

ASSOCIATION OF VARIOUS ISO 9000 PROMINENT BENEFITS WITH SALES AND YEARS OF CERTIFICATION AMONG SMALL AND MEDIUM SCALE MANUFACTURING COMPANIES

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Abstract

Every manufacturing company has its own quality system for producing quality products. This quality system differs from one company to other in the different as well as same industrial sectors. ISO 9000 is a common Quality system that is appropriate for all manufacturing companies irrespective of their products, size, and sector. It focuses on documentation, sop, and quality manuals. ISO 9000 implementation provides many benefits to companies over and above companies' own quality system. This paper's main purpose is to study these advances and examine the association of these benefits for ISO certified small and medium scale companies with respect to their sales turnover and years of certification. The study was conducted with 400 small and medium-scale companies located in various industrial districts of Maharashtra. Association was observed between various benefits with sales turnover and years of certification. Results of the study will help the certified companies to focus on benefits that have an association with sales and years of certification for prospering the business further. Also, the result will motivate noncertified companies to adopt ISO 9000 Quality system.



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Keywords : ISO 9000, Benefits, Sales Turnover, Years of Certification, SME, Quality

1. Introduction

In India, ISO certification started after globalization and the Indian government opened the economy for foreign companies around 1995. Initially, certification started with large corporate houses. It took almost a decade for them to successfully implement it in all sections and sectors. The main reason behind this was for export. At the same time for SMEs, those who were supplying materials and services to large corporate, ISO 9000 became an essential condition for doing business in the domestic market. To sustain in the global market ISO 9000 certification was an essential requirement like a domestic business.

“ISO (International Organization for Standardization)” for Quality Management and Assurance developed an international standards series which is known as ISO 9000. Any formal quality assurance system's essential elements details are provided by the standards (Tsiotras and Gotzamani, 1996).

It has been more than 30 years that ISO 9000 is around in its various revisions as well as ISO 9000 quality system has been implemented by organizations as their first choice as they seek quality improvement (Coleman and Douglas, 2003). Since, ISO has issued 9000 series, across all industries various organizations extensively accepted these standards irrespective of their product or size (Magd et al., 2003).

Benefits of being ISO 9000 registered companies discovered that ISO certification encourages increased customer loyalty; maintains market share where customers require ISO 9000 registration; opens new markets; as well as even in those markets where there is no need for registration.

The ISO 9000 QMS (quality management system) approach depends on the idea that when associated resources and activities are treated as a process, more efficient results are achieved (Bhuiyan and Alam, 2004).

Thus, these standards aim at quality consistency assurance instead of an organization's products quality improvement (Tsiotras and Gotzamani, 1996).

2. Literature Review

Various researches have been done on ISO 9000 certification benefits. In this section findings of these studies are discussed.

Also, a milestone has been represented by ISO 9000 certification for a new organizational working method's introduction, particularly for the companies wherein there does not exist a well-rooted quality culture (Dahlgaard et al., 1998). In developing nations, an organization determined for increased ISO 9000 implementation so that they will have international markets access (Magd, 2006).

A strategic method for improving the production activities' performance is to adapt as well as execute the manufacturing organization strategy initiatives ISO 9000 QMS effectively. In the construction of improved quality systems, ISO 9000 certification for business excellence is considered a single step (Devos et al., 1996).

Feneguieh (1998) proves that companywide employee participation, as well as continuous development, resulted in substantial advantages for medium and small size enterprises. It has been proved through a case study by Douglas et.al (1999), true motives can only reap the benefits of the standard.

The ISO 9000 implementation benefits have been demonstrated by various studies (Briscoe

et al., 2005; Casadesu's and Karapetrovic, 2005 a; Arauz and Suzuki, 2004; Yahya and Goh, 2001; Lipovatz et al., 1999; Huarng et al., 1999; McAdam and McKeown, 1999; Elmuti, 1996). According to this research, the ISO 9000 standards implementation has led to enhanced business and operational performance in many industries. However, according to Naveh and Marcus (2005), Terziovski et al. (2003), and Rao et al. (1997), ISO 9000 standards implementation led to increased operational performance, but not to enhanced business performance as previously believed.

