

## **To Investigate the Factors That Causes Difficulties in Implementation of Quality Management System & Food Safety Management System in Food Industries of Karachi**

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**Abstract:** The objective of this research project is to observe the impact of different difficulties that causes in the implementation of the Quality Management System and Food Safety Management System in the Food industries of Karachi. In this study, ten food industries have been selected through random sampling, to understand the requirement of the Quality Management systems their effectiveness and importance. What difficulties faced in the implementation of the Quality Management system and Food Safety Management system in food industries of Karachi. By this study the highlighted difficulties knew and how these difficulties can overcome and reduced and how the food industries getting the maximum benefits after system implementation. By this research study companies easily knew the main problem which may slow the improvement before and after the implementation of the Quality Management System and Food Safety Management System and the importance of this system in future improvement and growth. Questionnaire and structured interview methods were used to gather quantitative data about QMS and FSMS. For this purpose, a detailed and multi section questionnaire was developed with the help of Microsoft Excel worksheet that supports automatic and real time calculations and displays of results in form of Bar Chart. In first sections inputs are taken to Affecting factors of Quality Management System and Food Safety Management System Implementation in Food Industries of Karachi while next section is the importance of Quality Systems. The researcher nominated three difficulties in the implementation of the Quality Management systems are Resources, Mindset and Management seriousness the answer got on average for these difficulties Resources 39%, Mindset 38% and Management Seriousness 23% shown in Table.7 and Graph.2 the above averages percentages illustrated that Resource is the major difficulty faced in the implementation of the system and the second is Mindset it meant that Management is serious on system implementation but not provide such resources to change the mindset in the system implementation.

**Purpose of the study:** The purpose of this study to know the major difficulties in the implementation of Quality Management System and food safety management system in Food industries of Karachi and how to control on difficulties by working on effecting factors and maintain standards and the continual improvement achieve the customer confidence local and international market.

**General Purpose:** to know acceptance of Quality Management System and Food Safety Management System in the food manufacturing industries of Karachi.

**Specific Purpose:** To know how the Quality Management System and Food Safety Management System in industries implemented and what would the difficulties industries will face and how effectively they use the Management system.

**Significance of study:** By this researcher checked the main difficulties and major problem phased by the food industries of Karachi who are going to implement the Quality Management system in all department and Food Safety Management system in processing areas and want to maximum advantages of these system but due to lack of system awareness many difficulties may cause for the continual improvement of the companies this study relate to all the factors influence on the implementation phase and difficulties on different stage in different sides.

**Keywords:** Food Manufacturing Industries, Fast Moving Consumer Goods, Quality Management System, Food Safety Management System, Karachi

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Date of Submission: 19-08-2017

Date of acceptance: 08-09-2017

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## I. INTRODUCTION

Quality Management and Food Safety Management System are the requirement of food industries of Karachi to meet the global standards to export products in different countries for this first is the implementation of these standards for this we have to know the problems advantages disadvantages in the implementation of the systems.

Implementation of Quality management and Food Safety Management System are not only beneficial for export products it is good for local markets and customer who are confident and satisfied to use the product of those companies which are certified by the accreditation bodies.

In Pakistan there are many laws and regulation for food manufacturing and quality as per provincial government before 1999.

Islamabad consumer protection act, 1995

NWFP consumer protection act, 1997

Pakistan Quality standards and quality control authorities act, 1996

West Pakistan pure food ordinance, 1960

Cantonments pure food act, 1966

Pakistan Hotels and restaurants act, 1976

Pakistan penal code, 1860

The above ordinance and act update slowly and some of them updated and some obsolete. The main thing is that no one comprehensive and complete System designed by the government on country level which obey by the provinces and all over the Pakistan standards all over Pakistan and out of Pakistan for their exports.

The philosophy of system implementation in food industries of Karachi is to maintain their product quality according to the international quality standards for food. In Pakistan many rules and Acts for product quality and consumer goods provinces wise although all rules and followed but no one international or country wide system and standard not maintained to address the quality and standards for food to the consumer in that way companies move to the certification of ISO system for their product quality improvement and exports to the international markets. Quality Management System and Food Safety Management System in that way we are implementing these system not maintained our mind to prepare ourselves for completely adoption and that is the way the improvement and growth stopped. These systems are back bone of any companies to achieve their mission and maintain their vision as by the company growth.

For the implementation of system Quality Management System (ISO-9001:2008) and Food Safety Management System (ISO-22000:2005) we need to prepare persons working In food industries level wise many difficulties and hurdles found in the implementation phase which will be over by different methods for this we need resources to making persons mindset according to the system requirement and the management seriousness for the continuation of system standards, trainings , changes in the infrastructure and many which addresses in the implementation of Quality Management System and Food Safety Management System.

**Scope of the study:** As the food processing and manufacturing grows and upgraded day by day in Pakistan we have to meet the processing industries as international market requirement. The companies implement ISO system to maintain the standards according to the international markets for this the effecting factors and difficulties phased by the Organization and Importance for adoption of Quality Management System and Food Safety Management system in Food industries of Karachi.

## II. LITERATURE REVIEW

The farms of fresh produce farmers are major sources of food contamination by microbiological organisms and chemical pesticides. In view of their choice for farming practices, producers are influenced by food safety requirements. This study analyzes the role of food safety standard certification toward the maturity of food safety management systems (FSMS) in the primary production of fresh produce. Kenya and Uganda are two East African countries that export green beans and hot peppers, respectively, to the European Union but have contrasting features in terms of agricultural practices and certification status. In the fresh produce chain, a diagnostic instrument for prime production was used to assess context factors, core mechanism and assurance actions, and system output to measure the performance of FSMS for certified green bean farms in Kenya and noncertified hot pepper farms in Uganda. Overall, our findings show that in Uganda, noncertified hot pepper farms revealed only a “basic level of control and assurance” activities in their FSMS, which was not satisfactory, because no insight into potential pesticide microbial contamination was presented by these farmers. On the other hand, certified green bean farms in Kenya had an “average level of control and assurance,” given that insight into the delivered food safety and quality by the farmers. Farm size did not impact the development level of FSMS. This study confirms the role played by food safety standard certification toward the development of FSMS implemented in developing countries and demonstrates the possibility of Ugandan farms to upgrade agricultural practices in the fresh produce sector.

