Abstract—Crude oil supply about 80 percent of foreign exchange revenue and 98 percent of primary energy to date, main source of primary energy supply of foreign exchange revenue and it considered the economy. Therefore, the need for energy, discuss pricing may be considered. Prices are carrying a message. Increase or decrease oil consumption, as well as in political strategy has its own message. Daily production for a barrel of oil products like gasoline, gasoline, kerosene and other items fully approximate ranging from twelve to ten barrel of oil products like gasoline, gasoline, kerosene and other items fully approximate ranging from twelve to ten thousand dollars of investment are needed. Refinery with a refining capacity of one hundred thousand barrels a day to one billion two hundred million dollars and investment needs. In this case, Iran could be up to 90 percent of domestic facilities to use. Iran piece in building manufacturing capability is 50 percent. Tehran oil refinery has chosen for case study for economical impacts and analyzing.

Keywords-component; oil, energy, economy, refinery, Tehran oil refinery

I. INTRODUCTION

Between economic growth and energy production harmony there, and generally increase economic growth, energy consumption will be increasing. In other words, low energy consumption is not expected to have considerable economic growth [1]. Researches shows Tehran oil refinery has very good design for make less cost for repairing [20]. With consideration to Tehran oil refinery seems this refinery should extend for future [19]. Strong evidence is found that oil prices no longer Granger cause many U.S. macroeconomic indicator variables in data after 1973 [10]. For energy, especially oil, mining, equipment, renovation and exploration of new vessels is necessary, because the market demand for particular energy level (about 80 million barrels in 2000) and the country could set renovation and interpretation facilities, extractive markets to find a valid, economic growth and ultimately the security will be more stable. The amount of oil and gas processing capacity required to meet demand during the next 20 years is more than twice the amount realized during the last decades [2]. Iran oil refineries need to increase for providing better future of people [17]. The most important problem is costs of Tehran oil refinery productions [18]. The urgency for investment in Iran's current production ceiling to maintain and even increase that is in the Persian Gulf region where about 67 percent of world oil has a kind of zero sum game with the ruling. That would defeat other countries in the region located in Iran (Dianat, 2003). Iran's per capita income of 2,244 dollars in 1980 to 1000 dollars in 1997 fell compared to the relative increase in global oil rates but increased continuously after the decline had one of the reasons its important addition to increasing population, declining birth rates world production of oil and a little power in Iran [4]. Energy security issues coupled with increased concern over the natural environment are driving factors behind oil price movements. While it is widely accepted that rising oil prices are good for the financial performance of alternative energy companies, there has been relatively little statistical work done to measure just how sensitive the financial performance of alternative energy companies are to changes in oil prices [9]. Results indicate that the refining sector plays an important role in the recent price increase, but not in the way described by many analysts [13]. Recent work has revealed that nonlinear structure indeed exists in spot and futures returns [3]. The Iran oil refineries need to consideration for extending during the future planning [12]. The Iranian oil ministry try to achieve the real cost and benefit for planning the oil refinery in future [14]. The economics of oil refinery directly needs to understand the future costs of producing [15]. On the other hand the oil industry especially oil refinery need to with considering the inside of country costs for future economical management plan [21].

II. TEHRAN OIL REFINERY

As mentioned earlier the oil refinery and environment interactions were studied given the size of the job and environmental features in the framework of different units of oil refinery (executive, constructional, operational and processing) and different environmental (physical, biological, socio-economical and cultural) parameters. The major environmental impacts and consequences of oil refineries include gas emissions, effluents, solid wastes, noise, odor and visional and aesthetic impacts.

