MAIN ACTIVITIES OF IRAN KHODRO: IS IT POSSIBLE TO IDENTIFY?

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Abstract

The main purpose of this study is answer to this question ‘is it impossible to identify the main activities of Iran Khodro?’ The population of this study are the directors and heads of departments, including productive and nonproductive at Iran Khodro that were 305. Data has collected from 180 person from production, service, administrative, selling and … departments by a questionnaire with study of variables and observation by analysis of documents. Five item Likert's range was used which involve form completely opponent to completely proponent to get responders opinions. All the reliability and validity of measures has examined. Questionnaire reliability was estimated by calculating Cronbach’s Alpha via, it was 0.84. In order to analyze the data resulted from collected questionnaires deductive and descriptive statistical methods are used, and to display some statistical data we used column diagram and in deductive level to test the hypothesis of the research we used $X^2$ and one simple t-test. Findings show that it is impossible identifying the main activities of Iran Khodro.

Keywords: main activities, Iran Khodro, BOM, Operation sheet

INTRODUCTION

Iran is of course renowned not as a producer of cars but as an oil economy. It is the second largest exporter of oil in the world, and has 9 per cent of the world’s oil reserves. In 1979 some of the ideologists of the Islamic Revolution argued that Islamic Economics would help free the country from its dependence on oil and the domination of its economy by western oil companies. This it has failed to do. Since 1979 the price of oil has fluctuated markedly, but ‘80% of Iran’s exports continues to be derived from oil and, increasingly, natural gas, accounting for 60% of
government revenues’ (Marossi, 2006). Iran remains an oil dependent economy; it remains a ‘rentier state’.

At the same time, however, Iran has the largest automobile industry in the Middle East. Although it accounts for less than 4 per cent of Iran’s industrial exports, it is the fastest growing industry in Iran. It employs, roughly, 150,000 workers. Last year it produced almost a million vehicles. Its managers claim that it will produce half a million new cars every year and so become the ‘Detroit of the Middle East’.

Over half of Iran’s cars were produced by Iran’s largest car manufacturer, Iran Khodro. Today some 34,000 workers work for Iran Khodro at its main complex west of Tehran. Most of these workers work for the main plant or at the 100 or so contract companies that surround the main plant and live in its nearby housing complex.

Car production in Iran began with the establishment of Iran Khodro’s predecessor, the Iran National Industrial Development Corporation, in 1962. After 1967 its only product was Iran’s ‘National Car’, the Peykan, which was assembled from Hillman Hunter kits imported from the UK. For decades it was ubiquitous on Iran’s roads.

The termination of its production in 2005 in favour of newer models has recently been reversed under pressure from President Ahmadinejad’s new government.

In the 1970s the Iranian car industry seemed to be a perfect example of what, at the time, some social scientists in the West referred to as the ‘new international division of labour’ (Frobel, 1980). This was in effect a new form of Third World dependency where instead of merely exporting raw materials and agricultural products to the West and importing its manufactured products, Third World countries would increasingly be performing unskilled, low-paid assembly work for western multinationals. Just as they claimed that Islamic Economics would free Iran from its dependency on oil, so Islamic ideologists appropriated this aspect of the Third Worldist critique of dependent capitalism, and it remains a contentious ideological legacy today as western multinationals return to Iran.

In the 1970s, the owner of Iran National was closely associated with the Royal court and working for this company was considered a privilege. Management promised a job for life in the style now widely referred to as ‘Fordism’, and there was job security and better than average wages. In Iran its workers were sometimes considered to be a ‘labor aristocracy’ who identified with their factory management, and thus were among the last groups of workers to join the anti-Shah protests of 1977_1979.

Work at Iran Khodro’s still centers on heavy manual work and assembly. In 1991, the ‘Self-Sufficiency Unit’ of Iran Khodro was created in an attempt to make all components in-house. This became centralized in SAPCO (Supplier of Automatic Parts Corporation) in 1993. By the 1990s, the company claimed they were producing almost 98 per cent of the parts needed for the Paykan 1600 in Iran*120,000 units per year*using machinery purchased from Talbot. Although the locally produced parts content has increased from what it was in the 1970s, Iranian firms usually exaggerate local content, as was the case with Iran’s ‘national car’, the Iran Khodromade, Samand saloon, which in fact was designed in Germany (Ibid, 2006).