The convenience of food safety management systems, their implementation and maintenance as a measure of management commitment was evaluated across three regions in Ghana using International, Government and privately-owned food manufacturing and food service operators. Years of operation was found to significantly affect good practices in terms of the availability of technical persons or supervisors although hygiene certification for technical persons or supervisors was not significant across the types of industries surveyed. Only 18.9% of the food set-ups had available all the listed Prerequisites program with Personal Training and Planned Preventive Maintenance being the least in use. Whilst 60% of the internationally-owned food set-ups operated with HACCP, none of the government-owned food businesses did. Food Safety Management systems like ISO, CODEX Hygiene Principles, GMP and SFBB were sparingly in use across the industries. Food auditing program unavailability among the locally-owned set-ups conferred lack of Management commitment and/or the capacity to satisfy both consumer and statutory requirements. It was recommended that there is the need for awareness creation, development of manpower with the technical knowledge, and improved surveillance with legislative backing to improve food safety operation systems in the country.

Implementation of food safety programs has been tough for small and medium sized companies (SMEs) in Cyprus, taking into consideration specific practices witnessed as common place amongst Cypriot food producers. SMEs tend to have a poor understanding of food management systems and limited adoption and implementation. The requirement for full food management implementation and the replacement of the national standards by the new ISO22000 in 2006 located an even greater burden on these businesses.

The aim of this project is to compare food safety and hygiene before, during, and after implementation of food management systems assessing whether the implementation of food management systems in SMEs in Cyprus improves the hygiene and compliance with food safety requirements. A questionnaire survey was made of 50 SMEs (food industry sector) and an audit process was carried out, in companies that had not started the implementation of food management systems but intended to do so. Follow-up audits to the premises observed the process and the operatives to determine any changes to the level of food safety and hygiene. A benchmarking audit was carried out before, during, and after implementation of the system, and each company was rated. Results show that most respondents encountered many problems in applying and maintaining food management systems. Even if food management systems were applied, businesses did not alter their daily practices in a significant way.

The performance of current food safety management systems (FSMS) of food processing companies for export (fish) and domestic markets (dairy). The FSMS-diagnostic instrument was applied to assess the levels in context riskiness, FSMS activities, and food safety performance of 14 fish and 22 dairy companies in Tanzania. Fish companies revealed average FSMS and medium-good food safety performance, while dairy companies indicated basic FSMS and poor food safety performance. However, the FSMS of both sectors operated in moderate-risk context. Both sectors need specific measures to improve their FSMS and reduce the risk-level of the context to guarantee food safety. The measures to reduce context riskiness include putting high and specific requirements on operators' competence level, describing all activities in standard operating procedures, and setting requirements on product use by major customers. The measures to enhance FSMS performance include use of industrial cooling facilities, hygienic design, strict raw material control, specific sanitation program, and analysis of critical control point. Dairy companies need to set-up assurance activities including validation, verification, documentation, and record-keeping system. However, enabling regulatory environment is required for the food industry, mostly the domestic market sectors, to improve FSMS and guarantee food safety.

Controllable factors that either positively or negatively influence the finished product are referred to as the quality control. The use of good and sound raw material is of primary importance for the achievement of the required end product of consistent quality. Identification of the critical points is essential since the process control relates to the processing results of the raw material. Traditional quality control is completely unable to eliminate quality problems, thus a preventive strategy based on thorough analysis of prevailing conditions which ensures that objectives of the quality assurance program are met is recommended for the food industry.

The food industry is putting in place modern food safety management systems (FSMS) to satisfy customers and consumers. The situation of food safety in developing countries in the Asia-Pacific region remains, however, far from satisfactory. Food safety can be described as the voluntary approach by some socially conscious and responsible companies that encourage the development, implementation and maintenance of HACCP based program in all food related establishments and grading stations for which external monitoring and verification program are to be properly established. India is world's second largest producer of agricultural products after China. Yet, we don't offer as much choice to our consumers. The Indian food processing industry has tremendous potential because it has a huge domestic market whose demands keep on rising as well as in the foreign market, not just made up by the rapidly growing Diasporas but also by international consumers. The aggregates of export of food products as increased by massive 66.4% in just two years from INR 21,805 crore in

2006-07 to INR 36,294 crore in 2008-09. Interestingly, rice had topped the export list in each of the last three years accounting for about total exports of food and food products. And if higher demand at home last year saw a fall in non basmati rice export, it was more than compensated by a surge in export of basmati rice. Export of basmati rice had more than doubled last year from INR 4,345 crore in 2007-08 to INR 9,477 crore in 2008-09. By the end of the year 2009, it is estimated that some 200 million will be added to the 300 million estimated consumers of processed food in India. With the growing per capita income, the ministry of food processing in its vision 2015 document on the prospects and opportunities of the sector estimated that its size would soon triple. This is backed by an Ernst and Young estimation of it growing by 30% - 40% in the next 10 years. We are expected to double our agricultural exports to USD 20.6 billion in coming 5 years. According to the Agricultural and Processed Food Products Export Development Authority (APEDA), our share of farm exports in global trade will grow from 2% - 5%. The experimental material is consists of Six treatments like, Bread, Biscuits, Dairy, Hotel, Fruit and Vegetables and Snacks with Exploratory Research Design under Random Sampling. The observations are recorded on the basis of various parameters are, Types of customers in the companies covered, Food safety status of the respondent firms, FSMS in business growth, FSMS in reducing product loss and FSMS in product shelf life. It is clear that FSMS is helping these companies to viewpoint in much better position than those players who have no FSMS in their enterprise. It is a true fact that India is on the way of becoming a developed country and improving in its literacy level and per capita income not only in urban area but also in rural areas. This is the high time that every entrepreneur, who want to enter in food industry, or any existing player who is not serious about the role of food safety should be serious to the magic of FSMS in future food business.

