
DEVELOPING THE SALT CENTRE OF EXCELLENCE AS A UNIQUE SELLING PROPOSITION UNIVERSITY OF TRUNOJOYO MADURA

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ABSTRACT

As one of the most enormous salt globally, Indonesia consumes more than 3 million tonnes of salt annually, mainly imported from several countries. However, Indonesia is the second-longest equatorial coastline in the world, with abundant salt resources from the sea. Developing a salt industry development centre on Madura Island is a crucial solution to eradicate Indonesia's label as a salt imported dependent state. Madura Island has large salt production and is labelled a salt island. Being a centre of academics on Madura Island, the University of Trunojoyo Madura is qualified as a salt centre of Excellence due to having met thorough research and development, sourcing absorptive and disseminating capacity guidelines. Research and academic activities in the salt field, such as attending scientific seminars and conferences, participating in workshops and other centers of excellence collaboration, have been done in a decade as academic Excellence. Several industries have produced and utilized the commercialization of research products like fortified salt, rich mineral salt, and solus per aqua (SPA) salt. University also develops collaborative research, advisory and informal knowledge exchange between the university and industry. To implement this program's success, the university develops information systems technology to manage the Centre of excellent performances. Finally, based upon the work done on several guidelines, the university's positive impact on research, industrial corporation, and product dissemination has increased dramatically over the years.

Keywords: salt centre of excellent, unique selling proposition, University of Trunojoyo Madura

INTRODUCTION

As an archipelago state, Indonesia has the benefit of seawater resources that are appropriate for developing a salt industry development centre. However, Indonesia is labelled as a salt import-. Dependent state due to massive imported salt consumption of more than 2 tons annually (BPS, 2019). Madura Island has large salt production and has been acclaimed as a salt island since the Dutch colonization in ancient times. Being a centre of academics on Madura Island, the University of Trunojoyo Madura plans to eliminate Indonesia's label as a salt imported dependent state by developing a salt centre of Excellence. Centre of Excellence has gained widespread attention in several universities, and the key components are a massive allocation of competitive grants and a concentration of long-term and pliable research funding to research groups (Tomas Hellstrom *et al.*, 2018). Recognized as a salt

centre of Excellence, it benefits the university and all stakeholders. Interest in strategic planning on developing a salt centre of Excellence is a mission of the university president in his programs during election time. The University president has undertaken strategic planning with varying degrees of earnestness and comprehensiveness in an academic capacity and sourcing absorptive and disseminating capacity. Strategic planning with clear goals is the capability to conduct developed collaborative research, advisory and informal knowledge exchange between university, government, industry and society. Creating a memorandum of understanding with PT Cheetham Garam Indonesia, Suzukatsu Co., Ltd, and Toyobo Engineering has been signed to generate knowledge sharing between the university and the industry. Establishing a corporation agreement between the University of Trunojoyo Madura and the government, such as the Ministry of Research and Technology, Marine and

Fisheries Ministry, and Ministry of the Economy, has been done to achieve performance guidelines. With comprehensive performance to achieve the requirement to be a salt centre of Excellence, the University of Trunojoyo Madura has made several approaches and achieved the best goal. The results from this program are expected to enhance salt production in Indonesia and remove Indonesia as a salt imported-dependent state. This paper concludes that several activities are done by the University of Trunojoyo Madura, which has met specific research and development, sourcing absorptive and disseminating capacity guidelines to develop a salt centre of Excellence.

Centre of Excellence in Indonesia

A centre of Excellence is an institutional research centre that highly concentrates on existing individual capacity and resources to enable researchers to cooperate across knowledge disciplines and institutions, delivering comprehensive and interdisciplinary outcomes (Samuel Moore *et al.*, 2017). These programs help to boost Excellence in research and product development. There are several categories for the Centre of Excellence in Indonesia: Maritime, Energy, Food and Agriculture, Transportation, Information and Communication, Telecommunications, Defense and Security Technology, Health and Medicine, Advanced Materials, Social, Culture, and Humanities, Policy, and Disaster Mitigation. There are 24 centers of Excellence developed by university in Indonesia nowadays (PUI Ristekdikti, 2021); some of them will describe as follow.

Tropical Disease and infection centre of Excellence

Airlangga University develops a Centre of Excellence with a concentration of expertise in tropical disease and infection. The vision is one of the university's strengths for stimulating advanced interdisciplinary research on tropical and infectious diseases based on molecular biology. The university served training, information, and diagnostic services related to tropical and infectious diseases and developed bioproducts. Detailed information can be checked on their website (ITD, 2021).

Tropical Bio Pharmaca Center of Excellence

The tropical biopharmaca Centre of Excellence was developed by Bogor Agricultural

University due to Indonesia accommodates 70% of the world's species diversity and multiethnic society. This program will make a compelling improvement to increase the prosperity of Indonesian society. Biopharmaca is described as plants, animals, minerals, and microbes with promising properties being drugs and a super food for living things. Tropical Biopharmaca Center of Excellence is working not only in biopharmaca development, natural resources conservation, and proposing bioprospecting policy and regulation but also on exploration, conservation, cultivation, extraction, chemical structure analysis, standardization, and efficacy studies of the natural resources. The vision is to be a superior research centre in biopharma scopes by optimizing the added value of multi-professional levels of natural resources. Comprehensive information can be gained on their official link (Biofarmaka, 2021).

Creation of a University of Trunojoyo Madura salt Centre of Excellence

The development of the salt centre of Excellence is a strategic initiative of the University of Trunojoyo Madura to realize national salt independence. This institution carries out multidisciplinary, interdisciplinary research activities with high-level standards and relevant dates. The development of the salt centre of Excellence is directed at producing demand-driven salt technology innovation through three program focus: institutional development (absorptive sourcing capacity), research and development (research and development capacity), and dissemination of research results (disseminating capacity). This program has a performance indicator to measure academic and commercialization recognition work. The early step towards developing the salt centre of Excellence began in 2003 by developing the Centre for marine studies, focusing on research and study on salt Commodities of Excellence.