As per the Yahya and Goh (2001), for ISO 9000 operational benefits' dimensions consist of: quality awareness and prevention, cultural change, measurement systems, documentation, cross functional/departmental cooperation, inter-company communications, and rework/scrap. Also, as observed by Lipovatz et al. (1999) that ISO 9000 certified companies' significant perceived advantage is the production process improvement. In addition to this, as pointed out by van der Wiele and Brown (1997) that as stated by small manufacturing companies pursuing ISO 9000 certification, the most important gains relate to internal improvements which includes improved product quality, improved problems awareness within the organization as well as better quality awareness. Among ISO 9000 standards' implementation's one advantage is decrease in production costs as per Beattie and Sohal (1999).

On the basis of research done by Magd (2006) in Saudi Arabia, he identified increased quality awareness, better documentation procedures, and improved quality system efficiencies among companies as three of the most important benefits of ISO 9000 implementation. Increased customer satisfaction and including suppliers' better control are considered as identified market benefits by Mo and Chan (1997). Customer satisfaction and quality improvement are considered as manufacturers globally-accepted uniform standards' external benefits, as per Lipovatz et al. (1999). Furthermore, time to market, competitive edge, perceived quality, and customer satisfaction are ISO 9000 certification-associated external benefits, as stated by Yahya and Goh (2001). Also, as confirmed by Simmons and White (1999) that a company that lacks compliance's ISO certificate discovers itself having marketing disadvantages.

As noted by Lipovatz et al. (1999), manufacturers will gain from the uniform ISO 9000 standards' global acceptance in terms of customer satisfaction, efficiency, improved quality, increased productivity, as well as finally a competitive edge which helps in increasing market shares. Also, ISO 9000 direct benefit lies in systemization, according to Huarng et al. (1999).

ISO 9000 standard focuses is on the process instead of service/product quality (Dick *et al*, 2002; Csadesus and Karapetrovic, 2005). ISO 9000 is considered as a management control procedure (Stein and Hitchcock, 1997) that comprise of business in design, production, and distribution process documentation for ensuring that services and products' quality fulfill the customers' needs (Withers Ebrahimpour, 2001).

ISO Certification is observed as a path for the organization for better-run organizations,

marketing benefits, profit improvements, continuous improvement, (Aarts and Vos 2001; Beattie and Sohal 1999), and achieving competitiveness in the market place (Rao et al. 1997).

A 160 Australian companies study (Brown and Van der Wiele, 1995) showed certification benefits such as increased competitors' respect, greater customer satisfaction, improved relationship within the organization, improved in products and services offered, improved customer relations, improvement in management, increase product quality awareness and company quality awareness.

As stated by Vloegeberghs, Bellens (1996) and Brown et.al (1998) the significant advantages in character are internal like improvement in product quality, improves awareness about the importance of quality, and company problems.

In Spanish companies, ISO 9000's most significant application's internal benefits are improvement in work procedures, responsibilities, and obligation of workers, greater commitment to work, increased company confidence in quality. Benefits analysis to the HRM presented certification's two positive aspects one improved job satisfaction and communication between employees and management.

The ISO 9000 primary advantage is that an efficient quality system is produced through it that helps in error, rework and scrap elimination. Further, an internationally recognized quality level is demonstrated by the certification of ISO 9000. Businesses are being forced by large customers in order to bid for contracts to have ISO 9000 certification.

Burgess (1993) claims that it is a marketing tool and improved efficiency as a major benefit. Rodney McAdam and Michael Mckewon (1999) survey from Northern Ireland of small businesses found reasons for ISO 9000 as quality improvement, customer pressure, marketing benefits, and reducing operating cost. The Survey also found that the majority of small businesses experienced benefits like fewer customer complaints, increased productivity reduced cost, increases business control, and improved sales.