We are in an age of great change for agriculture. The effect of globalization is changing the industry that 20 years ago were unforeseeable: the rise of biotechnology use, food safety concerns, fears of bioterrorism, and increasing consumer demands. These developments result in an altered landscape of agribusiness management. Managing these developments requires an understanding of the collection of rules: regulatory (business/government), product requirements (business/consumer), and operating practices (business/customer) that defines how the modern company in agriculture operates in this environment.

In respond to these issues, the use of quality management systems (QMS) has filled in on some of these needs. A QMS is a set of policies, processes, and procedures that define how to create products and services in an organization. A formal QMS standardizes how these systems operate and their adoption has greatly increased in the same time frame as a more connected, global economy. This dissertation is case study of the impact of implementing a QMS at Farmers' Cooperative Co. (FC) of Farnhamville, Iowa.

In a 2003 survey, quality professionals were asked whether the ISO 9000 standard has lived up to its expectations. Overall 42% perceived ISO 9000 as "a system with flaws that is taking us in the right direction" while 40% said "the system provides a good basis for total quality management" (Douglas, Coleman, & Oddy, 2003). Critics of the standard contend that an organization can become certified and still produce poor quality output. Some point to specific companies that are certified and do not seem to deserve it. This is seen as a weakness of the accreditation process. A common negative perception is "that registration to a standard has no relationship with business improvement." Other criticisms of certification identified were that "quality by inspection is not quality" and "certification is dependent on the assessors' definition of quality." Some critics of the older versions of standard have said that it has a narrow focus emphasizing conformance to specifications and does not address customer satisfaction achievements (Johannsen, 1996). A third criticism is that the ISO 9000 standard is jargon ridden. It is promoted as a universal standard that is applicable to any organization; however, some of the terminology needs to be translated for non-manufacturing organizations. The scope of TQM is much broader than ISO 9000 as a management system framework. A criterion that Johannsen uses to judge the usefulness of a quality management system framework is its comprehensiveness and the reliability of the assessment. A critical feature of a reliable assessment model is that two organizations with the same characteristics should achieve the same assessment. Finally, quality consultants might be overselling reducing waste and reducing costs as the direct benefits of ISO 9000 certification.

ISO 22000:2005: ISO, those worldwide association to Standardization, will be an association altering a few norms viewing forms What's more frameworks to a large number separate organizations (ISO vital Plan, 2010). 163 national norms figures were parts of the ISO association in late 2010 Furthermore ISO's portfolio after that held over 18500 guidelines viewing economic, natural What's more social maintainable advancement. ISO 22000:2005 may be a nature administration framework tending to sustenance wellbeing issues done nourishment generation Also could a chance to be connected to every one sorts of association in the natural way of life. As stated by Færgemand (2008), ISO 22000:2005, nourishment security administration systems: "Aims to guarantee that there need aid no feeble joins in the nourishment supply chain. This will be finished by the adaptability of the plan in the standard which empowers an approach tailor-made to every one segments about nourishment safety in the natural way of life. ISO 22000:2005 may be intended will fit in separate methodologies since the prerequisites to nourishment security need aid different "around sustenance makers.

The standard doesn't gatherings give a check-list since methods due previously, you quit offering on that one processing might not make suitable to an alternate. ISO 22000:2005 is not perceived Toward GFSI because of the absence of specialized foul detail for segment PRPs. Done a blending with parvovirus 220, ISO 22000 is known as FSSC 22000 Also is distinguished Toward GFSI.

FSSC 22000: Today around 16 sustenance makers done Sweden are confirmed Toward FSSC 22000 (FSSC 22000, 1). FSSC 22000 is a national control framework created Toward the framework from claiming sustenance wellbeing certification, with those backing starting with sustenance Furthermore drink commercial enterprises of the European union (CIAA) (Bureau Veritas, 2007). Those standard is In view of ISO 22000 and parvovirus 220 the place the reason for those Initially will be with gatherings give an instrument for the oversaw economy should control Furthermore minimize sustenance wellbeing dangers What's more to guarantee agreeability. Parvovirus 220 might have been produced on point out necessities looking into prerequisite projects (PRP) with control sustenance wellbeing dangers throughout those nourishment preparing What's more should backing management frameworks executed with satisfy those ISO adaptation. FSSC 22000 need gained worldwide distinguish since established done 2004 and the standard is important should various sorts from claiming associations in the natural way of life (FSSC 22000, 2). It applies should Producers and makers from claiming die vegetal products, results about creature origin, long shelf-life products, nourishment bundling manufacturing Also sustenance parts for example, additives, bio-cultures and vitamins, in any case of unpredictability or measure of the organization, general population alternately privately possessed alternately On it may be profit-making alternately not. Confirmation figures that need aid authorized with issue certify FSSC 22000 certificates need aid the individuals that have a concurrence for those FSSC framework (ibid.), the standard will be legislated Eventually Tom's perusing a board from claiming stakeholders directing, including agents starting with known gatherings. Concerning illustration demonstrated in the past chapter, prerequisites of the ISO 9001 standard are archived dependent upon eight caliber management standards. These standards are: 1) client focus; 2) leadership; 3) contribution from claiming people; 4) transform approach; 5) framework methodology will administration; 6) consistent improvement; 7) true approach to choice making; also 8) commonly useful supplier relationship (International association for Standardization, 2008b). The compelling usage from claiming ISO 9001 caliber administration framework (QMS) need been internationally perceived in the final one two decades Similarly as a aggressive playing point to different sorts Furthermore sizes from claiming fill in associations. Therefore, ISO 9001 standard is An report that comprises of a situated from claiming criteria purposely constructed to small, medium, What's more expansive ventures with exhibit their abilities with attain An essential level about caliber Eventually Tom's perusing formalization and documentation for their nature management frameworks (Beattie et al. , 1999).

