents. The respondents of the study were the Chief Executive Officers (CEOs) of the Regional Government Water Supply Companies (or PDAM) in Indonesia. The respondents were located across Indonesia, including those PDAMs in Sumatera, Java, Kalimantan, Sulawesi, Bali, West Nusa Tenggara, East Nusa Tenggara, Maluku and Papua islands. The technique of data collection used in the study was a questionnaire with a Likert's scale 1-6 (1: Strongly Disagree; 6: Strongly Agree). The questionnaires were sent by email to CEOs of PDAM. Furthermore, the quantitative data were analyzed using Structural Equation Modelling Partial Least Square (SEM-PLS) analysis the usage of SmartPLS software.

4 RESULTS AND DISCUSSIONS

The findings presented in this study are derived from the hypotheses formulated in the study. Overall, the findings are presented in Table 1:
Strategic Entrepreneurship and PDAM's Performance

The results from the calculation of Inner Model T-Statistic are displayed in Table 1. The result of the analysis shows that there was no statistically significant relationship between strategic entrepreneurship and PDAM's performance (T-Statistic = 0.862838 < 1.96). This finding contradicts the finding of other researchers who assert that strategic entrepreneurship produces a superior corporate performance, meaning that with strategic entrepreneurship, firms can have superior performance with an increase in market share [30]. The contradictory findings related to the fact that the water tariff in the PDAM companies were generally below the production costs, which makes investment become not feasible. Decision-making for specific PDAM sites was not yet autonomous as it still depend on the consideration of outside parties; thus the organization has no discretion in making decisions. For example, it did not have the ability to experiment because most of the PDAM facilities were still facing loss for a long run, thus indicating that PDAM sites are very weak in their entrepreneurial orientation. Furthermore, internal organizational culture, in general, has not fully supported the development of positive behavior of employees. Consequently, there will be no investment opportunities as long as PDAM keep maintaining tariff below production cost. Moreover, if PDAM is still facing loss, they will not be able to attract talented people. Indeed, the essence of strategic management is seeking ways to transform those opportunities into a sustainable competitive advantage. Both disciplines are linked to a value creation, which is recognized as an organization's primary goal. Entrepreneurial action and strategic action can contribute individually to create value, but they can contribute even more when combined [8]. Firms that resist changes, those that fail to innovate, soon come to an end. Therefore, strategy is not about maintaining a status quo. Strategy should be about creating the future. In other words, strategy is innovation [28]. Yet the innovation process is not completed until an idea has been fully developed and converted into cash in the market [31]. A lack of entrepreneurial action in today's global economy can cause failure, as viable attitudes and entrepreneurial behavior are necessary for firms of all sizes to achieve wellbeing and thrive in a competitive environment [32]. Results of strategic entrepreneurship implementation often deal with more effective performance, today or in the future [26]. The creation of wealth is at the heart of entrepreneurship and strategic management. The outcomes of creation (entrepreneurship) and the utilization of current advantage while jointly exploring new ones (strategic management) can increase firm’s wealth, and intellectual as well as social capital [33]. In view of the fact that drinking water tariff applied in most PDAM sites in Indonesia are still below production costs, the strategic entrepreneurship approach is not yet effective to improve PDAM's performance. This is in line with statement of ref [34] that entrepreneurial opportunities are found in markets where products, goods, services, raw materials, and organizing methods can be introduced at a price level above production costs. Without opportunities, there is no entrepreneurship. Likewise, the case of PDAM aligns with the statement of ref [34] which asserts that if resources or opportunities controlled by the firm are unvaluable, they will not allow companies to choose or implement strategies that take advantage of external opportunities or neutralize threats. When companies are pursuing high growth starting from low profitability levels, it often makes profitability worse than improved. In addition, companies with low profitability are unlikely to finance a strategy of building valuable and hard-to-copy advantages as they grow. Therefore their growth will not be sustainable.

Dynamic Capabilities and PDAM's Performance

As presented in Table 1, there was a statistically significant effect of dynamic capabilities to PDAM's performance (T-Statistic = 2.388960 > 1.96). This means that the performance of PDAM will improve if dynamic capabilities are improved through enhanced coordination of internal activities, renewed competencies, improved capability, and reconfigured assets (if necessary to adapt to environmental changes resulting from deregulation or re-regulation). This finding supports previous research, found that high-growth firms are less concerned about what they cannot control but instead concentrate on those areas within the realm of their influence [35]. Moreover, the results reinforce the study of ref [24] that posit that prior to a significant expansion, companies need to develop some kind of competitive advantage based on the successful identification and exploitation of uniqueness in their resource pool. The findings imply that dynamic capabilities reflect past learning of processes, as they are a learning pattern of collective activity through which the organization systematically generates and modifies its operational routines in pursuit of improved performance [36]. Firms that successfully build and manage assets in an ecosystem will benefit greatly [37]. Moreover, a dynamic capabilities approach focuses on the internal organization as key to achieving corporate success [14]. The firm's ability to continually improve its current resources and build new ones is important to retain a competitive advantage and take advantage of entrepreneurial opportunities over time. The sooner resources are acquired and transformed into competitive advantage through dynamic capabilities, the higher the chances for a successful wealth creation process to occur [14] Water utilities can envision and achieve improvement in water services through internal restructuring. Innovation in internal management, particularly attention to incentives and performance rewards for experienced personnel, can help to address gaps in water services for the poor.

