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Do the Government Support Salt Small and Medium Enterprises' Competitiveness?

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ABSTRACT

As a strategic commodity, salt in Indonesia faces the challenges of increasing imports rather than the capacity to produce locally, which SMEs almost produce. Therefore, the research explored the extent of the government's role in the competitiveness of salt SMEs. The research applied a descriptive method with a qualitative approach. For policy analysis, literature review, observation, and in-depth interviews were conducted to analyze the effectiveness of government policies using Regulatory Impact Assessment (RIA) and Cost-Benefit Analysis (CBA). The results find that at least six issues on the existing policies need concern. It consists of local people who are allowed to produce salt, the President Decree 69/1994 role and position, the salt consumption, which is mandatory to have SNI, the changeable salt classification, the other SNI than voluntary iodized consumption salt, and SNI for food-grade salt and caustic soda (chlor-alkali products). The situation shows the government's significant role in influencing the competitiveness of sustainable salt SMEs. Subsequently, the research proposes recommendations for the sustainable competitiveness of Small and Medium Enterprises (SMEs) on salt industry development, such as arranging new regulations or revising the existing regulation by integrating and harmonizing the interest cross-ministries, establishing the task force under the Coordinating Ministry for Economic Affairs or directly under the president to prepare the national salt industries development. The national salt classification needs to be considered as the applicable classification internationally. Salt is salt, so there is no need to differentiate it into local and imported salt. Therefore, the imported salt can be classified into food-grade and Chlor-Alkali products (CAP) salt, which should meet international standards and be mandatory.

Keywords: government policy, small and medium enterprises, competitiveness, salt industry

INTRODUCTION

Small Medium Enterprises (SMEs) have a primary role in creating job vacancies (Whang, 2019; Yazdanfar & Öhman, 2019) and life sources for people with low skills (Al Shukaili, Al Kindi, Kassim, Ahmed, & Al Hosni, 2022; Falentina & Resosudarmo, 2019; Journeault, Perron, & Vallières, 2021; Mubarik, Devadason, & Govindaraju, 2020; Sarmah, Saikia, & Tripathi, 2021). Consequently, governments pay attention to SMEs development (Cheong, Lee, & Weissmann, 2020; Das & Rangarajan, 2020; Kim & Park, 2021; Melnyk, Schoenherr, Verter, Evans, & Shanley, 2021; Mustapa & Mohamad, 2021; Ugwu-Oju, Onodugo, & Mbah, 2020; Xiang & Worthington, 2017; Xiang, Zhao, & Zhang, 2022; Yu, Peng, Shi, & Yang, 2022; Zheng, Li, & Liu, 2021). The same situation also happens in Indonesia. The government has serious attention toward SMEs that are convinced to be able to provide job vacancies and various economic activities in public (Sunoko, Saefuddin, Nanere, & Ratten, 2022).

As an archipelago country with 270 million population, the economic activities focus on the seashore, particularly on Java Island, the island with the largest population concentration (Sunoko et

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al., 2022). SMEs in Indonesia are more than 64,20 million, with Gross Domestic Product (GDP) from the manufacturing industry reaching 19,88%, followed by agro-industry (agriculture, forestry, and fishery) at 13,70% and wholesale and retail trading at 12,93%. However, the agro-industry contributes the highest sharing of job vacancies at 29,76% (Badan Pusat Statistik, 2021). The number of micro-enterprises has reached 98,68%, and its contribution to job vacancies can absorb 116,98 million people causing the government to have serious attention to how to improve the SMEs' competitiveness, particularly in micro-enterprises with a tendency to be susceptible enterprise and easy to change the business (Sunoko et al., 2022). However, the agro-industry also faces hard challenges like population growth and the industry that accelerate the process of land use change (Nasikh, Kamaludin, Narmaditya, Wibowo, & Febrianto, 2021; Yogi, Samudro, Soesilo, & Pratama, 2022). In addition, entrepreneurs are dominated by the age group over 50 years old.