Those creator will present two segments from claiming written works reviews. The To begin with segment might a chance to be extremely all regarding the ISO What's more other nature strategies for usage around the world (i. E. , general Review). The second segment might be Verwoerd particular at the postulation from claiming this Examine (particular Review ISO 9001 standard framework effects once execution Furthermore reductions. Diverse territorial investigations of the ISO 9001 impact, on the execution from claiming fill in organizations, bring indicated exactly effects with noteworthy contrasts. Liao et al. (2004) need examined Australian manufacturing organizations Also found that affirmation will be well on the way on prompt both, genuine Also observed nature upgrades. Drew Furthermore Healy (2006) need indicated that Irish associations utilizing personal satisfaction management frameworks were performing superior to guaranteeing compelling relations for clients and workers. Their exploration system included study information taken from 932 organizations in the private and general population segment. The examination of the effects proposed that a helter skelter rate of organizations have confidence that their reputation, results Also administrations expanded for those superior since accomplishing those ISO 9000 affirmation. Different studies, completed in the commercial enterprises Eventually Tom's perusing Ebrahimpour et al. (1997), suggested that ISO 9001 caliber administration framework execution in the fill in associations hope design, product, process, What's more supplier association upgrades. Tan et al. (1998) accounted clinched alongside their exploration to little Furthermore medium confirmed ventures done Australia that profits and upgrades need aid just noteworthy in connection to internal improvement, more terrific nature awareness, moved forward item quality, Also progressed familiarity with issues inside the worth of effort organizations; same time Different examines need came about with incompletely inverse discoveries The point when adopting ISO 9001. David Furthermore Idemerfaa (2005) bring demonstrated upgrades over item improvement forms In view of ISO 9001 standard suggestion. Simmons what's more White (1999) discovered no certain connection between ISO confirmed associations Also execution. This also confirms that study done Eventually Tom's perusing Heras et al. (2002) who surveyed 800 Spanish organizations and came about for no constructive effects for deals Furthermore productivity. Also, an investigation conveyed crazy by Lai Also Cheng (2005) demonstrates that, an affirmation alone might not move forward execution. They recommended that execution of the caliber administration framework previously, fill in organization, doesn't bring an immediate effect ahead a great execution. They contend that profits need aid just recognized internally as opposed remotely.

Despite those continually updated rendition of the ISO 9001 standard requirements, beginning from the initial rendition done quite a while 1987 until the most recent particular case issued in the quite a while 2008, and its broad requisition On huge numbers separate countries, there are at present ambiguities if ISO 9001 need aided associations accomplish genuine execution upgrades. In any case of the kind Also span from claiming organizations the associations need aid running, the address “If there is a real profit and improvement“ may be still contentious. A large number fill in associations Might not confirm those available cooperation the middle of ISO 9001 usage Furthermore its execution upgrades. Some fill in associations have arrived at a level of disappointment and frustration since certain results starting with applying the ISO nature framework were not fundamentally recognized. Those purpose behind that is, the vast majority most likely because of the way that the vast majority investigations done once ISO 9001 QMS were not done observationally Also were mostaccioli body of evidence studies, which were descriptive, alternately prescriptive (Costa What's more Lorente, 2003). Concerning illustration an aftereffect about this non finishing argument, Koc (2007) need concluded on as much paper to examine inquiries regarding execution change what's more entryway this execution will be enhanced. This might have been carried Eventually Tom's perusing reviewing 106 little What's more medium ventures the place 79 from claiming them were ISO 9001 confirmed ventures. Koc (2007)'s discoveries demonstrated huge contrasts in exhibitions the middle of confirmed and non-certified organizations. Koc (2007) need tended to ISO 9001 impact on the manufacturing parameters through change of aggressive necessities. The manufacturing parameters characterized to as much paper were those following: 1- Result plan execution 2- creation arranging execution. 3- Machine set-up execution 4- a major aspect review execution. 5- Material taking care of execution 6- in procedure holding up. 7- Manufacturing run through usage 8- support execution. 9- Faulty a major aspect creation 10- apparatus usage. 11- Apparatus usage 13- crude material stock require.

