

## C716454 : MAJOR INDUSTRIAL ENGINEERING  
KEY WORD:

PANNIDA VIMUKTANON : FORECASTING OF DEMAND FOR SETTING PLANTS IN AN INDUSTRIAL ESTATE. THESIS ADVISOR : ASSOCIATE PROFESSOR JANTANA JANTARO.  
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This research is to estimate the demand of area for industrial real-estate from 1996-2000 to be an advantage for policy and appropriate planning for the concerned department. In this research there will be a multiple regression model for the area of industrial real-estate which is associated with some kind of industry. Industrial real-estate has separated the type of industry into 20 groups. The potential industry are fertilizer , colours chemicals and oil-energy industry. The multiple regression equation is as follow.

$$Y = -1593666.752 + 4.8285X_7 + 9.9679X_{10}$$

Y The demand of area for industrial real-estate

$X_7$  The demand of area for fertilizer, colours and chemicals industry.

$X_{10}$  The demand of area for oil and energy industry

The area for fertilizer, colours and chemicals industry has been estimated from the fertilizer consumption. The area for oil-energy industry has been estimated from the oil consumption as the following models.

$$X_7 = -1791351.83 + 1104.38 Z_1$$

$$X_{10} = 381185 - 1928.50 Z_0^2 + 55.32 Z_0^3$$

$Z_1$  The consumption of fertilizer in agriculture

$Z_0$  The consumption of oil

Using 5% significant level , the results of statistical analysis show that the variation in the area of industrial real-estate has been explained by the area of fertilizer, colours chemicals industry as well as oil-energy industry at 99.20%.

Hence, the variation in the area of fertilizer , colours and chemicals industry has been explained by the fertilizer consumption at 90.05%. And 84.62% of the variation in the area of oil-energy industry is attributed to the variation in oil consumption.

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