From the external side, the free trade agreement causes fierce competition between local and imported products (Hussain & Shah, 2021; Jagdambe & Kannan, 2020; Nie, Li, Bi, & Li, 2022; Sunoko et al., 2022; Yanase & Tsubuku, 2022). One of the commodities that are sufficient to be a concern is salt. It is inseparable from Indonesia's comparative primacy, which has a beach line along 108,00 km. However, the salt still depends on the import. Salt needs in Indonesia are about 4,4 million tons, but the domestic salt productivity only contributed 2,5 million tons in 2020 (Kementerian Perdagangan, 2020).

The government realizes that Indonesia can accomplish the salt needs from domestic production based on the availability of the resources (Kementerian Kelautan dan Perikanan, 2016). However, the institution that has the responsibility to handle the enterprise competitiveness states that the import is conducted due to the quality of domestic salt produced by the solar salt farmers not achieving the standard required by the market, particularly for industry requirements (Komisi Pengawas Persaingan Usaha, 2021). The quality of salt produced by local farmers, the quantity that does not meet national needs, imported salt that tends to increase, and the price of imported salt that is relatively cheap with high quality make the national salt industry from upstream to downstream tend to be uncompetitive (Komisi Pengawas Persaingan Usaha, 2021). From the upstream side, salt farmers experience repeated problems yearly, namely the uncompetitive selling price of salt, especially during the main harvesting time. On the downstream side, processed salt by small and medium salt processing industries has difficulty competing with large-scale industries on processing iodized salt consumption (Sunoko et al., 2022). They generally have permits/quotas for importing salt, especially to meet the needs of the various food industries.

Based on the explanation, the research seeks to explore the extent of government intervention in encouraging the competitiveness of the national salt industry both on the upstream side of solar salt farmers and on the downstream side of small and medium salt processing industries. Moreover, the government's role in encouraging competitiveness improvement has already been attended to long ago. The government policy both at the center and regional levels influence entrepreneur competitiveness (Appiah, Osei, Selassie, & Osabutey, 2019; Bui, Pham, Pham, & Ta, 2021; Díez, Duval, & Maggi, 2022; Hervás-Oliver, Parrilli, Rodríguez-Pose, & Sempere-Ripoll, 2021; Joo & Min, 2022; Journeault et al., 2021; Njinyah, 2018; Panjaitan, Timur, & Sumiyana, 2021; Pulka, Ramli, & Mohamad, 2021; Xiang & Worthington, 2017; Zamani, Rahman, Fauzi, & Mohamed Yusof, 2022; Zide & Jokonya, 2022). Whether the policies issued by the government can increase the competitiveness of the national salt industry or vice versa is the focus of the research. As a result, the research is expected to provide options and strategies to develop a competitive national salt industry, especially in increasing the role of SMEs in salt production and processing.

METHODS

The research applies a descriptive method with a qualitative approach. Descriptive analysis is a tool to observe and elaborate on the phenomenon (Nassaji, 2015), with qualitative methods designed primarily to answer questions about how and why (Hamilton & Finley, 2020). For data collection based on Busetto, Wick, and Gumbinger (2020), primary and secondary data are collected through literature review or document study, observation, and in-depth interviews. Meanwhile, the quality of the qualitative research is also determined by selecting interviewees who have a relatively good understanding of the issues observed (Steccolini, 2022). For that purpose, a set of regulations is observed in line with the direct observation in salt production centers in three provinces: East Java, Central Java, and West Java.

For data collection and analysis, in-depth interviews are conducted with 30 salt farmers/suppliers in 3 provinces, 10 owners of small and medium salt processing manufacturers located in Pati Regency, Central Java which is the center of the small-medium salt processing industry, and 8 government officers. Those are the saturation for sample size (Hennink & Kaiser, 2022). Then, Regulatory Impact Assessment (RIA) is developed to evaluate the extent government policy influences entrepreneurs' competitiveness (Aquila et al., 2019; Carvalho, Rondon, & Marques, 2020; Koker, 2022; Shah, 2018) in the national salt industry. Cost-Benefit Analysis (CBA) is also conducted qualitatively (Alfon & Andrews, 1999; Carvalho et al., 2020).