Furthermore, in 2016, the Centre for marine studies became an innovation development centre where salt was a unique selling proposition. The achievements of innovations and production performances on food and nonfood salt products resulted in the establishment of the salt centre of Excellence at the University of Trunojoyo Madura in 2017 by the Ministry of Research, technology, and higher education. The University of Trunojoyo Madura signed a memorandum of understanding with several salt companies (PT Garam Persero, PT Cheetam Garam

Indonesia, Shizukatsu Japan and PT Anta Tirta) for cooperation in developing the salt centre of Excellence. Such consortiums may deliver as collaboration for creating cooperative research and development centres that will contribute to the development of the Salt Center of Excellence. Dissemination of research results is an essential innovation condition resulting in the Center of Excellence. Food and nonfood salt production development was successfully prototyped at the University of Trunojoyo Madura salt laboratory, such as food salt (fortification salt) and nonfood salt (purified salt for spa, industrial, pharmaceutical and analytical beauty). The institute has a positive result in commercializing those products and is well received by the market. Further development of innovative products and technology includes scaling up the salt technology, enhancing salt production, teaching farms and creating a centre of quality control and assurance University of Trunojoyo Madura developed four hectares of salt research and development centre in Pamekasan District in 2018.

Program Innovation of a University of Trunojoyo Madura salt Centre of Excellence

The development of the salt centre of Excellence is directed at producing demand-driven salt technology innovation through three program focus: institutional development (absorptive sourcing capacity), research and development (research and development capacity), and dissemination of research results (disseminating capacity). In a salt centre of Excellence, absorptive sourcing capacity has performance indicators such as organizational governance, the ratio in human resources and research, infrastructure support, standardization, certification, networking and access information. Organizational management is essential in ensuring coordination and performance are working correctly. Work responsibilities are centralized into a working organizational subunit with responsibilities for delivering high-impact research and innovation results. The selection of the operating responsibility given by institutions depends on the organization member's expertise. The Salt Center of Excellence is a university institution that identically refers to scientific institutions whereby the members actively share

knowledge, insights, and experiences to implement the knowledge resulting in innovation. The depth and breadth of expertise and qualifications of their institution members are among the essential features of the salt centers of Excellence. The research and development activities are in keeping with the specialization of the institutional members and research activity is comparable with the number of human resources and research budget. One of the primary purposes of the salt center of Excellence was to research selected preference issues in food and nonfood salt production shared with institution members. The output goals are quantity and quality increase of scientific papers, publishing scientific papers in national and international journals and national and international research collaborations. For example, the salt center of Excellence has been focused on research on fortified, rich minerals, and solus per aqua (spa) salt; besides that, it produces products in various types (herbs, flowers, spices, marine natural ingredients extract and refinery). Herbs, flowers, spices and marine natural ingredients extract are selected due to having many beneficial effects on human health and can be perfectly blended with salt.

Several products from the salt center of Excellence as described on figure 1. Several scientific papers have been published in several journal publications, and also, the institution is successfully commercializing conducted research results. Other academic activity in the salt field, such as attending scientific seminars and conferences, participating in workshops, and another centre of excellence collaboration, has been done favourably. To implement the research results and enhance the quality and quantity of the products, the pilot plan and scale-up technology scale have been developed in salt centre of Excellence. The memorandum of understanding with several salt companies (PT Garam Persero, PT Cheetham Garam Indonesia, Shizukatsu Japan, and PT Anta Tirta) has been signed as a knowledge transfer between the institution and the industry. They were developing the four hectares salt pond in Pamekasan district aimed to scale up the salt technology that was prototyped at the institution laboratory. This salt pond is also expected to become a teaching farm for salt farmers to learn salt production technology and a teaching industry for developing new start-ups in salt production.



Figure 1. Several products from the salt center of Excellence
Source: Salt center of Excellence

In addition, the other goal of opening this salt pond is as a center for product performance indicators (quality control and quality assurance) and professional human resources in terms of salt production and processing. The construction of salt ponds is planned for two years, where the first year is focused on on-farm development while the second year is directed at off-farm development. Currently, the activities are underway on preparing a master plan, detailed land design engineering, land preparation, boundary dike construction, and a flow-down system. While in the second year (planned on 2020) salt houses, mini plant industries, warehouses, laboratories, and office buildings will be built. The future strategic planning of increasing the quality of the salt centre of Excellence:

1. Engineering scale-up for fortification and purification of salt both on-farm and off-farm
2. Development of industrial salt production and derivative product
3. Identification of marketing strategies and product introduction to the market
4. Product standardization
5. Dissemination of purification and fortification technology
6. Marketing and development of salt products and their derivatives

CONCLUSION AND SUGGESTION

The Centre of Excellence establishes three important performance guidelines (research and development, sourcing absorptive, and disseminating capacity) that can be used by any institution aspiring to pursue Centres of Excellence. The University of Trunojoyo Madura has developed the requirements for

developing the salt centre of Excellence in the last decade. Experiences involving creating and operating the salt centres of Excellence have been done on all performance indicators. A memorandum of understanding between several salt companies and the government has been signed to generate knowledge sharing between universities, industry and government. Many benefits for the institution (research and development and institutional development) and society (research dissemination, teaching farm and industry) have been felt during the existence of the salt centre of Excellence. Finally, based upon the work done on several guidelines, the University of Trunojoyo Madura is honourable as a salt centre of Excellence in Indonesia.

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