Starting with every last one of over literature, I see all the that ISO 9001 standard is an entire framework will make executed the sum Different fill in associations in any case about their way for organizations. It might have been plainly comprehended that ISO 9001:1987 might have been particularly planned also focused on manufacturing parts. However, those after the fact forms of the standard, principally the individuals beginning previously, quite a while 2000, were formed will help production, administration what's more every one sorts for business alternately operations parts. The majority expositive expression showed up to location the issue for upgrades or if ISO 9001 need made a distinction to execution change alternately in any event need initiated change in the fill in associations. From that useful encounter Also understanding of the ISO 9001 implementation, I see change as a work from claiming various variables. In these variables need aid monitored What's more regulated effectively, sure conclusions might affect the point when actualizing ISO 9001 personal satisfaction administration framework. Change camwood a chance to be a capacity for every last one of eight nature oversaw economy standards alternately possibly more. It might additionally make A work of the ISO 9001 primary requirements: oversaw economy responsibility, asset management, result alternately administration realization, Also estimation Furthermore dissection instruments. Essentially controlling those over provided for four prerequisites Furthermore guaranteeing their compelling vicinity will certainly have a consistent fill in association with those ISO 9001 necessities What's more primed for. Affirmation. From this expositive expression review, I also get it that ISO 9001 reductions would even now disputable. A portion associations to streamlined nations need seen reductions Also some need not. It may be possibility that all reductions rely on upon how these associations recognize them. Reductions don't continuously must be upgrades in the organizations' monetary accounts. To A percentage circumstances, upgrades might a chance to be took from the benefits of the business Also operations perspectives. Done different words, oversaw economy Furthermore operations execution Might make improved without fundamentally expecting at whatever prompt observable benefits to the ISO 9001 confirmed associations. Yes, benefits may make required in the long run in any case with continually enhancing administration Furthermore operations forms within those worth of effort associations. This will be precisely what ISO 9001:2008 standard nature administration framework calls for, as delineated clinched alongside figure (1) to a process-based nature administration framework. I have done far reaching written works Audit with see all the additional over these sorts of upgrades Furthermore the thing that need aid those parameters that focus or start them. It need Additionally been settled on certain with see all the and perceive that's only the tip of the iceberg regarding what need been carried out for Kuwait over ISO 9001 What's more the thing that need been carried out Furthermore cleared out to future research. As specified in the past chapter, Mady (2008) might have been keeping tabs that's only the tip of the iceberg ahead refractor and sustenance stuff commercial enterprises for admiration to their TQM hones. He might have been a whole lot intrigued by Taking in All the more something like client concentrate furthermore measuring QMS execution for connection to TQM usage. To as much last Determination Also recommendation, Mady (2008) suggested that mechanical organizations ought to a chance to be ISO 9001 enlisted should move forward their personal satisfaction hones. Therefore, it might have been chose to review Likewise a number ISO 9001 confirmed associations as conceivable to sampling, to draw An full picture of the ISO 9001 QMS hones and its level for usage in Kuwait.

### III. RESEARCH METHODOLOGY

Questionnaire and structured interview methods were used to gather quantitative data about QMS and FSMS. For this purpose, a detailed and multi section questionnaire was developed with the help of Microsoft Excel worksheet that supports automatic and real time calculations and displays of results in form of Bar Chart. In first sections inputs are taken to Affecting factors of Quality Management System and Food Safety Management System Implementation in Food Industries of Karachi while next section is the importance of Quality Systems. My Research basically based on survey, there were some iterations of questionnaire, during the research study, based on feedbacks for structure and questions, that were incorporated and final version of questionnaire is available in Annexure A of this report.

**Population:** There are more than 100's of large and small food & beverage industries in Karachi, which are engaged in Processing of different food categories, Cereals, Snacks, Pasta , Meat Poultry Egg , Spices, Confectionaries, Sauces ,Syrups and Ready to Eat Foods. These Food Industries are Multination, National and Enterprise type.

**Sampling:** Effectiveness of Quality Management System and Quality Management system on the basis of individual Food industry, to have the judgment of better and least expensive choice. So, the unit of study was individual person who are working in Food industry in Which Quality Management System and Food Safety Management System Implemented and they are the part of this system in the form of Food Safety Team Member, Leader or Management Representative. I have used survey research system for collection of data, from each respondent company, one questionnaire was invited of implemented Quality Management System and Food Safety Management System, which differ from each other in terms of their product Category.

**Sample Size:** 10% sampling was targeted for this research study, from cited population and 50 companies were selected as sample population from Food Industries in Karachi. Questionnaires were interviewed by Phone Call to the sample population through call accompanied with an introduction to the research subject for ease of understanding and urge of reply.

S.no	Interviewed Food Technologist	Food Sector
1	Person A	Spices & Pickle
2	Person B	Confectionaries
3	Person C	Ketchup Pickle & juices
4	Person D	Cereal
5	Person E	Cereal
6	Person F	Spices & Pickle
7	Person G	Snacks & Baking
8	Person H	Confectionaries
9	Person I	Certification Body
10	Person J	Spices & Pickle

**Pilot Test:** Some question are omitted from questionnaire due to linkage with same topics and relevancy by the pilot run test this research study were the Food Technologist working in different Food Industries on Different Management Level and a part of their systems for the system continuation and improvement.

Sr. No	Category
1.	Bread Industries
2.	Beverage & juice Industries
3.	Cereal Industries
4.	Confectionaries Industries
5.	Frozen Food Industries
6.	Meat Processing Industries
7.	Milk Processing Industries
8.	Ice Cream Industries
9.	Ketchup and Sauces Industries
10.	Spices Industries
11.	Edible Oil Industries
12.	Snacks Industries

**Data collection:** Stratified sampling technique was applied to have representation of each stratum i.e. from Food Manufacturing industries from each processing category. Further convenience and random sampling techniques were applied to finalize the list of respondents from each stratum. Food Industries and Food Manufacturer were divided into following categories:

**Role of the Researcher:** Initially, Phone Call correspondence was planned to have the replies of questionnaire from respondents and in that very case, the researcher's role was limited one as correspondent and in case of any explaining of questionnaire, to provide assistance.

But due to late and low response, interviews were scheduled with respondents to get fast and firsthand knowledge / data. There revealed two types of cases:

1. Where the problem was just time and priority, data and other relevant information was available.
2. Data and relevant information was not handy, but had to dig out or calculation was required.

In each case, researcher performed the needful role to support respondent without any influence or bias and damaging the genuine of data.

