Title : A Study of Market Demand for Thai Cement during 1992 - 1996

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This Thesis addresses itself to the market demand of Thai cement. Cement industry is very important for national economic and social development, covering such aspects as housing, public utilities, commercial or office building, industrial plant and government and private building. Initially, There was a scarcity of cement due to a replacement of wood by cement because of high price of wood, especially since B.E. 2531. The betterment of the economy vis à vis a government support in terms of credit for house ownership helped boosting up a demand for cement beyond the production within the country.

This research is aimed at the study on the structure of cement industry in Thailand both in terms of production and marketing which serve as the determinants for demand for cement utilization. In addition, a model for projection

of market demand for future Thai cement has been constructed in order to help prevent the scarcity of cement which might occur in the years to come.

This study is based on the secondary data during B.E. 2531 - 2534. The market demand for cement was analyzed in terms quantitative and descriptive approaches relative to the demand for mixed and Portland cements via multiple regression and the market demand for cement during B.E. 2535 - 2539. Besides, this study is based on the primary date utilizing questionnaire mailing to the middle management of the Cholpratarn Cement Co.and a total of questionnaires have been returned.

It was found from an analysis of the structure of the cement industry that cement industry in Thailand is based on a market with less competitors. The Thai Cement Co. is the company which has the largest market share. It is also a leader in price fixing and in production of the merchandises under the government control. At present the production of cement is lower than the market demand. But in the near future the cement production will surpass the market demand and be able of exporting to foreign countries.

As for the multiple regression in Equation No.2, by treating the demand for cement within the country as a dependent variable, and government and private construction as independent variables, it was found that both the government and private constructions are able to jointly explain the variation (variance) of the dependent

variable at a rate of 79.12 %. The above computed multiple regression is as follows:

$$y = 465950.36957 + 372.87057\ x_1 - 6.12473\ x_2$$

Where the dependent variable is the demand for cement within the country, independent variable x_1 is the private contruction alongside with variable x_2, the government construction.

With regard to the multiple regression in Equation No.3,by assigning the total sale volume of the cement within the country as a dependent variable and the private and government constructions as independent variables, it was found that both independent variables are able to jointly explain the variation/variance of the dependent variable at a rate of 81.77 %. The abouve computed multiple regression is as follows :

$$y = 254096.86732 + 371.82695\ x_1 - 5.22044\ x_2$$

Where the total sale of cement within the country serves as the dependent variable; private and government constructions as independent variables.

The multiple regression in Equation No.4 assigns the demand for cement within the country as dependent variable; and private contruction, production of cement within the country, and government construction as independent

variables. Upon computation it was found that the three independent variables are able to jointly explain the variance of the dependent variable at a rate of 99.19 %.

The above computed multiple regression is as follows:

$$y = -446480.8850 + 7.26351\ x_1 + 1.04212\ x_2 - 62071\ x_3$$

Where the demand for cement within the country serves as the dependent variables; the private construction, the production of cement and the government construction as independent variables.

The multiple regression in Equation No.5 assigns the production of cement within the country as the dependent variable and the private and public constructions as independent variables. Upon computation, it was found that the two independent variables are able to jointly explain the variation/variance of the dependent variable at a rate of 80.43 %. The said computed multiple regression is as follows.

$$y = 875551.03026 + 350.82932\ x_1 - 5.28154\ x_2$$

Whereas the dependent variable is the production of cement within the country and the independent variables are the private and public constructions.

From the study of the correlation matrix in order to find the coefficient relationships of the demand for

cement within the country, the sale volume of cement within the country, the production of cement, the governement and private constructions variables, it was found that :

(1) The government construction variable is related to the demand for cement within the country at a rate of .516;

(2) The government construction is related to the sale volume of cement, within the country at a rate of .590;

(3) The government construction is related to the production of cement within the country at a rate of .559;

The above coefficient relationships are rather low. However, the relationships between other pairs of variables are considerably high with a statistical significance of at least .05, as will be seen below :

(a) The relationship between the demand for cement within the country and the sale volume of cement within the country has a coefficient value of .993;

(b) The relationship between the demand for cement within the country and the production of cement within the country has a coefficient value of .995;

(c) The relationship between the demand for cement within the country and the private construction has a coefficient value of .810;

(d) The relationship between the sale volume of cement within the country and the production of cement within the country has a coefficient value of .998;

(e) The relationship between the sale volume of cement within the country and the private construction has a coefficient value of .854;

(f) The relationship between the production of cement within the country and the government construction has a coefficient value of .865;

(g) The relationship between the private construction and government construction has a coefficient value of .865.

The obstacles and problems of the cement industry vis a vis the method for improvement in order to bring about a sufficiency of cement for local consumption and a surplus of cement for export for more earning are the resultants of this study. Besides, the government should promote the export of cement by searching for more customers, implementing the VAT in order to help the Thai cement compete with foreign competitors. The government should help the cement industry together with the adjustment of the cost of living of the people because these measures are the important factors which induce the market demand for cement in the future.