In the Arab world, some researchers have examined ISO 9001:2000 certification status. For instance, Mezher (2000) has researched the transition from ISO 9000 to TQM of 30 Lebanese businesses. Mezher and Ramadan (1999) examined 32 Saudi manufacturing companies. The important advantages seen by Saudi companies were the enhancement of customer service as well as the efficiency of the company. Magd et al. (2006) have observed similar findings. Egyptian businesses were studied Magd and Curry (2003). The companies questioned indicated more interest in domestic operational advantages such as improved paperwork or effectiveness of the quality system.

Walid Zaramdini (2006) found in his survey in UAE that certified firms are more focused on internal causes such as products or procedures improvements than on external factors such as consumer pressure or competition imitation. Moreover, the certification procedure created more internal advantages in comparison to external ones.

Gupta (1994) claimed that implementing ISO 9000 offers a number of non-tangible as well as tangible advantages, including delegation responsiveness, enhanced employee morality, and job satisfaction, to the organization. Jackson and Ashton (1995) stated ISO 9000's one of the key derived advantages is that employees throughout the firm are fully involved in developing a successful system as well as share a sense of accomplishment.

Fotopoulos et al. (2010) showed that initially, external as well as then internal environments were the most important advantages of certification. Psomas et al. (2010) have highlighted important elements in order to effectively apply the ISO 9001, especially in small and medium-sized enterprises.

As per the extremely significant "subjective" research in the particular area (Brown and Van der Wiele, 1995), the primary advantages which stem from registration of ISO 9000 are "better quality awareness, overall company management, and internal relationships, as well as improvements in customer satisfaction and products offered". Alternatively, as per a Hong Kong survey (Lee, 1998), the registered companies' advantages were "achieving better team spirit, having fewer staff conflicts, reducing wastage, increasing efficiency, improving sales through attracting new customers, and getting fewer customers complaints".

3. Research Gap

The literature review finds various benefits. But these benefits were not identified or classified under different headings or groups. It was also observed that very little research was done on the association of these benefits with respect to their years of certification and sales turnover, for small and medium companies after getting ISO 9000 certification.

4. Objective of the study

1. To classify benefits under various groups.
2. To study the association of these benefits with respect to their years of certification and sales turnover, for small and medium-size companies.

5. Research methodology

5.1 Measures

After literature's extensive review as well as in this research, 35 common benefits for small and medium scale sectors having ISO Certification were studied in consultation and discussion with ISO consultants, owners, managers, and people involved in ISO implementation of the standard. Furthermore, the selected benefits were classified into business, production, employee, customer-related groups. Refer to appendix 1 for these benefits. The questionnaire was designed on these benefits. Responses to these benefits were taken on five points liker scale i.e. 1- strongly disagree, 2- disagree, 3-Neutral, 4-agree, 5-strongly agree. Years of certification were grouped in to four group

i.e.0-5, 5-10, 10-15, and 15-20 years. Sales Turnover (Rs. Millions) was grouped into 0-500, 500-1000, 1000-1500, 1500-2000, 2000-3000, 3000-5000, 5000 and above.

5.2 Pilot study

A pilot study was carried out after designing the questionnaire, by utilizing fifteen respondents which consisted of Mumbai city's Quality Managers, Owners, and production managers. The pilot study was performed in person with respondents. Minor corrections were created in the wording of the questionnaire for improving clarity, depending on their responses.

5.3 Sample Size and data collection

For this study, a descriptive research design was used. The final version of the questionnaire was sent to small and medium scale companies through known contacts, ISO consultants, and e-mails. It was addressed to company executives and managers, owners, people involved in ISO implementation, management representatives, and practitioners from the industry. Data was gathered from small and medium scale companies located in industrial districts of Maharashtra on the basis of convenient sampling. The sample size was 400. After data collection, responses were coded in "SPSS (statistical package for social sciences)" version 16 for computer processing.

5.4 Reliability and validity tests

A measurement item group's internal consistency indicates the homogenous degree of the items in the group. Also, "Cronbach's alpha reliability coefficient" is utilized for estimating internal consistency in this study. For the benefits items, Cronbach's alpha is equal to 0.888 (greater than 0.6) satisfactory reliability is indicated by it (Malhotra, 2004).