#### IV. DATA ANALYSIS & INTERPRETATION

**Questionnaire Replies:** Selected 100 different Food Industries for this research study and 20 participants nominate for interview who are working on Managerial Level in Quality and Production departments of food industries and Quality Management or Food safety Management system Implemented. Researcher called 15 Interviewee but the response came from 10 calls in Which 1 interviewee is auditor in Auditing organization and conducting audits in food industries.

List of Interviewee and their related food Industry.

**Table.1**

S.no	Interviewed Food Technologist	Food Sector
1	Person A	Spices & Pickle
2	Person B	Confectionaries
3	Person C	Ketchup Pickle & juices
4	Person D	Cereal
5	Person E	Cereal
6	Person F	Spices & Pickle
7	Person G	Snacks & Baking
8	Person H	Confectionaries
9	Person I	Certification Body
10	Person J	Spices & Pickle

Person Alphabets were used instead of their real name of interviewee and they were from food manufacturing industries of Karachi. Are being producing different type of food products for local and export.

Effecting factors

**Table.2**

S.no	Interviewed Food Technologist	Importance of QMS and FSMS in the food industries of Karachi	Yes	No
1	Person A to J	It helps to export the product	10	0
2	Person A to J	Continual improvement	10	0
3	Person A to J	Hygiene and control of quality	10	0
4	Person A to J	Awareness of GMP	10	0
5	Person A to J	Quality standards	10	0
6	Person A to J	Customer satisfaction	10	0
7	Person A to J	Social responsibilities	8	2
8	Person A to J	Interdepartmental coordination of organization	10	0
9	Person A to J	Communication	10	0
10	Person A to J	Criteria for supplier and customer	10	0

In the above table asked questions about different factors. Management serious, Employee involvement, Resource availability, Training of employee, Acceptability of change, Mindset, Team work, Improvement in Organization all persons answered yes except one person who were not relate Mindset as a effecting factor. Importance of Quality Management and Food Safety Management System in Food Industries

**Table.3**

S.no	Interviewed Food Technologist	Effecting factors	Yes	No
1	Person A to J	Management seriousness	10	0
2	Person A to J	Employee involvement	10	0
3	Person A to J	Resource availability	10	0
4	Person A to J	Training of employee	10	0
5	Person A to J	Acceptability of change	10	0
6	Person A to J	Mindset	9	1
7	Person A to J	Team work	10	0
8	Person A to J	Improvement in Organization	10	0

In the above table asked questions about importance of Quality Management System and Food Safety Management System in the food manufacturing industries in Karachi, two persons were not relate social responsibility as an important.

QMS and FSMS Certification in Food Industries of Karachi

**Table.4**

S.no	Interviewed Food Technologist	Good	Average	Bad
1	Person A	√	X	X
2	Person B	√	X	X
3	Person C	√	X	X
4	Person D	√	X	X
5	Person E	√	X	X
6	Person F	√	X	X
7	Person G	√	X	X
8	Person H	√	X	X
9	Person I	√	X	X
10	Person J	√	X	X

All the persons were accepted that Quality Management System and Food Safety Management System good for Food Manufacturing Industries of Karachi.

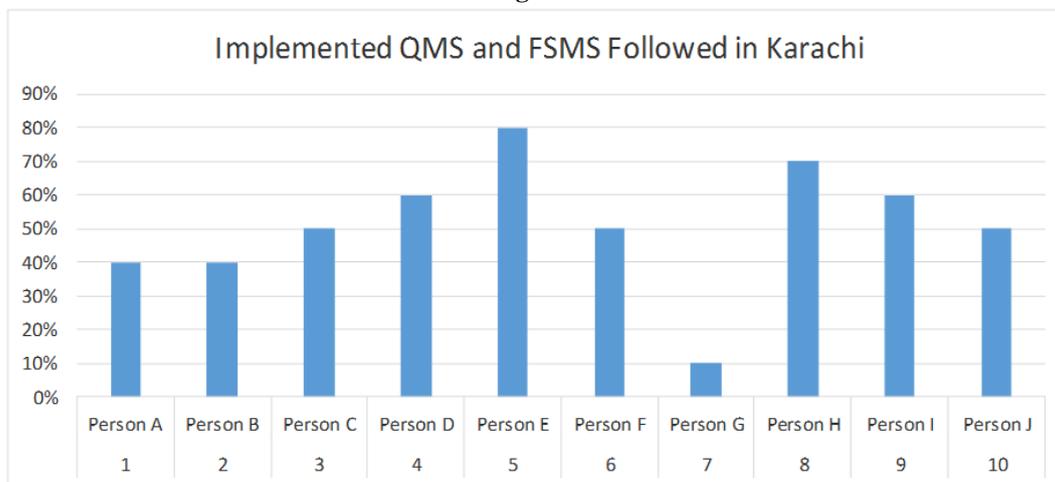
Quality System Followed in Food industries of Karachi

**Table.5**

S.no	Interviewed Food Technologist	Implemented QMS and FSMS Followed in Karachi
1	Person A	40%
2	Person B	40%
3	Person C	50%
4	Person D	60%
5	Person E	80%
6	Person F	50%
7	Person G	10%
8	Person H	70%
9	Person I	60%
10	Person J	50%

In the above mentioned table interviewees answered in percentage about the following of the Quality Management system and Food Safety Management System in their industries where they were working the average of these above answer percentages was 51%.Below the graph showing the percentages mentioned in above table.

**Figure.1**



Implemented Systems in Persons' Organization

**Table.6**

S.no	Interviewed Food Technologist	QMS	FSMS
1	Person A	√	√
2	Person B	√	√
3	Person C	√	√
4	Person D	√	√
5	Person E	√	√
6	Person F	√	√
7	Person G	√	√
8	Person H	√	√
9	Person I	√	X
10	Person J	√	√

Table shows the implemented Quality System of Interviewees.