Government policies, strategic entrepreneurship, dynamic capabilities, and PDAM’s performance

The finding presented in Table 1 shows that there was a role of government policy in strengthening the influence of strategic entrepreneurship and dynamic capabilities on PDAM's performance (T-Statistic = 2.295038 > 1.96). This means that the performance of the PDAM will increase with the existence of the performance of the PDAM. The results of the analysis, displayed in Table 1 indicate that the relationship between dynamic capabilities and PDAM's performance is statistically significant (T-Statistic > 1.96). This finding is consistent with the idea that dynamic capabilities are crucial for PDAM's performance improvement. The results also show that government policies positively influence PDAM's performance (T-Statistic > 1.96). This finding is in line with the argument that government policies can provide the necessary support and resources for PDAM's success. Furthermore, the results suggest that the implementation of strategic entrepreneurship approach is necessary for PDAM's performance improvement (T-Statistic > 1.96). This finding is in line with the idea that strategic entrepreneurship is crucial for PDAM's success.
of a government policy that supports and provides incentives. This supports statement of ref [28] that where natural monopoly exist (such as provision of drinking water and wastewater services), service providers (public or private) will only be motivated to improve performance if legitimate regulations and/or available competition create the necessary incentives, an implication of importance to policy-makers concerned with promoting entrepreneurial activity [38]. Is can be deduced that the government should minimize barriers to entrepreneurship. In the case of government supported policies, it is assumed that since the government is in the lead for entrepreneurship development, it should provide much needed resources which include providing a conducive environment for businesses that will greatly promote entrepreneurship. Government policy, in this context, is any action aimed at regulating and improving the conditions of small and medium enterprises in the form of government support, implementation and financing policies. Under this definition, government policies associated with entrepreneurial practices are targeted at encouraging entrepreneurship by creating a favorable environment for employers and articulating guidelines that will govern entrepreneurial activity for entrepreneurship is the foundation of the nation's path to industrialization. Furthermore, the government should enact a user-friendly policy for entrepreneurs [25]. Effective government policy is crucial in encouraging successful business firms. Most governments, especially in developing countries, are struggling to achieve economic development, they are always introducing supportive policy programs in different forms, for example, infrastructure, finance and fiscal. Government policies consist of policy implementation, supportive government policies, and government funding [25]. In developed and developing countries, supportive government policies are an important factor for growing small and medium-sized enterprises. Government regulation is a moderator for the relationship of entrepreneurship and performance orientation variables [21].

5 CONCLUSIONS

Strategic entrepreneurship does not significantly affect the performance of PDAM, however significant dynamic capabilities do. Government policies should be focus on strengthening the influence of strategic entrepreneurship and dynamic capabilities on PDAM’s performance. Therefore, to improve PDAM performance, a three-fold approach must be adopted: firstly, a dynamic capabilities approach; second, a simultaneous dynamic capabilities and strategic entrepreneurship approach; and thirdly, a government-policy approach. However, the approach with the most dominant effect on PDAM performance is dynamic capabilities with the highest T-statistic value. Therefore, in improving PDAM performance, the dynamic capabilities approach should become the first priority. The first and second approaches should be accommodated by applying the appropriate strategic planning process to the PDAM, while the third approach through government policies becomes the focus of the central government. From this, it can be recommended that in order to improve the performance of the PDAM, top management of PDAM should take strategic action. First, it is crucial to be able to coordinate internal activities within the organization, continuously renew competencies and improve personnel capabilities and, if necessary, reconfigure assets to get opportunities. The first step aims to improve efficiency and effectiveness of firm’s internal activities in order to reach optimum efficiency, to reduce NRW, and to obtain FCR. This includes installation of an accurate water metering for each customer. Second, it is necessary to strengthen the ability to sense opportunities, mobilize resources strategically to exploit those opportunities to grow through expansion of service coverage and improvement of service quality with the aim of continuously increasing the coverage of services so as to provide services to all communities in need, primarily the urban poor, while maintaining the financial capacity and quality of service in accordance with standards determined by the regulator. If PDAM operates more efficiently, the customer will benefit from lower tariff and shall continue to expect and receive high quality service. The central government as policy maker should generate policies that can create enabling conditions for PDAM to operate more efficiently. Policies should be developed to encourage PDAM to achieve FCR rather than making policies that encourage growth of PDAM as a primary goal. Therefore, the policies that encourage the achievement of FCR in PDAM, and the proper implementation and calibration of the customer’s water meter will positively affect the efficiency level of PDAM’s operations which can ultimately improve PDAM’s performance. Given the government’s policy, capacity building, control, funding assistance, and effective and efficient policy implementation, it is hoped that the government will be able to facilitate PDAMs to capture opportunities to grow.

REFERENCES