5.5 Hypothesis

Hypothesis 1

H_0 = There is no significant association between various benefits of firms with respect to their years of certification.

H_1 = There is a significant association between various benefits of firms with respect to their years of certification.

Hypothesis 2

H_0 = There is no significant association between various benefits of firms with respect to their sales turnover.

H_1 = There is a significant association between various benefits of firms with respect to their sales turnover.

6. ANALYSIS OF DATA

To find the association between various benefits with respect to years of certification and sales turnover chi-square test (χ^2) with a 95% confidence level was conducted.

6.1. Findings

6.1.1 Demographic Profile of Sample. (Refer Table 1)

6.1.2 Business Related Benefits

Hypothesis 1: Business Related Benefits and Years of certification

H_0 = There is no significant association between various Business Related Benefits with respect to their Years of certification.

H_1 = There is a significant association between various Business Related Benefits with respect to their Years of certification.

It was observed that there was the association of enabling competitive products, Development of more stringent quality production system with years of certification as $\chi^2 < 0.05$ (Refer Table 2). Hypothesis H_0 is rejected and H_1 is accepted.

Other business-related benefits like improved company image, productivity, profitability did not have an association with years of certification as $\chi^2 > 0.05$ (Refer Table 2). Hypothesis H_0 is accepted and H_1 is rejected.

Hypothesis 2: Business related benefits and Sales Turnover

H_0 = There is no significant association between various Business Related Benefits with respect to their Sales Turnover.

H_1 = There is a significant association between various Business Related Benefits with respect to their Sales Turnover.

It was observed that in the case of enabling competitive products there was an association with sales turnover as $\chi^2 < 0.05$ (Refer Table 2). Hypothesis H_0 is rejected and H_1 is accepted.

In the case of other Business related benefits like profitability, productivity, improved company image, more stringent quality production system development, there was no association with sales turnover as $\chi^2 > 0.05$ (Refer Table 2). Hypothesis H_0 is accepted and H_1 is rejected.

6.1.3 Production Benefits

Hypothesis 1. Production Benefits and Years of certification

H_0 = There is no significant association between various Production Benefits with respect to their Years of certification.

H_1 = There is a significant association between various Production Benefits with respect to their Years of certification.

It was observed that there was an association in case of improved parts' identification and traceability, improved raw materials products, and quality, Clear work instructions as well as procedures with years of certification as $\chi^2 < 0.05$ (Refer Table 3). Hypothesis H_0 is rejected and H_1 is accepted.

It was observed that there was no association in case of reduced wastes and defective rates, enhanced production flexibility procedures with years of certification as $\chi^2 > 0.05$ (Refer Table 3). Hypothesis H_0 is accepted and H_1 is rejected.

Hypothesis 2. Production Benefits and Sales Turnover

H_0 = There is no significant association between various Production Benefits with respect to their Sales Turnover.

H_1 = There is a significant association between various Production Benefits with respect to their Sales Turnover.

It was observed that there was an association in case of improved raw materials and products quality, Clear work instructions and procedures, Enhanced production flexibility with sales turnover as $\chi^2 < 0.05$ (Refer Table 3). Hypothesis H_0 is rejected and H_1 is accepted.

It was observed that there was no association in case of reduced wastes and defective rates, improved parts' traceability and identification with sales turnover as $\chi^2 > 0.05$ (Refer Table 3). Hypothesis H_0 is accepted and H_1 is rejected.

6.1.4 Employee Benefits

Hypothesis 1. Employee Related Benefits and Years of certification

H_0 = There is no significant association between various Employee Related Benefits with respect to their Years of certification.

H_1 = There is a significant association between various Employee Related Benefits with respect to their Years of certification.

It was observed that there was an association of Improvement in job satisfaction and staff motivation, Improvement in employee knowledge of products and processes, Improvement in human resource planning, and clear job responsibility among employees with years of certification as $\chi^2 < 0.05$ (Refer Table 4). Hypothesis H_0 is rejected and H_1 is accepted.