Difficulties Faced In system Implementation

**Table.7**

S.no	Interviewed Food Technologist	Resources	Mindset	Management Seriousness
1	Person A	20%	50%	30%
2	Person B	20%	45%	35%
3	Person C	35%	50%	15%
4	Person D	50%	50%	0%
5	Person E	50%	50%	0%
6	Person F	50%	0%	50%
7	Person G	50%	30%	20%
8	Person H	30%	20%	50%
9	Person I	33%	33%	34%
10	Person J	50%	50%	0%

In the above mentioned table asked about three major difficulties Resources, Mindset, Management Seriousness faced they answered different by the average 39% Resources, 38% Mindset, 23% Management Seriousness.

**Figure.2**



By the Management Serious were low but Resources are the main difficulty which are faced related to Management Seriousness its means Management want to Implement the system but not providing the resources to change the mindset of the persons.

System Implemented years in Person's Organization

**Table.9**

S.no	Interviewed Food Technologist	QMS Implemented Years	FSMS Implemented Years
1	Person A	4	2
2	Person B	9	7
3	Person C	8	5
4	Person D	10	8
5	Person E	9	7
6	Person F	4	2
7	Person G	4	4
8	Person H	9	7
9	Person I	20	0
10	Person J	10	8

The above table showed the Quality System implemented years of the interviewees industries.

RESOURCE REQUIREMENT FOR IMPROVEMENT

**Table.10**

S.no	Interviewed Food Technologist	Resources Enough for Improvement
1	Person A	No
2	Person B	No
3	Person C	Yes
4	Person D	Yes
5	Person E	No
6	Person F	Yes
7	Person G	No
8	Person H	Yes
9	Person I	Yes
10	Person J	No

As by the above table 50% were accepted that the resources were provided to them for Quality Systems were enough and 50% denied.

Training Frequency in Person's Organization

**Table.11**

S.no	Interviewed Food Technologist	Systems Training Frequency
1	Person A	Quarterly
2	Person B	Yearly
3	Person C	Yearly
4	Person D	Monthly
5	Person E	Quarterly
6	Person F	Quarterly
7	Person G	Quarterly
8	Person H	Undefined
9	Person I	When Required
10	Person J	2 months

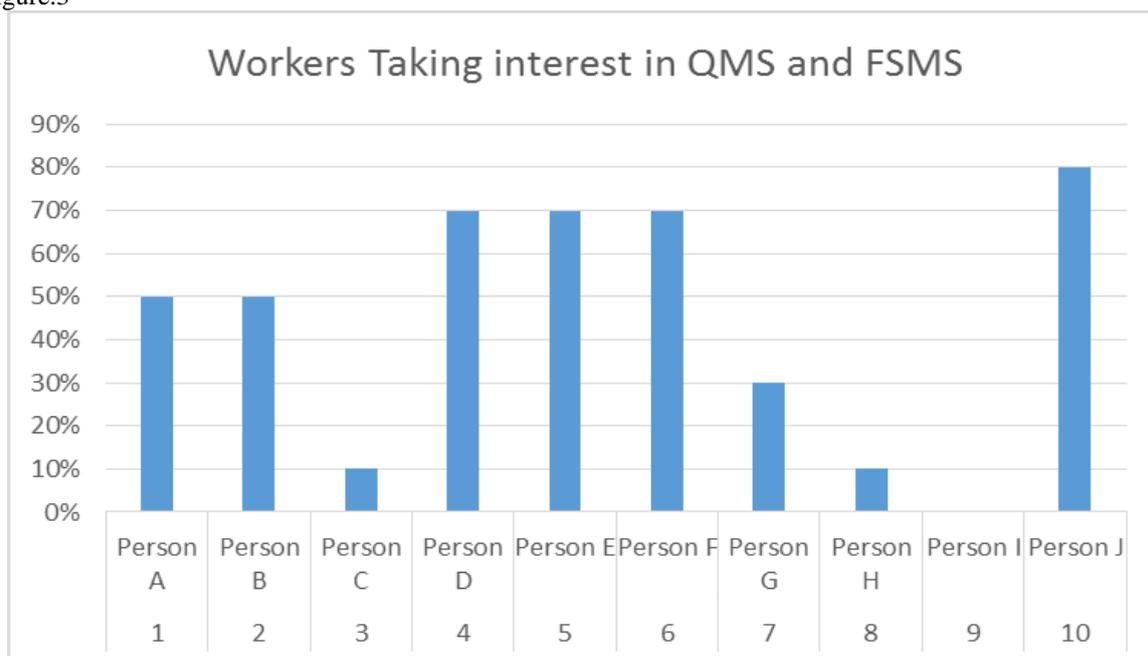
The above table showed the training schedule of the interviewee implemented in their industries. Interest of Line Workers in Quality Management System and Food Safety Management System

**Table.12**

S.no	Interviewed Food Technologist	Workers Taking interest in QMS and FSMS
1	Person A	50%
2	Person B	50%
3	Person C	10%
4	Person D	70%
5	Person E	70%
6	Person F	70%
7	Person G	30%
8	Person H	10%
9	Person I	No worker
10	Person J	80%

The above table related to workers interest in the Quality Management System and Food Safety Management System. The average is 49%.