RESULTS AND DISCUSSIONS

Indonesia has criteria to define Micro, Small, and Medium Enterprises (MSMEs). Regarding Indonesian

Government Regulation 7/2021, enterprises are grouped into micro, small, medium, and large enterprises based on the capital and sales results. Meanwhile, the industry is an economic activity that processes raw materials or utilizes resources to produce goods with added value or more utilization. Otherwise, regarding Indonesian Government Regulation 5/2021, the industry is distinguished into small, medium, and large industries. Table 1 shows the criteria for MSMEs in Indonesia.

For salt enterprises in Indonesia, it can be classified into salt-producing activity on land and salt processing industry activity, besides salt trading activity. As a commodity that does not have substitution, salt is considered a strategic commodity. The annual world salt is around 230 million, with 39% from solar salt (39%) and mining salt consisting of 26% rock salt and 35% from brines (Sedivy, 2008). India, Chile, and Australia are the major salt exporter, and the United States of America is the largest market. Meanwhile, Indonesia is in the top ten salt importers (International Trade Centre, 2020).

From the utilization side, salt is mostly used as the raw material of chlor-alkali products (CAP) and soda ash, reaching 61% (Sedivy, 2008). The rest is for human consumption (22%), road deicing (8%), and other uses (2%). Salt application in the industry is also used for textile bleaching, pulp and paper bleaching, disinfectant, water treatment, and other derivative products in the manufacture of organic and inorganic chemicals such as Polyvinyl Chloride (PVC), Ethylene Dichloride (EDC), Vinyl Chloride Monomer (VCM), and others (O'Brien, Bommaraju, & Hine, 2005). In Indonesia, salt is grouped as consumption salt and industry salt. Regarding Indonesian Minister of Industry Regulation 88/2014, the consumption of salt is classified into household salt and diet salt. Thus, the salt industry is divided into chemical, food, pharmacy, oil, water treatment, and skin tanning.

Almost all salt productions in Indonesia come from solar salt. It is called solar salt because the production process depends on solar, especially for the evaporation process (Sunoko et al., 2022). In Indonesia, salt is produced by solar salt farmers and PT Garam (a state company). One of the solar salt pond layouts is as shown in Figure 1.

Generally, seawater is pumped or flowed into a trapped pool called a seawater tank or *bozem* (reservoir). After the deposition is conducted to reduce impurity, seawater is evaporated at the selection pool that has a 40%-80% range of salt area. This evaporation is conducted to add the density of saltwater. Next, old saltwater (brines) is collected in the old saltwater storage pool (brines tank). Old water (brines) with the 18-21 Be concentration has flowed into crystallization table plots. In approximately 5 to 10 days, the salt crystal will be formed, and it can be harvested. The produced solar salts are drained in a bund to reduce the water contents. Afterward, the salt is sold to salt sellers or the small-medium salt processing industry.

Table 1 Criteria of MSMEs in Indonesia

Criteria of enterprises	Capital (excluding land & building) in IDR billion	Annual turnover in IDR billion
Micro	≤ 1	≤ 2
Small	> 1 to ≤ 5	> 2 to ≤ 15
Medium	> 5 to ≤ 10	> 15 to ≤ 15

(Source: Government Regulation 7/2021)