It was observed that there was no association of Effective communication among employees and management, improved quality awareness, and team spirit in a company with years of certification as $\chi^2 > 0.05$ (Refer Table 4). Hypothesis H_0 is accepted and H_1 is rejected.

Hypothesis 2. Employee Related Benefits and Sales Turnover

H₀= There is no significant association between various Employee Related Benefits with respect to their Sales Turnover.

H₁= There is a significant association between various Employee Related Benefits with respect to their Sales Turnover.

It was observed that there was an association of clear job responsibility among employees and improvement in human resource planning with sales turnover as $\chi^2 < 0.05$ (Refer Table 4). Hypothesis H₀ is rejected and H₁ is accepted.

It was observed that there was no association of Effective communication among employees and management, improved team spirit and quality awareness in the company, Improvement in job satisfaction and staff motivation, Improvement in employee knowledge of products and processes with sales turnover as $\chi^2 > 0.05$ (Refer Table 4). Hypothesis H₀ is accepted and H₁ is rejected.

6.1.5 Customer Benefits**Hypothesis 1. Customer Related Benefits and Years of certification**

H₀= There is no significant association between various Customer Related Benefits with respect to their Years of certification.

H₁= There is a significant association between various Customer Related Benefits with respect to their Years of certification.

It was observed that there was an association of Enhanced on-time delivery culture, Better communication with the customer, improved customer satisfaction/loyalty, Improvement in response to customer complaints, improved identification of customer requirements with years of certification turnover as $\chi^2 < 0.05$ (Refer Table 5). Hypothesis H₀ is rejected and H₁ is accepted.

Hypothesis 2. Customer Related Benefits and Sales Turnover

H₀= There is no significant association between various Customer Related Benefits with respect to their Sales Turnover.

H₁= There is a significant association between various Customer Related Benefits with respect to their Sales Turnover.

It was observed that there was an association of improved identification of customer requirements, Enhanced on-time delivery culture, Better communication with the customer, and improved customer satisfaction/loyalty with sales turnover as $\chi^2 < 0.05$ (Refer Table 5). Hypothesis H₀ is rejected and H₁ is accepted.

It was observed that there was no association of Improvement in response to customer complaints with sales turnover as $\chi^2 > 0.05$ (Refer Table 5). Hypothesis H₀ is accepted and H₁ is rejected.

7. Discussion

7.1 Business Related Benefits

Initially, companies implement the ISO process and get the certification. As it practices processes over the period of time to survive in the market it produces competitive products to remain in the market. ISO process helps the companies to do improvement in products where inputs come from customer complaints and needs of the customer which is part of the ISO process. Hence there is an association of competitive products with years of certification.

ISO also helps in developing sop for inspection and quality of raw materials, components, and finish products in the manufacturing of items. It gives more stress on checklists on quality parameters before passing the items. This is nothing but development stringent quality process for production. This stringent norm of quality is developed over a period of time with feedback of quality problems from the inspection department and internal customer complaints as and when it occurs. Hence there is an association of stringent quality production systems with years of certification. It is a continuous process.

Company image is part of goodwill it carries in the market. Productivity depends upon the input to output ratio. Profitability depends upon acceptance of the product in the market and various marketing schemes to improve sales. It is independent of years of certification. Hence there is no association of these parameters with years of certification.

For any firm as sales turnover increase profit also increase. To develop competitive products new research and design, skilled manpower, Hi-tech machinery, Special purpose machines are required. It requires extra funds. This extra fund comes from the profits of the company.

Hence there is an association of enabling competitive products and sales turnover.

Business-related benefits like profitability, productivity, improved company image, more stringent quality production system development are related to the internal manufacturing process. It is there irrespective of sales turnover. Hence there is no association with sales turnover.

7.2 Production Benefits

With practicing of parameters like improved parts' identification and traceability, improved raw materials products, and quality, Clear work instructions, as well as procedures after implementing of ISO with no of years, goes on improving. It is like practice makes the procedures perfect and improvements. Hence there is an association of these benefits with no. of years of certification.