In recent years Iran Khodro’s workers have become quite familiar with a series of ‘new management techniques’ that in the West are familiar as constituent parts of management packages such as ‘lean production’ (for a recent critical overview see Charron and Stewart)
Iran Khodro’s managers learn about these techniques, and also about the neo-liberal ideology of ‘ghanoun zedaii’ (deregulation), at Tehran University and at the firm’s own Research Management School. They also investigate advanced techniques in automation at their own research centres in collaboration with Iranian and European university engineering departments. More recently teams of Renault specialists have been busy at Iran Khodro redesigning manufacturing techniques in preparation for the production of the first of the new L 90 models.

When Fordism reigned during the Shah’s era, the plant had large depots on the Tehran - Karaj road with rows and rows of newly manufactured cars waiting to be sold. Now production is increasingly organized on a ‘just-in-time’ basis. The firm has only very small depots, and manufacture is supposed to take place in only very short runs in response to customer demand. The workers claim that this has led to work intensification and stress as the management passes on the responsibility of getting every order ready in time to the workers.

Workers also now have to learn Japanese-style techniques of quality control. The low level of quality of Iranian made cars is notorious. Recently it was the object of criticism even in the Iranian parliament (Saipa Warned over Quality, 2007).

The Iran Standards and Quality Control Company itself calculated that if European cars have technical faults that can be counted in tens, technical faults in Iranian made cars can be counted in hundreds (Low on Quality’, 2006).

Management have recently attempted to organize ‘takapou’ teams (literally ‘running about’ teams). These are supposed not only to work as groups but also to hold weekly team briefings to improve and speed up production. The workers claim that these have not really taken off in the factory yet. Nevertheless there is a clear wish by management to move away from traditional forms of work. They also keen to automate production in the new ‘salons’, which rely totally on robots. The company claims that hazardous work in the paint room has already been fully automated. Similar claims are made for the ‘press room’ where automated technology is supposed to have removed the danger of accidents. All in all the company claims that in recent years it has modernized half of the production processes. The company Tam (Technology in Automatic and Advanced Manufacturing) is one of Iran Khodro’s subsidiaries and is in charge of automation, having already performed this work in collaboration with Korean, Japanese, French and German firms.

However, work teams and contracting groups are often organized on more ‘traditional’ basis, where leaders will, for example, even recruit members from their own village in order to secure a loyal workforce, a new form of articulation between capitalism and semi-feudalism.

Iran Khodro’s workers assert that these techniques have led to an intensification of the pace of work and that automation has frequently led to deskilling where they merely perform simple routine tasks such as button pushing. This has allowed management to recruit from a larger pool of unskilled or semi-skilled workers, so undermining job security. Iran Khodro claims to be ‘adapting new techniques to local customs and conditions’. Surprisingly the workers claim that there is no specifically ‘Islamic’ element to work organization in Iran Khodro, either in regards to managerial ideology or in relation to incentives or exhortation, apart from visits by mullahs for Friday prayers. This contrasts with what is known about car factories in neighboring Islamic countries, such as Turkey. In reality discipline relies neither on Islamic exhortation nor on western ideologies of empowerment and teamwork. Workers are driven by job insecurity and the
fear of unemployment. Iran’s official unemployment rate is 15 percent, but is in reality considered to be closer to 30 per cent. Jobs at Iran Khodro are highly sought after despite the conditions of work and pay, which will now be outlined. In addition there is an Islamic police force inside the workplace, the Harassat. This exists in all large Iranian workplaces but seems particularly strong at Iran Khodro. Led by junior managerial staff, it has been used to break up workers’ protests and to arrest and detain individual workers. The main purpose of this study is answer this question ‘is it impossible to identify the main activities of Iran Khodro?’

METHODOLOGY

The population of this study are the directors and heads of departments, including productive and nonproductive at Iran Khodro that were 305. Data has collected from 180 person from production, service, administrative, selling and … departments by a questionnaire with study of variables and observation by analysis of documents. Five item Likert's range was used which involve form completely opponent to completely proponent to get responders opinions. All the reliability and validity of measures has examined. Questionnaire reliability was estimated by calculating Cronbach’s Alpha via, it was 0.84.

In order to analyze the data resulted from collected questionnaires deductive and descriptive statistical methods are used, and to display some statistical data we used column diagram and in deductive level to test the hypothesis of the research we used $\chi^2$ and one simple t-test.

RESULTS AND CONCLUSION

According to observations in firm level, especially in production departments that all fundamental activities lead to production or service and the importance of ISO 9000 cause to documenting and regulation of activities in Iran Khodro.

