

# **Application of Six Sigma Methodology for Reducing Repair Time**

## **Case Study: Iran KhodroAgent**

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### **Abstract:**

In recent years, many companies have used different types of quality programs such as total quality management, reengineering, value engineering, lean production, and six sigma in order to increase customer satisfaction and reduce quality cost. Among all these programs, six sigma is one of the most powerful tools for problem solving. Iran Khodro Company has begun using this methodology in Isaco. This paper demonstrates the executive progress of reducing time of car repair in one of Iran Khodro agents in Shiraz city. DMAIC problem solving approach was used for this project. The aim of this project is to increase customer satisfaction and increase agent revenue. Implementing this approach, vehicle clearance and store were identified as critical to quality divisions. So, making amendments in these areas reduces the repair time.

### **Keywords:**

Six Sigma Methodology, Agent, Repair Time.

## Presenting a Model for Determination of Project Progress with Multiple Criteria

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### **Abstract:**

The project progress percentage is one of the most important criteria in project management. This criterion is the basic index of a project function which is important for all organization beneficiaries, managers and contractors. Monitoring a project implementation requires standards and scales whose value is calculated during the project progress and will be compared with the ideal or expected value to be used as controlling tools. To determine a real project progress percentage, the quantitative criteria such as time and cost are often used, while existence of risk and delays are inevitable in each project. So, the main purpose of this article is the assessment of project progress value by considering the effective criteria on project progress. For this purpose, a new model with an applied view and compatible with the common standards is presented, in which risk, time, float and cost criteria have been chosen. Also, the Macro program by Excel software has been designed, which can be linked to M.S project software. Several examples are solved to define the proficiency of this model. As a sample, there is an applied example at the end of the article.

### **Keywords:**

Project Progress, Project Progress Percentage, TheEffective Criteria on Project Progress, Risk, Float.

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# Survey and Classification of the Reasons of Iran's Industrial Property Right Reaction

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## **Abstract:**

Iran's IPR system, like that in developing countries, is reactive. The research goal is the description of actual deficiencies in Iran's IPR system and identification of the roots and reasons of the reaction and effective internal factors. This research is done via library study, experts' views, and relevant indexes with depict method. At first, according to published articles, backgrounds of the global economy and different approaches of developing and developed countries in the IPR system are surveyed. Then the present situation in Iran, effective global reasons in present situation, and also relevant to internal and external factors is identified. According to this classification, 3 kinds of factors and reasons are identified: (a) global fields and weak role of developing countries in innovation; (b) the relevant factors with weak performance of Iran's National Innovation System (NIS); and (c) structural weakness and disharmony in performance of policy and executive agent in Iran's IPR system. Some of the factors are related to internal agent weakness and the others are related to international issues, such as universal challenge between developing and developed countries. IPR system, as one of the important elements of NIS, is a determining factor in the development trajectory of any country. For revising Iran's IPR system it is necessary to pay attention to these subjects: (a) consideration of IPR system performance in NIS (b) coordination of IPR system ability and development level of the country.

## **Keywords:**

Intellectual property right (IPR), Industrial Property Right, Innovation National System (NIS), Developing Countries.

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# Assessing Project Time Management of the Morvarid Petrochemical Contractors in 5th Olefin Project via ANP

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## **Abstract:**

Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed sponsors' needs and expectations. Project time management is one of the fields that involve processes which require success in order to complete projects on time; accordingly, these processes are affected by other factors. This study tries to introduce some assessment models in project management in Morvarid Petrochemical Co., as the executive of the 5<sup>th</sup> Olefin project in Asalouyeh, and their contractors. Effective factors in time management and delays could be affected by Morvarid petrochemical contractors; accordingly similar contract types are made (Fixed Price Construction & Erection Contract: Lump Sum). These factors are categorized based on management fields in PMBOK standard and assessed with ANP and questionnaires. Contractors could be ranked via comparing their strengths and weaknesses. Their factors are the different weight value in delays. The findings of this research show that the entire management project fields have relation with each other but the intensity of their relations differs and depends on time and place of project execution.

## **Keywords:**

Time Management, PMBOK, ANP, Morvarid Petrochemical Company.

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# Modeling a Manufacturing Cell Design Problem with Extended Fuzzy Multi-Objective Programming

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## **Abstract:**

Nowadays, management tends to decision making via some techniques according to environmental conditions. The condition of decision making is inaccurate and vague in organic environments and data are mainly uncertain. Decision making is a difficult process in conditions of uncertainty and vagueness in the manufacturing system. In this situation, it seems that fuzzy methodologies are more suitable tools to fuzzy considerations. This paper presents a new fuzzy integer multi-objective mathematical programming model for the cellular manufacturing systems (CMS) design problem and its solution methodologies. The aim of the proposed model is to handle two important problems of CMS design called cell formation and exceptional elements simultaneously in fuzzy environment for efficient and better CMS design. An efficient CMS design requires concurrent consideration of real life and real time features relevant to the system. The objectives of the model are minimization of the cost of exceptional element elimination, minimization of the number of outer cell operations and maximization of the utilized machine capacity. The model fuzzy parameters are part demand, machine capacity, processing time, budget and the exceptional elements' elimination costs. Management wants to reach simultaneous optimal solutions for all objective functions. To illustrate the model, an example problem with fuzzy extension is adopted from literature and computational result and sensitivity analysis are obtained by the new solving model. Also, two well-known performance measures are suggested for this problem and model solutions are investigated by using these performance measures. The model is capable of expressing vagueness of all the system parameters and gives the decision-maker (DM) alternative decision plans for different grades of precision.