Figure.3



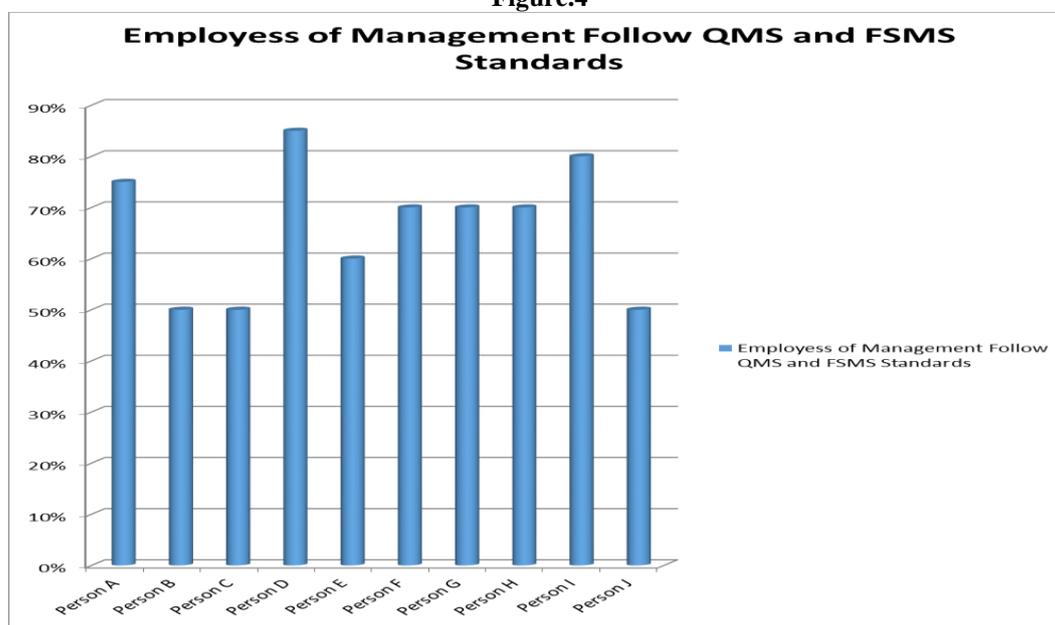
Following Quality Management System by Managerial Employees

Table.13

S.no	Interviewed Food Technologist	Employees of Management Follow QMS and FSMS Standards
1	Person A	75%
2	Person B	50%
3	Person C	50%
4	Person D	85%
5	Person E	60%
6	Person F	70%
7	Person G	70%
8	Person H	70%
9	Person I	80%
10	Person J	50%

The above table related to the managerial staff who are taking interest in Quality Management System and Food Safety Management System the average is 66%.

Figure.4



As by the Table.2 All the persons agreed on 8 effecting Factor which are mention in the table except one who said Mindset not effects on system implementation we can describe mindset as different parameters interest of the person, understandability and acceptability because new project and standard is difficult until it will not understandable to everyone mostly down the level of management workers or persons who performed work by their and well known about their workplace for immediate changing.

As by Table.3 All the persons agreed on 10 important point on which companies willing to certifying by the system two persons who said social responsibility is not important because its related to some other standard but if we talk about Food safety management system it is responsibility itself for hygiene of work personally and work place If we are a part of system we have to follow the clauses of the system in which all the criteria are described in that way Food Safety Management System have some clause.

As by the Table.4 it is agreed by all the persons which was interviewed that system certification of ISO-9001 and ISO-22000 are good for Food industries of Karachi.

As by the Table.5 related to the system following in food industries of Karachi implemented in the industry According to Graph.1 we can the percentages 10%, 40%, 40 to 60% ,70% and 80% average percentage is 51% its mean implemented system in food industries followed 51% which is no enough for improvement.

The researcher nominate three difficulties in the implementation of system are Resources, Mindset and Management seriousness the answer got on average for these difficulties Resources 39%,Mindset 38% and Management Seriousness 23% shown in Table.7 and Graph.2 the above averages percentages illustrated that Resource is the major difficulty faced in the implementation of the system and the second is Mindset it meant that Management is serious on system implementation but not provide such resources to change the mindset in

the system implementation. Persons which were interviewed have both Quality Management and Food Safety Management System Certifications in their Food industry and well experienced in the Food processing As shown in Table.8 when the Question asked which system is your company requirement they replied BRC, FSSC22000, ISO-17025 and ISO-18000. Resources enough for the improved asked by the interviewee the answer we got by the percentage of 50% yes and 50% No. Training frequency of the system is different in organization such as monthly Quarterly, yearly when required not specify or standardize.

Interest level of line workers in system implementation or continual improvement average 44% means it have two reasons first may be awareness and second may be resources that is why the mind set of workers not changed. Interest of managerial level in the system implementation and continual improvement is 66% on average it must be more to get immediate benefits of change caused by the continual improvement.

## V. RECOMMENDATIONS

As per analysis and conclusion for the system implementation and continual improvement we need some change and standardization for system continuation and requirements. Management seriousness is most important in such a way management is not achieve system certification but also involve in system implementation and the improvement in the organization. Most of the factors of the system is related to management of the company in food industries of Karachi. Management can involve the employee in system implementation certification and improvement by providing them good resources to motivate them in their working areas. Training of employee is most important to aware and prepared them how to work and how to maintained their working place and trying to improve their working place and trying to improve their working areas. Many industries have different criteria for training that is quarterly in year, half yearly and yearly and no requirement for new inducted persons for the improvement internally monthly training should be arrange in house and at least half yearly training should be arranged from the certified trainer to recall the standards and improvement. After Certification of Quality Management and Food Safety Management System the organization Should approve to maintain a in house training group who will arrange meeting once in a month for Training need, Resource requirement, Improvement status Future requirements preparation of internal and external audit meeting with worker and ask their work place difficulties to make their easy and improved. To motivate the workers there must be reword system to getting interest in the implementation and continual working and improvement and maintaining standards all over the company.

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