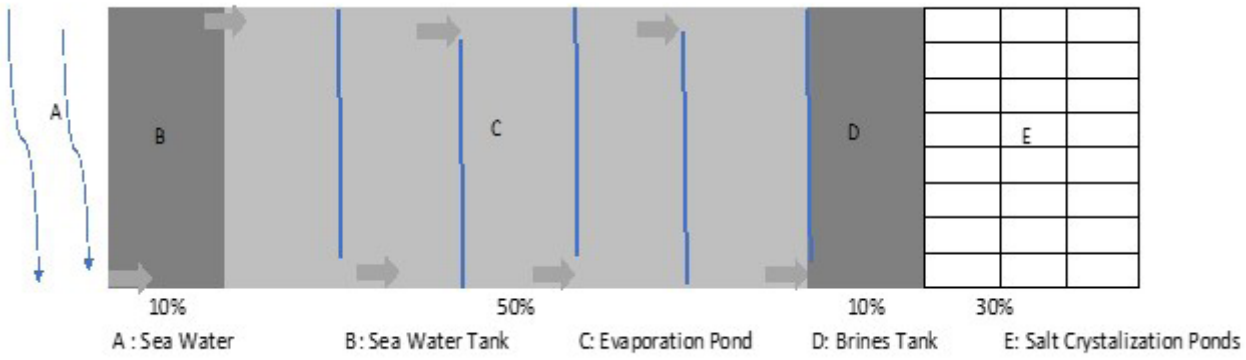

Figure 1 One of Layout of Solar Salt Pond Model

In the salt processing factory, generally, the salt is processed to accomplish the iodine salt consumption needs, and the rest is used for fish salting, animal feed mix, and agriculture fertilizer ingredients. Then, the fraction is absorbed by the industry that requires salt with low Natrium chloride (NaCl) content compared to CAP industry needs. In the salt processing factory, salt is washed. Then, the salt is ground following the appointed mesh size and drained to be processed with iodine addition. For brick salt production, it is molded into a specific size. Next, the fine salt/brick salt is heated to obtain the minimum water content following the expected standard. The heated salt is cooled and ready to be packed in the upcoming process. The solar salt produced by solar salt farmers is generally distinguished into the first quality (K1), second quality (K2), and third quality (K3) based on the color/cleanliness factor, hardness, and sodium (NaCl) content.

The price difference between qualities is around Rp50 to Rp100. The applicable price at the market is the price of a sack of salt in size of 50 kg Freight on a Truck (FOT) in the factory. Meanwhile, the price of first quality (K1) salt in Bandung is Rp1.050 per kg pack on 50 kg/sack. So, the sale price at the solar salt farmer level is the price after reducing the sack price, land transportation cost, load on the truck cost, delivery cost, and others.

The salt from land is loaded by boat, bicycle, and motorcycle into the village road. If the axle or semi-trailer truck cannot enter the village road, the salt is trans-shipped using a pick-up truck. Usually, an axle or semi-trailer truck can load 25−40 tons of salt. Therefore, the solar salt pond location determines the price accepted by sea salt farmers. The major solar salt-producing region in East Java spread in Madura Island (Sampang, Pamekasan, and Sumenep), and the fraction is produced in Gresik, Pasuruan, Probolinggo, and Tuban. The next major producer is Central Java (Pati and Rembang), and the fraction is produced in Demak, Jepara, and Brebes. Meanwhile, West Java is in the third position (Indramayu and Cirebon), and the fraction is produced in Karawang. The primary markets sequentially are West Java, North Sumatera, West Sumatera, Banten, South Sumatera, Papua, Jakarta, DIY, and other provinces, as shown in Figure 2 (Badan Pusat Statistik, 2014).

The location of solar salt ponds influences the price that solar salt farmers accept from different locations. Solar salt farmers in West Java will get higher prices than those in Central Java and East Java/ Madura due to their close location to the market. Thus, to compete in the market, solar salt farmers in Madura consistently maintain the quality of produced salt to obtain a better sale price. Besides, the labor and other costs are pressed as minimum as possible.

The government's concern for the industrial sector can be seen from the five-year national development plan (Repelita I) in 1969-1973. The government has started to focus on agriculture industrial development, including the clothing industry, to decrease the dependency on imported stuff. Then, following the Iodine Deficiency Disorder (IDD) issue that is a recommendation in UNICEF-WHO Joint Committee on Health Policy Special Session 1994, salt is used for human and animal consumption mixed with iodine, especially for the countries with IDD as a public health problem. The iodine number needed by the body is 150 µg iodine/day for adults and 220–290 µg/day for pregnant and lactating women. Salt is also used as iodine fortification media based on its strategic role that everyone consumes salt with a stable use rate.

Figure 2 Map of Main Solar Salt Producers and Markets

Besides, iodized technology is relatively convenient and affordable. However, more importantly, adding iodized salt to processed foods does not affect the color, taste, and odor. Moreover, the iodine existence in salt is convenient to be monitored (World Health Organization, 2014).