Wastages and defect rates depend upon machines, manufacturing process, design and development of the product, technology, and skilled manpower. It is not related to years of certification. Production flexibility depends upon the production facilities available. Many times it is not changeable once facilities are installed. Hence there is no association of these

benefits/parameters with years of certification.

A customer always demands quality products and quality raw materials used in them to improve the durability of products. This parameter automatically improves sales. Clear work instructions and procedures increase production which in turn helps in increasing sales. Production flexibility means changing the production of one item line to another with minimum change in the production process. This helps reduce time in changeover. This time saving helps in increasing production. Increased production helps in improving sales. Hence there is an association of these production benefits with sales turnover.

Identification and traceability of parts are very important things in production. If we take the automobile industry there is more than one lack of parts that goes into making an automobile. To receive these parts, manufacture the parts, and store the parts in stores is a challenging activity. To trace these parts when required proper locations are provided in the production store. It does not help in selling the product. Reduced wastes and defective rates help in improving productivity. It does not have an effect on sales. Hence there is no association between these benefits with sales turnover.

7.3 Employee Benefits

All ISO sop clearly defines responsibilities, skill requirements, knowledge in the job content of employees and staff. As a result, there is improvement in these parameters with respect to years of completion of ISO certification. Hence there is an association of Improvement in job satisfaction and staff motivation, Improvement in employee knowledge of products and processes, Improvement in human resource planning, and clear job responsibility among employees with years of certification. Team spirit and quality awareness are generally independent of ISO certification. Its part is the part of the day-to-day working of production and operation. Communication among employees and management is a day-to-day activity. It is independent of certification. Hence there is no association of these parameters with years of certification.

Clear job responsibility among employees and improvement in human resource planning saves time in production. This improves production. Hence more quantity is available for sales. Targets are given to sales employees. As more quantity is available for sales, it helps in achieving the sales. Hence there is an association of this benefit with sales turnover.

Effective communication among employees and management, improved team spirit and quality awareness in the company, Improvement in job satisfaction and staff motivation, Improvement in employee knowledge of products and processes are part of any business. It is independent of sales. Hence there is no association of these benefits with sales turnover.

7.4 Customer Benefits

For the customers, related benefits like Enhanced on-time delivery culture, Better communication with the customer, improved customer satisfaction/loyalty, Improvement in response to customer complaints, improved identification of customer requirements sop are set during certification. Hence as years of certification go on increasing there is improvement in these parameters. Hence the association with years of certification.

For the customer benefits like improved identification of customer requirements, Enhanced on-time delivery culture, Better communication with the customer, and improved customer satisfaction/loyalty sop are set during ISO implementation. Once these go on improving with practice more customers are attracted towards company products which result in improved sales. Hence there is an association between these benefits with sales turnover.

Response to customer complaints comes into the picture after the product is sold to a customer. Hence there is no association of customer complaints with sales turnover.

8. Conclusion

The researcher's findings suggest that benefits namely enabling competitive products, Enhanced on-time delivery culture, Better communication with the customer, Improved customer satisfaction/loyalty, Improvement in response to customer complaints, Improved identification of customer requirements, Improvement in job satisfaction, and staff motivation, Improvement in employee knowledge of products and processes, Improvement in human resource planning and clear job responsibility among employees, Clear work instructions and procedures, Improved identification and traceability of parts, Improved quality of products and raw materials, more stringent quality production system development have an association with years of certification. Similarly enabling competitive products, Enhanced on-time delivery culture, Better communication with the customer, Improved customer satisfaction/loyalty, Improved identification of customer requirements, Improvement in human resource planning and clear job responsibility among employees, Enhanced production flexibility, Clear work instructions and procedures, Improved quality of products and raw materials have an association with sales turnover.

9. Implication

Benefits are nothing but the output of ISO 9000 implementation. In the above article, various benefits are discussed and their association with years of certification and sales turnover are identified. The findings will motivate the companies to focus on benefits that have an association with sales turnover and years of certification to progress. Also, noncertified companies will be motivated to go for certification to get the various benefits discussed in the article.

