

SALT BUSINESS GROWTH IN INDONESIA CASE: 4 DISTRICTS IN INDONESIA

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ABSTRACT

This paper aims to measure and forecast salt price based on cost and price rationality. The research employed quantitative method with Ordinary Least Square Model for measuring the rationality of salt and ordinary least square for forecasting salt cost and price in order to describe salt cost and price behaviour. Although the demand for salt increases every year, the abundant and cheap raw materials as well as the growth of the domestic production of salt business do not correlate positively with the growth of demand. We focus on measuring and forecasting price rationality as a proxy for the salt business prospects in Indonesia. We found that salt price formed at the time of the study was higher than the normal one. This is contrary to the motive theory of entrepreneurs, making the salt business in Indonesia remain a mystery.

1. INTRODUCTION

Indonesia is the largest archipelagic country in the world. There are around 17,000 islands spreading throughout Indonesia. Around 13,466 islands have been recorded and there are still around 3,000 which do not have names or coordinates so that Indonesia. As a maritime country, Indonesia has a great potential in salt industry. Salt is one of the resources of marine wealth that is beneficial to human life. Salt is known as a flavoring ingredient by almost all people. In addition, salt also has other uses, such as for health, food industry and many other benefits.

Table 1.1 :
Development of Needs, Production and Imports of Salt in Indonesia from 2009-2016

Year	Necessary (Ton)	Production (Ton)	Imports (Ton)
2009	2,960,250	1,371,000	1,589,250
2010	3,003,550	1,230,600	1,772,950
2011	3,228,750	1,113,118	2,115,632
2012	3,270,086	2,071,601	1,198,485
2013	3,554,670	1,087,715	2,466,955
2014	3,611,990	2,192,168	1,419,822
2015	3,883,473	1,273,839	2,609,634
2016	4,001,029	1,373,821	2,627,208
Average	3,439,225	1,464,233	1,974,992

Source: Marine and Fisheries Ministry of Indonesia (2017)

Even though the demand for salt

increases every year, the amount of domestic production is always below imports. The source of abundant raw materials and the growth of the domestic production of salt business do not correlate positively with the growth of the demand. This is the mystery of salt business in Indonesia.

Usually, business growth does not have a positive correlation with the demand because of non-profitable or not sustainable business, or because of monopoly or policy. Having many possibilities to answer the mystery, we start from the entrepreneur motive theory by Richard Cartilon. The primary motive of entrepreneurs is profit. So, we started analysing salt price and cost rationality to identify the business prospect. The salt business prospect can attract local and foreign investors in salt business.

Keynes argued the investment is function of interest rate and expectation (keynes,2018 : 38). Business prospect is an expectation factor based on the motive of entrepreneurs. When interest rate decreases , demand increases and businesses have prospect in the future based on Keynes and Richard Cartilon's theory. The growth of business must have a positive correlation with demand growth. Thus, we focus on measuring and forecasting price and cost rationality.

2. LITERATURE REVIEW

Price rigidity against demand does not always apply to all goods in the market. In other

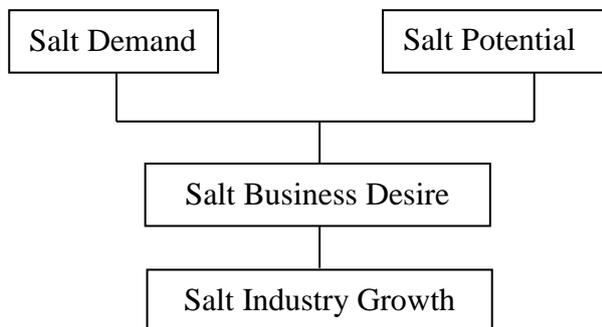
words, not all goods have price and demand rigidity (Levy,et al., 2019). Salt is one of goods that does not have price rigidity. Salt has become a cultured commodity in the society and the use of salt in food is inherent in people's lives (Mørk.,et al,2019). Salt remains healthy in consumption, with the World Health organization's recommendation of no more than 5 grams per day per individual (Cappuccio et al., 2019 ; Zhou et al., 2019). Salt is the main ingredient in salting fish. So, the demand for salted fish has increased the demand for salt (Gordon,2018). The various uses of salt makes it a commodity with global demand (Food and Agriculture Organization of the United Nations,2018:157; Linford,J.2018 :157).