Following this situation, the government has released President Decree number 69/1994 regarding the procurement of iodized salt. The tradable salt for human and cattle consumption requirements, fish salting, or additional food industry ingredients are the iodized salt that meets the Indonesia National Standard (Standar Nasional Indonesia (SNI)). This presidential decree is considered the beginning of Indonesia's salt processing industry development.

As a chain system business, the rules related to the salt industry cannot be seen or evaluated partially. The existing rules must be grouped to see the role and effect on the salt industry in Indonesia. Emergency Law 25/1957 is considered the opened door of the salt processing business monopolized by PT Garam. Furthermore, President Decree 69/1994 discloses the growth and development opportunity for the salt processing manufacturing industry in the downstream sector.

Moreover, this regulation emphasizes siding with the development of the salt processing industry (downstream) in Indonesia. From the side of the government agencies that are mandated to salt matters, there are at least three ministries that are mandated/ directly related to the national salt industry. The Ministry of Marine Affairs and Fisheries is obligated to improve the quality and quantity of national salt production. Meanwhile, the Ministry of Industries manages the imported salt utilization for the industry and provides the business companion and affirmation of national salt processing industry capacity. Then, the Ministry of Industries manages the imported salt utilization for the industry and provides the business companion and affirmation of national salt processing industry capacity. On the other hand, The Ministry of Trade manages both domestic and imported salt commerce.

The reviewed regulations related to salt industry development from upstream to downstream can be identified in Table 2 (see Appendices). It provides the description that the other agency or policy needs to establish to synchronize programs and policies from these three ministries. According to the result of the review, at least six issues on the existing policies need a concern, such as local people who are allowed to produce salt, the President Decree 69/1994 role and position, the consumption of salt mandatory to have SNI, the changeable salt classification, the other SNI than voluntary iodized consumption salt, and SNI for food-grade salt and caustic soda.

State regulations can produce both 'good' and 'bad'. Regulation can also promote economic and social welfare and lead to significant economic and social costs (Kirkpatrick & Parker, 2004). Hence, RIA provides a methodical examination of the expenses and advantages of a proposed new regulation and an assessment of the presentation of existing regulation (Kirkpatrick & Parker, 2004). Then, it results in new or modified regulations with more improvement (Carroll, 2010). Furthermore, RIA can be adopted in three areas, including building an effective regulatory management system in the new regulation formulation, improving the quality of new regulations, and upgrading the quality of existing regulations (Kirkpatrick & Parker, 2004).

Moreover, according to OECD (2022), there is a checklist containing ten questions for regulatory decisions. One is "Do the benefits of regulation justify the costs?" Therefore, the CBA is presented in qualitative form upon the regulations related to six existing policies that are successfully conducted by the synthesis.

CBA in Table 3 (see Appendices) shows that the government provides a business opportunity as wide as possible for local people in the salt processing business. It is followed by various programs from the Ministry of Marine Affairs and Fisheries as mandated by Law 7/2016. It provides low-interest business loan facilities, salt production and processing facilities and repairs primary and supports infrastructure in salt production centers.

Even though the government is not really successful in developing the appropriate technology for discovering High Density Polyethylene (HDPE) plastic use as a pond base to accelerate evaporation, and the salt produced is white and more precise. On the downstream side, the government also follows the iodine importance for the public by providing an opportunity for the iodized salt processing industry to grow and develop by mandating the consumption of salt for humans and cattle to have iodine content.

However, the published regulations later, especially the downstream ones, such as those published by the Ministry of Industries and Ministry of Trade, potentially cause price stress for the sea salt farmer's level. When the price accepted by sea salt farmers is only 40−60% of the processing factory purchase price, the sea salt farmers' price will be stressed. The importation cannot be appropriately calculated, such as how much the industrial salt needs with the specification cannot be fulfilled by the salt produced by sea salt farmers. If the allegation of imported salt leaking into the market of iodized consumption salt is true, it will be more pressing for the selling price of salt produced by salt farmers. The salt classification into consumption salt and industrial salt seemly degrades the sea salt farmers and PT Garam's roles in accomplishing the national needs. It is asserted that the salt produced by sea salt farmers is only helpful and utilized for iodized consumption salt, and the resulting quality cannot fulfill the industry's needs.