Tehran Oil refining Co.
Date of establishment: 1965-1968
Date of operating: 1969 (South refinery)-1973(North refinery)
Nominal capacity: 220,000 barrels per day
TABLE I. TEHRAN OIL REFINERY

<table>
<thead>
<tr>
<th>Product</th>
<th>Capacity (1000 liter per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid gas</td>
<td>1259</td>
</tr>
<tr>
<td>Gasoline</td>
<td>1700</td>
</tr>
<tr>
<td>Jet fuel</td>
<td>6989</td>
</tr>
<tr>
<td>Light Naphta</td>
<td>383</td>
</tr>
<tr>
<td>Kerosene</td>
<td>3442</td>
</tr>
<tr>
<td>Gas oil</td>
<td>12872</td>
</tr>
<tr>
<td>Furnace oil</td>
<td>7549</td>
</tr>
<tr>
<td>Crude engine oil</td>
<td>1878</td>
</tr>
<tr>
<td>Bitumen production feed</td>
<td>2160</td>
</tr>
</tbody>
</table>

III. METHODOLOGY

For appropriate economic costs of oil refinery construction index has been used to fuel operations. Gasoline as a key factor to estimate costs and benefits of the refinery construction has been considered [5]. Economic indicators in gasoline costs estimates projects management generally considered to be economic [11]. For counting the economical effects the Price relationships in the given – taken data table has been used. In computing the given - taken table is assumed that the price depends on (i) the following:

1) Coefficients of domestic inputs or technical coefficients: The coefficients of the cost structure of a product show. In other words the rate coefficients of goods and services required for the production of one unit of goods or service as taken offers. This number divided by the result of consumption of product (j) to product (i) as the inputs (j) is the total product taken. Therefore, include the amount of consumption of product (j) to product (i) as the inputs (j).

2) Price each domestic intermediate inputs used in the unit taken product (Pj : j).

3) Primary inputs, including personnel compensation planning, operating surplus (profit) tax and net production or in other words, value added per unit of taken product (Uj : j).

A according to the price per j = 1, 2, ..., n is equal

\[ P_1 = a_{11}p_1 + a_{21}p_2 + \ldots + a_{n1}p_n + U_1 \]
\[ P_2 = a_{12}p_1 + a_{22}p_2 + \ldots + a_{n2}p_n + U_2 \]
\[ \vdots \]
\[ P_n = a_{1n}p_1 + a_{2n}p_2 + \ldots + a_{nn}p_n + U_n \]

That these relations:

\( P_j : \) Price index j has

\( a_{ij} : \) Technical coefficient or in other words, the usage of the product i as input in a product unit j

\( U_j : \) Ratio value to produce one unit taken product j or in other words, the rate of primary inputs is taken (personnel services or pay compensation, operating surplus and net taxes on product) used in the production of one unit of product (j).

Now these relations into the matrix relations:

\[
P_1 = a_{11}a_{21} \ldots a_{n1} P_1 + U_1
\]
\[
P_2 = a_{12}a_{22} \ldots a_{n2} P_2 + U_2
\]
\[ \vdots \]
\[
P_n = a_{1n}a_{2n} \ldots a_{nn} P_n + U_n
\]

Thus:

\[
P = A'P + V
\]

\[ P = (I - A')^{-1} V \]

(W) rate of this year compensation employees (payroll), interest rate (operating surplus) and (r) rate production and imports net of tax. Using this relationship can affect each of these factors on the unit price to calculate different parts. For example, through the above relationship can change the price of products in the tax rate changes and import the product to evaluate. Now if in (4) rate (A’) and (U) be replaced, in different is achieved unit price.