10. Limitations

Since the study of benefits is done in part of one state of India, included only the manufacturing sector, and had a relatively small sample size, caution should be exercised in generalizing the results. The conducted survey could be subject to respondent bias. The findings discussed above which could not be compared with previous literature findings as such research is not done previously.

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Appendix 1

Business-related benefits

Enabling competitive products

Improved profitability

Improved productivity

Improved company's image

Development of a more stringent quality production system

Production benefits

Enhanced production flexibility

Clear work instructions and procedures

Reduced wastes and defective rates

Improved identification and traceability of parts

Improved quality of products and raw materials

Employee-related benefits

Effective communication among employees and management

Improved team spirit and quality awareness in the company

Improvement in job satisfaction and staff motivation

Improvement in employee knowledge of products and processes

Improvement in human resource planning and clear job responsibility among employees

Customer-related benefits

Enhanced on-time delivery culture

Better communication with the customer

Improved customer satisfaction/loyalty

Improvement in response to customer complaints

Improved identification of customer requirements

Table 1: Demographic Profile of Sample

Demographic Factors	Category	Frequency	%
Operations Scale	Small	227	56.8
	Medium	173	43.2
Certification Years	0-5	102	25.5
	5-10	158	39.5
	10-15	90	22.5
	15-20	50	12.5
Sales Turnover in Rs (Millions)	0-500	235	58.8
	500-1000	69	17.2
	1000-1500	33	8.2
	1500-2000	5	1.2
	2000-3000	26	6.5
	3000-5000	11	2.8
	5000 and above	21	5.2

Table 1 shows responses under SMEs, certification years and sales turnover.

Table 2: χ^2 Values of Business Related Benefits

Business Related Benefits	Years of certification	Sales Turnover
Enabling competitive products	0.004	0.006
Development of a more stringent quality production system	0.010	0.148
Improved company's image	0.668	0.568
Improved productivity	0.209	0.609
Improved profitability	0.327	0.279

Table 2 shows χ^2 test values for the association of various **Business related Benefits** with years of certification and sales turnover. Test values < 0.05 shows significant association and values > .05 says no significant association at 95% confidence level.

Table 3: χ^2 Values of Production Related Benefits

Production Benefits	Years of certification	Sales Turnover
Improved quality of products and raw materials	0.000	0.012
Improved identification and traceability of parts	0.003	0.514
Reduced wastes and defective rates	0.205	0.385
Clear work instructions and procedures	0.006	0.016
Enhanced production flexibility	0.384	0.003

Table 3 shows χ^2 test values for the association of various **Production related Benefits** with years of certification and sales turnover. Test values < 0.05 shows significant association and values $> .05$ says no significant association at 95% confidence level.

Table 4: χ^2 Values of Employee Related Benefits

Employee Related Benefits	Years of certification	Sales Turnover
Improvement in human resource planning and clear job responsibility among employees	0.000	0.000
Improvement in employee knowledge of products and processes	0.002	0.085
Improvement in job satisfaction and staff motivation	0.026	0.210
Improved team spirit and quality awareness in the company	0.139	0.968
Effective communication among employees and management	0.129	0.609

Table 4 shows χ^2 test values for the association of various **Employee related Benefits** with years of certification and sales turnover. Test values < 0.05 shows significant association and values $> .05$ says no significant association at 95% confidence level.

Table 5: χ^2 Values of Customer Related Benefits

Customer Related Benefits	Years of certification	Sales Turnover
Improved identification of customer requirements	0.000	0.015
Improvement in response to customer complaints	0.000	0.167
Improved customer satisfaction/loyalty	0.026	0.002
Better communication with the customer	0.008	0.014
Enhanced on-time delivery culture	0.007	0.000

Table 5 shows χ^2 test values for the association of various **Customer related Benefits** with years of certification and sales turnover. Test values < 0.05 shows significant association and values $> .05$ says no significant association at 95% confidence level.