On the other side, not all industries require high-specification salt (high NaCl content and low impurity). The national salt processing industry is only developed into the iodized consumption salt processing

industry. Only a few processing industries enter processed salt to fulfil the industrial salt. When viewed from the business terms and classification to import, this condition is inseparable from the convenience of importation activity. The salt classified into consumption salt, oil salt, and industrial salt changes into consumption salt and industrial salt following the Ministry of Industry Regulation Number 88/2014. The iodized consumption salt is obligated to get SNI causing the rising operational cost to manage the certification and license, such as ISO 9001 fulfilment, halal certification, SNI certification, brand license, and BPOM's Certificate of Free Sale (CFS).

Meanwhile, the importers of the food-grade industry and caustic soda do not get the strict treatment as the iodized consumption salt. It is suspected to be the cause of the upstream and downstream of the national salt industries' slump. The minimum standard for caustic soda and food grade is not obligated to enclose the COA with the unobligated national standard.

Based on the analysis, the government needs to reevaluate and arrange new regulations or revise the existing regulation by integrating and harmonizing the interest of cross-ministries. The government's seriousness in improving the competitiveness of national salt industries from the upstream to downstream can be started by formatting the task force under the Coordinating Ministry for Economic Affairs or directly under the president. This task force formation is important in preparing the road map of the national salt industries' cross-ministries and agencies. Then, the ministries and agencies related to their roles and authorities can follow up by publishing the policies following the road map. Moreover, the salt classification into consumption and industrial salt worsens the national salt industries. The national salt classification needs to be considered as the applicable classification internationally. Salt is salt. There is no need to differentiate it into local and international salt. Therefore, the imported salt can be classified into food-grade salt and CAP salt as these salts require to meet the SNI of food-grade and CAP salt or the international standard. Thus, the imported salt is obligated to be accompanied by COA. Then, President Decree 69/1994 needs to be enforced with its law consequences upon the implementation violations. These recommendations are desired to repair the salt management from the upstream to downstream and improve the competitiveness of sea salt farmers and national salt processors.

CONCLUSIONS

The government plays a significant role in realizing a competitive and sustainable national salt industry business. This role can be seen from the impact of government policies. A comprehensive policy impact analysis by linking related policies from upstream to downstream can adequately challenge the development of the national salt industry from a regulatory perspective. The research finds that existing regulations tend to be less mutually reinforcing, especially in encouraging the competitiveness of SMEs in both the upstream of salt production business and the downstream of the salt processing industry.

The research proposes recommendations for SMEs on salt industry development, such as arranging new regulations or revising the existing regulation by integrating and harmonizing the interest cross-ministries and establishing the task force under the Coordinating Ministry for Economic Affairs to prepare the national salt industries development. Then, the national salt classification needs to be considered as the applicable classification internationally. Salt is salt, so it is no need to differentiate it into local and imported salt. Therefore, the imported salt can be classified into food-grade and CAP salt as these salts are required to meet the SNI of food-grade and CAP salt or the international standard. Thus, the imported salt obligates to be accompanied by a COA. Then, President Decree 69/1994 needs to be enforced with its law consequences upon the implementation violations.

Finally, the research results allow researchers, policymakers, and the government to comprehensively view existing policies from upstream to downstream in a particular case. The results show that the number of regulations that need to be reviewed includes establishing a work unit or task force that functions as coordination across ministries and agencies to increase the competitiveness and sustainability of the national salt industry, particularly for SMEs. Nevertheless, the research uses only policy approaches to determine the competitiveness in Indonesian salt industry. Hence, additional strategies should be developed to get a comprehensive view. As a result, further research is required to expand other aspects based on various theories, such as Romer's endogenous growth or Porter's Diamond model.