Price indexes in the price model given - taken are compiled in two ways:

- Price index entered the sector through a net tax increase production and imports, wages and value added
- If the price of a product or the number of equations to get out of the system, the price can change as a result from outside factors change the price of other sections. Default in this study that gasoline prices (oil products refinery products as operational indicators) is determined from the outside. For this purpose, price of oil products that are displayed (\( P_p \)) as an extra operating system from the equation is out. Then the relationship matrix (3) is presented as follows:
In this regard:

\[
\begin{bmatrix}
P_p \\
\bar{P}_o
\end{bmatrix}
= \begin{bmatrix}
a_{pp} A'_{pp} & \bar{a}_{po} A'_{po} & \bar{a}_{po} A'_{po} \\
\bar{a}_{po} A'_{po} & \bar{a}_{oo} & \bar{a}_{oo} \\
\bar{a}_{po} A'_{po} & \bar{a}_{oo} & \bar{a}_{oo}
\end{bmatrix}
\begin{bmatrix}
P_p \\
\bar{P}_o
\end{bmatrix} + \begin{bmatrix}
U_p \\
\bar{U}_o
\end{bmatrix}
\]

Using relationship (6) Price of oil products \((P_p)\) and other products price are calculated as follows:

\[
P_p = a_{pp} P_p + A'_{pp} P_o + U_p
\]

(7)

\[
P_o = A'_{po} P_p + A'_{oo} P_o + U_o
\]

(8)

Because the price of oil products from outside considered does not need to solve the (7) exist and therefore related only to solve (8) in order to calculate \((P_o)\) the action.

\[
P_o(a_{0x}) = \left(1 - A_{oo} \right)^{-(n-1)} A'_{pp} P_p + U_o
\]

(9)

Default is that the first \((P_p = 1)\) and is calculated \((P_o)\) accordingly. Then, the solution is \((P_p = 1)\) achieved according to the equation. The Unit Price products in other sections of conditions that change have no petroleum products price. When the price of oil products is equal to 2 times for example, to enter the price \((P_p = 2)\) equation is (9), and obtained for \((P_o)\) on the base of \((P_p = 2)\) the change will be in the unit price of products of each of the sections change in price of petroleum products. This change in price is made up of two parts: changes in direct costs and indirect changes in price. Based on relations in the system equations (1) direct effects of price change is achieved on

\[
\frac{DP_i}{DP_j} = a_{ij}
\]

indicating price (i) on the effect price change in the price section (j). While the total effect the part will determine, the price between changes with regard to relations.

IV. RESULT AND DISCUSSION

In this study used to determine the effect on gasoline prices of other sections of the table given - taken. In the supply and consumption tables, 147 products (goods and services) in 99 field rows and columns are in economic activity. With all these considerations results can complete evaluation of environmental advances and expenses of an oil refinery. Due to results all designs, construction and exploiting stages could be subjected to environmental economy investigation bringing a complete viewpoint. In this study used to determine the effect on gasoline prices of other sections of the table given - taken. In the supply and consumption tables, 147 products (goods and services) in 99 field rows and columns are in economic activity. Therefore indicator highest price mentioned effect on water transport and air transport services, respectively 43 percent and 42 percent and the lowest effect on crude oil and natural gas and public primary education services 0/1 percent and 0/5 percent. The following table lists the products of the highest and lowest of the price mentioned indicator accepted; along with the rate of change is the price.

V. CONCLUSION

With assistance of offered model given operational need and other parameters particularly oil refinery financial affairs (financial-economical expenses level) the following items can be achieved: (a) Strict environmental feasibility plan of an oil refinery project could be implemented, (b) Appropriate locating in order to minimize environmental expenses given the financial viewpoint of the project. (c) Financial--technical explanation in terms of appropriateness with environmental parameters.

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Considerations of economic growth and oil export during the past twenty years indicates significantly between the two is, with proportional increase of oil production, economic growth rate increased and the oil thus reducing the country's economic growth is limited [6]. Hence achieve the desired economic growth and investment should be possible for countries to increase oil production to the domestic market should be able to thrive as an important raw material in many industries [7]. Affairs is not possible to do this unless effective investment in oil extraction and production system, because the oil and gas projects should be mobilized to be primarily "for capital and its domestic and foreign investment [8]. In the past two decades the rate of investment in oil industry especially oil refinery construction and its direct effect had on Iran's economic growth rate (Javadie, 2001).
REFERENCES