Documenting of operation process description involve three parts:

A) BOM: All-consuming materials and related technique number of each consuming unit has been written.
B) Operation sheet: the description of each work station in operation process with time consuming among and work force number have been written.
C) Imaging BOM: consuming materials description and operation process have been written.

Also, we use questionnaire to gathering data. The analysis of findings from questionnaire have been shown in table 1.

Table 1: The frequency of responds

<table>
<thead>
<tr>
<th></th>
<th>Very Low</th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
<th>Very High</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X$</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>$F$</td>
<td>12</td>
<td>6</td>
<td>57</td>
<td>84</td>
<td>21</td>
<td>180</td>
</tr>
<tr>
<td>Percent</td>
<td>6.6</td>
<td>3.4</td>
<td>31</td>
<td>47</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>$\Sigma FX$</td>
<td>12</td>
<td>12</td>
<td>171</td>
<td>336</td>
<td>105</td>
<td>636</td>
</tr>
</tbody>
</table>
According to table (1), 59 percent of responders say identifying level and documenting of activates in each department is high and very high in Iran khodro and only 10 percent say that they are low or very low.

1) **One-sample T test Results**

In this case we have two hypotheses:

- $H_0$: it is impossible identifying the main activities of Iran Khodro.
- $H_1$: it is possible identifying the main activities of Iran Khodro.

$H_0 : \mu \leq 3$

$H_1 : \mu > 3$

Table 2 shows sample output of a one-sample T test. We compared the mean level of main activities of Iran Khodro for our sample to a known population value of 3.

Table 2. Descriptive statistics and the results of one-sample T test

<table>
<thead>
<tr>
<th>Sample Statistics:</th>
<th>Number Of Obs.</th>
<th>H1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>180</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>3.533</td>
</tr>
<tr>
<td>Variance</td>
<td></td>
<td>0.954</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td></td>
<td>0.977</td>
</tr>
<tr>
<td>Median</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>IntervalConfidence</td>
<td>For Mean:</td>
<td>95 percent</td>
</tr>
<tr>
<td>Sample 1</td>
<td></td>
<td>179 D.F. 3.391 3.675</td>
</tr>
<tr>
<td>IntervalConfidence</td>
<td>For Variance:</td>
<td>0 percent</td>
</tr>
<tr>
<td>Sample 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis Test for</td>
<td>H0 : Mean=3</td>
<td>Computed t Statistic= 4.20549</td>
</tr>
<tr>
<td></td>
<td>Vs Alt : GT</td>
<td>Sig. Level = 4.48867E-5</td>
</tr>
<tr>
<td></td>
<td>At Alpha = 0.05</td>
<td>So reject H0.</td>
</tr>
</tbody>
</table>

The mean of characteristics of culture is 3.533, which is higher than population mean of 3. And T value is 4.20549 in 179 degrees of freedom. The estimated significance t-value is bigger than t-table among (1.96). Therefore, we can confirm $H_1$ and say that the main activities of Iran Khodro mean of 3.533 is significantly greater than the population mean of 3.

2) **$X^2$ Results**

In this case we have two hypotheses:

- $H0$: obtained distribution is uniform distribution
H1: obtained distribution is not uniform distribution
Table 3 show the results of $X^2$ to confirm or not of obtained distributions.

Table 3: The $X^2$ results

<table>
<thead>
<tr>
<th>Observed Frequency</th>
<th>Expected Frequency</th>
<th>Chi - Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>36</td>
<td>-24</td>
</tr>
<tr>
<td>6</td>
<td>36</td>
<td>-30</td>
</tr>
<tr>
<td>57</td>
<td>36</td>
<td>21</td>
</tr>
<tr>
<td>84</td>
<td>36</td>
<td>48</td>
</tr>
<tr>
<td>21</td>
<td>36</td>
<td>-15</td>
</tr>
</tbody>
</table>

Chi- Square = 123.5 With 4 d. f.
Sig. Level = 0

According to table 3, The Chi- Square is 123.5 With 4 df. The sig lvl is 0.000 and smaller than 0.05. So, obtained distribution is not uniform distribution. In other hand, there are different ideas about $H_0$. It means that we can confirm $H_1$ and reject $H_0$.

Findings show that it is impossible identifying the main activities of Iran Khodro.

References

2) Frobel F., the New International Division of Labor: Structural Unemployment in Industrialized Countries and Industrialization in Developing Countries (Cambridge: Cambridge University Press, 1980).