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APPENDICES

Table 2 Review of Regulations Related to the Salt Industry

No.	Regulations/Policies	Year	Related to Substances of Regulation	Review
1	Emergency Law 25/1957	1957	Besides PT Garam (company-owned state on salt business), local people can produce salt on a farm.	Local people get an opportunity to produce salt that PT Garam has previously monopolized.
2	President Decree 69/1994	1994	The tradable salt for consumption or cattle needs, fish salting, and industrial auxiliary material is iodized salt that meets the SNI.	The salt processing industry is developed. The salt from salt farmers must be processed before being used as raw/industrial auxiliary materials.
3	Minister of Industry Decree 29/1995	1995	An industry that produces the consumption of salt shall implement SNI.	The SNI obligation affects the increase of production fees toward the salt processing industry for iodized consumption salt. Besides the requirement to add the iodine into the processed salt, the entrepreneur expenses a considerable cost to meet the ISO 9001-based processing industry standard regarding the quality management system and the license and certification fee involving brand certification, halal certification, SNI certification, and Certification of Free Sales (CFS) from National Agency of Drug and Food Control (Badan Pengawas Obat dan Makanan (BPOM)). Meanwhile, the salt processing industry that produces salt for food and drink factory needs and the industries that use the salt besides iodized salt consumption do not require the SNI implementation obligation.
4	Minister of Industry Regulation 134/2009	2009	The salt application is classified into three types: consumption, oil, and industrial. The consumption salt is divided into household salt and food-grade salt (NaCl 94−97% and iodized) and fish salting salt (NaCl 85−95%, iodized), oil and other industries salt (NaCl 90−97%, non-iodized) and industrial salt divided into the chlor-alkali product (CAP) (NaCl > 98,5%) and salt for pharmacy (NaCl > 99,8%).	The national salt produced by PT Garam and solar salt farmers can accomplish the oil and other industries' salt requirements.
5	Minister of Industry Regulation 88/2014	2014	Salt is classified into two types, namely consumption and industrial salt. Consumption salt is divided into household salt (minimum 94% NaCl and iodized) and diet salt (minimum 60% NaCl and iodized). Industry salt is used for chemical industry/CAP (minimum 96% NaCl), food-grade (min. 97% NaCl iodized and non-iodized), pharmacy (99,8% NaCl), oil (min 95% NaCl), skin tanning (min 85% NaCl) and water treatment (min 85% NaCl in dry base).	A category of industrial salt needs can be fulfilled by national production even without further processing or with simple processing, such as salt for skin tanning and water treatment. However, this group is involved in an industry where its raw material needs can be imported.
6	Law 7/2016	2016	It is about the assistance of salt business facilities and infrastructure.	It can help to improve the quality and quantity of the national salt.
7	The Indonesian National Standard (SNI 3556:2016)	2016	It is about the minimum NaCl content is 94% in the dry base.	SNI for iodized consumption salt is mandatory. It has a consequence of additional production fee that has to be paid by the entrepreneurs, including the implementation of quality management (ISO 9001) and certification and license fees involving a brand license, halal certification, SNI certification, CFS, and BPOM.