Entrepreneurs are a key factor driving industrial growth and social change (Klofsten,et al,2019). Desire is the main determinant of the intention of entrepreneurial goals (Esfandiar,et al.,2019).

3. THEORY

Entrepreneurship is part of the driver of industrial growth and production growth (Baptista & Leitão,2015:24). Entrepreneurship itself is driven by entrepreneurial motives; entrepreneurial motives are creating profits (Berlin, 2015 :130 ; Nielsen, 2016 : 13). Entrepreneurs are maximum profit seekers (Cantillon,2015:19). The encouragement of entrepreneurs to do business is the potential market demand supported by investment function (Zakaria & Kaushal,2018 : 94). Investment function comprises interest rates and profit expectations (Keyness,2018 :184).

FRAMEWORK



Hypotheses :

H₀ : Salt Industry Growth has a positive correlation with Salt demand and Salt Potential

Profit

H₁ : Salt Industry Growth has a negative correlation with Salt demand and Salt Potential Profit

When H₀ is accepted, so the result is supporting the theory when H₁ is accepted approved The research results is not supporting the theory

4. RESEARCH METHOD

This research used quantitative method with ordinary least square model to measure salt potential profit proxies by salt price minus salt cost production; the result is then multiplied by salt demand (as independent variable) impact on salt industry growth proxies by domestic salt production (as dependent variable). The research also aims to identify positive and negative correlations of each independent variable to the dependent variable. This paper also use ordinary least square forecasting to forecast the correlation between dependent and independent variable and measuring price rationality. We used secondary data from World Bank for calculating aggregate data and interview data for calculating per entrepreneur in 4 districts in Indonesia to reveal the hidden factor of salt business mystery in Indonesia. We mixed secondary data and our primary data to calculate and measure price rationality and salt business prospects.

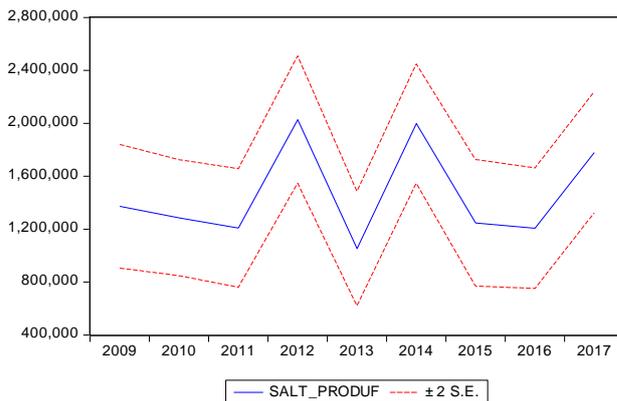
5. FINDINGS

OLS estimation result with R-squared 0.857965 :

$$\begin{aligned}
 \text{SALT_PRODUCTION} &= 431741.736261 + \\
 &0.897339875071 * \text{SALT_DEMAND} - \\
 &0.910615844693 * \text{SALT_IMPORT} - \\
 &2.44008131538e \\
 &07 * \text{SALT_POTENTIAL_PROFIT}
 \end{aligned}$$

Based on OLS estimation, we found that salt demand has a positive correlation with salt production and a negative correlation with salt import and salt potential profit. This indicates that the local industry does not grow with the positive correlation of salt demand. Not only does salt import become the barrier of local industry growth technology inclusion and salt local production process can be the variables affecting the salt industry mystery in Indonesia.

OLS Forecast result:



From the forecast results, there are production fluctuations with peak production in 2012 and 2014 again falling in 2015 and the recovery of Indonesia's local salt production in 2017 and a peak saturation limit in 2018 and a possible decline in production in 2019.

Based on the R squared estimation, Ordinary Least Square indicates that the influence of imports, the potential profit and demand for salt are significant enough for local salt production. There are pull and push between differences in production processes and domestic technology with the country of origin of salt imports so that there is a difference in production costs between domestic production and imported salt production. Imported salt pressure and expectations of profits of investors in the domestic salt industry have a considerable influence because the scale of the economy is very influential in production efficiency. The oddity in the Indonesian salt industry is the direction of the negative relationship between local salt production and the potential of the salt business in Indonesia. An in-depth study is needed to uncover the mystery of the salt business in Indonesia.

CONCLUSION

The direction of the relationship between domestic salt production and salt demand in Indonesia still aligns with the theory. However, the peculiarity of the direction relationship between domestic salt production and the salt business potential is a question and a dark side of the Indonesian salt business.

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