

EXECUTIVE SUMMARY

Silica or silica dioxide (SiO_2) is a compound commonly found in mineral called quartz sand which the sand itself is the result of weathering rocks containing the primary minerals quartz and *feldspar*. With the development of technology, silica can be used in various markets and industries, as in the tire industry, rubber, glass, cement, concrete, ceramics, textiles, paper, cosmetics, electronics, paint, film, toothpaste, and much more.

In Indonesia, the utilization of industrial production capacity of silica produced locally is not maximized, which is only 50% of the maximum capacity. This is caused by the fact that the current local silica product does not meet market required specification which is purity above 90% and the local silica is mostly below specification.

In line with the development of manufacturing technology of silica, the search for alternative raw materials of silica is also emerging. Recently, IPB has been utilizing rice husk to be used as raw materials for silica production. Based on the results of these studies, the difficulties faced by the silica-producing industry in Indonesia due to limitations in technology and capital can be answered by establishing manufacturing plant that utilizes rice husk as raw material to produce silica powder with a cheaper cost.

In addition, waste currently produced by rice mill in the form of rice husk has not been exploited by farmers. The amount of rice husk is 20% of the rice mill. As we know, Indonesia is one of the largest rice producing country in the world. Even the amount of rice produced from year to year increases leading to the increase of rice husk waste. Looking at the factors above, a business opportunity was identified to establish the first Indonesian company focusing in manufacturing Silica Powder from Rice Husk named Silica Company of Indonesia (SCI).

After doing some market research and segmentation, we set the ceramic tile industry as a target market, because the ceramic tile industry has the highest growth potential. Currently, the ceramic tile industry in Indonesia produces 320 million m² per year. With a ceramic density of 15 kg/m², the amount of ceramics produced annually in Indonesia is 144 million kg. SCI is targeting a customer share of 20% so that the target customer sales per year amounted to 1280 tons.

SCI needs to have a competitive advantage in order to win market. The first competitive advantage comes in terms of product quality where SCI silica powder reaches 99% with 1% impurity of K₂O. In addition, SCI is also located in Karawang, making SCI to have advantage in location compared to other company. This will also save the customers' time and cost when buying silica powder from SCI.

However, SCI also faces challenge to penetrate the target market. Some of the challenges are the high capital requirements, size of company competitors, switching costs, and brand identity of the SCI itself.

Within this business plan, we attempt to do financial projections for the next ten years where in 2016 or the 5th year, SCI has experienced break-even. The capital required to establish the SCI in 2011 amounted to Rp 8 billion in which 51% of our funding comes from the founder of the company and the remainder coming from investors and suppliers. Then in 2015, capital is added to purchase machinery to increase production capacity by using the exact same ratio (51-49). This is done with the consideration that the company's founders still wish to have the main control of SCI.

After conducting feasibility studies, SCI has a positive NPV and MIRR is equal to IDR 28.334.264.021 and 30.02% taking into account the inflation rate of 6% and the cost of capital or weighted average cost of capital amounting to 13.825%.

On the other hand, SCI also contributed to society by not forgetting the social return on investment. Although it cannot be assessed quantitatively, but SCI has reduced environmental pollution by using a rice mill waste, improved the living standard of farmers by buying rice husk from them, and created jobs to the community around the factory.

Looking at the feasibility analysis of SCI, we believe that the SCI is a promising business opportunity in Indonesia that is also focusing on the social aspect of the business.