## **Keywords:**

Cellular Manufacturing System, Group Technology, Cell Formation, Exceptional Elements, Multi Objective Programming, Fuzzy Mathematical Modeling.

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# Providing a Model to Identify the Effects of Enterprise Resource Planning (ERP) Systems in Quality Management Systems

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## **Abstract:**

ERP is being frequently implemented in many organizations recently. So, there is a significant question still need to be answered: “How can we use potential data and intelligence ERP systems in the effective quality control systems?” This paper aims at exploring the capabilities of ERP systems and extracting features of these systems to increase the effectiveness of quality control in enterprises. The researchers in this paper have intended to use information technology as an activator of quality control. This study has been conducted based on a survey research method and data collection has obtained by questionnaires. According to fundamental studies, all indicators were identified for an ERP system. Testing hypothesis, some indicators for the design of an effective quality control module was identified such as the tracking information, reducing quality costs, reducing bureaucracy, accurate record of customer orders, integrating operations, and etc. On this basis, a model is presented in three parts which is recommended all these factors should be used in design quality control and quality management modules.

## **Keywords:**

Enterprise Resource Planning (ERP), Quality Control Module, Total Quality Management (TQM)

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# **A Study of the Relationship between Organizational Culture and Operation Of Human Forces in Service Public Organizations in Tehran Province**

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## **Abstract:**

A dominant culture or atmosphere in an organization indicates organizational management. The planning and organizational culture leadership may improve organizational operation. The purpose of this research is the study of the relationship between organizational culture and operation of human force in public service organizations in Tehran. The main question is that "is there any meaningful relationship between organizational culture and the operation of human force in public service organizations in Tehran province?" The methodology of this research is descriptive – correlation and the participants are all employees of public service organizations in Tehran province in 1389. The participants were 450 persons and were selected via accessible sampling. Finally, the hypotheses were tested by enter regression multi-variable statistics. The questionnaires used in this research are Robins organizational culture questionnaires and Goldsmith operational questionnaires. The former elements are as follows: personal innovation, leadership, reward system, manager support, integration, communicational pattern, compatibility and risk taking control. Both questionnaires have a suitable validity calculated by Kronbach alpha method.

The findings of this study show that there is a positive and meaningful relationship between aspect of organizational culture and some elements of operation of human force in public service organizations in Tehran province ( $\alpha= 0.01$ ). In other words, we can predict elements of operation by aspects of organizational culture.

## **Keywords:**

Organizational culture, Human Force, Public Service Organization.

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# Proposing an Integrated Model of Clustering and QFD Approaches to Improve Quality of Services Based on Customer Type With a Case Study in Saman Bank of Qom

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## **Abstract:**

QFD is a technique used for designing products and services to reflect customer needs. The first phase of QFD is usually called house of quality (HOQ) matrix. Although the house of quality has been successfully used for several decades, and it has often been faced with a number of problems in real application cases. When defining the external customer in HOQ, a single customer group is often assumed. To solve this problem, in this paper an integrated model of clustering and QFD approaches based on customer type has been proposed. Statistical population of this research includes customers of Saman Bank of Qom. After random sampling, 144 questionnaires were used for data analysis. After data collection, the clustering approach was used and for each cluster one HOQ matrix was developed. The number of clusters was determined as four clusters; then, service characteristics of each cluster were prioritized by the QFD approach; and, finally, appropriate service was recommended for each cluster. The results imply that the integration of the two approaches forms an empowered technique by which, an organization can achieve competitive advantage through market segmentation, customer recognition/satisfaction.

## **Keywords:**

QFD, Data mining, Clustering, Customer satisfaction, Bank.

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# The Relationship among Authoritarian Management, Organizational Injustice Perceptual-Affective Strain, and Deviant and Organizational Citizenship Behavior

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## **Abstract:**

This research was conducted with the aim of investigating the model of relationships between authoritarian management with organizational injustice perceptual-affective strain with deviant and organizational citizenship behaviors. Research method was correlation covariance matrix analysis type and research statistical population was the male employees of an industrial factory, from among whom 216 persons were selected via simple random sampling. Research instruments consisted of the followings: authoritarian management questionnaire, researcher-made organizational injustice perceptual-affective strain questionnaire, and deviant behaviors and organizational citizenship behaviors. Data were analyzed using structure equation modeling. Results revealed that in sequential relationships: 1) there is positive relationship between authoritarian management and distributive and interactional injustice strain; 2) there is positive relationship between interactional and procedural injustice strain and distributive injustice strain; 3) there is a positive relationship between interactional injustice strains and procedural injustice strain; 4) there is relationship among distributive and interactional injustice strain and deviant behaviors; 5) there is negative and positive relationship between deviant behaviors and interactional injustice strain deviant behaviors and organizational citizenship behaviors. The conclusion of this research is that authoritarian management in industries and organizations as a stressor factor increases the level of stresses toward distributive, procedural and interactional injustice, decreasing the level of organizational citizenship behaviors and increasing the level of deviant behaviors.

## **Keywords:**

Authoritarian Management, Organizational Injustice Perceptual-Affective Strain, Deviant Behaviors, Organizational Citizenship Behaviors.

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