No.	Regulations/Policies	Year	Related to Substances of Regulation	Review
8	SNI 8207:2016	2016	Food grade salt is iodized and non-iodized salt used in the food raw material industry, with a 97% NaCl content at a minimum (dry base).	This standard is voluntary. Thus, entrepreneurs are more convenient in fulfilling the food-grade industry than salt processors for iodized salt consumption. Besides, the iodine application that is not mandatory is contrary to President Decree 69/1994.
9	SNI 8209:2016	2016	The iodized liquid consumption salt is a liquid food product, and its main components are Natrium Chloride and water with the iodine addition; NaCl 23−25%.	This standard is voluntary. Thus, salt entrepreneurs for liquid consumption are more convenient than those for iodized consumption salt. Besides, iodine use is unobligated and contrary to President Decree 69/1994. The same matter is applied to low sodium consumption salt (low Na+) circulating in the market, so it does not require SNI.
10	Government Regulation 8/2018	2018	The Ministry of Trade publishes the permission of imported salt for raw and industrial auxiliary materials with the recommendation of imported numbers by the Ministry of Industry.	The Ministry of Marine Affairs and Fisheries (which empower salt farmers) is not involved in determining the industrial salt import quota. In contrast, the number of published quota recommendations can exceed the actual needs if it ignores the national salt stock availability. The national-produced salt is considered low quality and cannot fulfill industrial needs. Practically, the nationally produced salt can be absorbed by animal feed factories, food and drink factories, oil, water treatment, fertilizer, fish salting, and other industries that “accept” the salt with less than 97% NaCl content. This condition may also affect the undeveloped salt processing/impurity industries because all the salt needs can be fulfilled by imported salt.
11	Minister of Industry Regulation 34/2018	2018	The imported salt has a NaCl content of more than 97-99,9% (dry base).	This regulation can limit the type/quality of imported salt. However, this regulation does not manage further provisions, such as the obligation to attach the Certificate of Analysis (COA) and the penalty or law enforcement for violations of the imported salt with NaCl content less than 97%.
12	Government Regulation 8/2018	2018	The Ministry of Industry publishes recommendations for raw and industrial auxiliary materials.	The Ministry of Industry has the authority to manage the imported raw material from the salt that solar salt farmers and salt processing industries cannot produce.
13	Minister of Trade Regulation 63/2019	2019	The salt for raw and industrial auxiliary material fulfillment has 97% NaCl and less than 100% of NaCl or sodium chloride (dry base).	This regulation can limit the type of imported salt. However, this regulation does not manage the further provision related to the obligation to attach the COA and the penalty for the regulation violation if the NaCl content is less than the provision. Besides, there is no explanation for “other uses” of salt material for food grade.
14	SNI 0303:2021	2021	The salt quality for the caustic soda industry is 96% NaCl at minimum (wet base)	The determined standard is lower than the internationally acceptable standard. The CAP industry needs raw salt with high NaCl content and low impurity rate. The standardization is voluntary, and the low minimum standard is potential for the use of the CAP industry, like imported salt utilized for industrial needs outside the CAP.

Table 3 Cost-Benefit Analysis (CBA) of Solar Salt Industry Development

No.	Existing Policies	Benefit (Positive Impact)	Cost (Negative Impact)
1	Local people can produce salt.	National salt production can improve and decrease import dependency.	Salt production without the supporting technology to produce high-quality salt is difficult to fulfill industrial needs as it requires salt as their high-specification raw material. The market is limited (salt consumption) and causes unhealthy price competition and salt-pressed selling prices.
2	Based on President Decree 69/1994, the tradable salt for human and cattle consumption, fish salting, and food industrial raw auxiliary materials is iodized salt that meets SNI.	The salt processing industries will be developed.	The salt user community gets a higher price than non-iodized fortification salt.
3	The salt consumption is mandated to have SNI.	Local people get the iodized consumption salt that has the national standard. The minimum standard of salt quality (SNI of consumption salt) can be accomplished by local-produced salt. Then, the iodized consumption salt processing industries can absorb the national salt (produced by salt farmers).	The operational cost of salt processing factories increases. There are required minimum standard fulfillment costs and additional license/other certifications fees.
4	The change of salt classification.	The newest classification from the Ministry of Industry classifies salt into two groups; consumption salt and industrial salt. As a result, all the salt-user industries which are classified into industrial salt can conduct the importation.	The lower quality of local salt than imported salt and the lower price of imported salt make local salt lose the competition and make it challenging to fulfill industrial needs.
5	The SNI salt, other than consumption salt, is voluntary.	The importers can buy salt with low specifications because no regulation requires a minimum limit for the quality of imported salt and the violation penalty.	The locally produced salt can lose the market for the industry that requires low NaCl content, and the market competition for consumption salt is strict, causing the low price of local salt, including the non-iodized food grade salt.
6	The SNI salt for the caustic soda and food grade.	The minimum standard is lower than the international/other standards. This condition results from the entry of imported salt with various specification qualities. The national standard for salt is still voluntary. Thus, the salt user industries can choose the imported salt specification following their needs.	Locally produced salt is hard to get into food grade and industrial markets, especially for fulfilling the industrial needs that require the salt under national standard specifications because the imported salt can fulfill it. Imported salt for food-grade industrial needs is allowed to be processed and free to be resold to require the food and drink industrial needs. The potency of the imported salt absorption to fulfill the iodized consumption salt needs follows President Decree 69/1994 because the food grade industry is categorized as an industrial salt group.