

# **Adoption of International Management Standards in Bangladesh: Progress and Prospect**

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## **Abstract**

The purpose of the study is to explore the trend, progress and prospect of ISO certifications awarded in Bangladesh. A comparative analysis with other South Asian countries was also conducted. ISO Survey of Certifications and related literature review are the main data source for the study. Data collection, analysis and drawing conclusions have been carried out through desk research method. The number of ISO certifications on different management systems represents a positive growing trends and wide scope for adoption of ISO standards in Bangladesh. It is found that most of the organizations have adopted ISO standards separately and some organizations have adopted integrated management standards. The study found that, the highly adopted management standards in Bangladesh are ISO 9001, ISO 14001, ISO 45001, ISO 22001 and ISO/IEC 27001, where the growth of ISO 9001 is in leading position. The business sectors with high growth rate of ISO certification are textiles and textile products. The output of the study can support policymakers to update policies and strategies in different sectors. It also can encourage decision-makers for the adoption of international standards.

## **Keywords**

ISO standards, Management systems, management practice, Progress and Prospect

## **1. Introduction**

With the evolution of global competitive environment, the goals and tasks associated with management systems are changing. In order to survive in this competitive business environment, organizations focus on supplying quality services and products at competitive prices to satisfy customers and stakeholders. Moreover, major international buyers are increasingly asking their suppliers to comply with international standards (Yeung and Mok 2005). So, organizations apply several management standards of specific functions such as environment, quality, energy, information security etc. The International Organization for Standardization (ISO) plays an important role in facilitating world trade by developing a wide range of standards to achieve business credibility for almost all sectors of activity. It bridges the gap between businesses by reducing barriers to international trade. It also helps organizations to reduce the adverse impact on environment as a result of their activities (*What Is the International Organization for Standardization (ISO)?* n.d.).

Bangladesh has significant economic growth over the past decade. To achieve its vision of attaining upper middle-income status by 2031, it needs to create ability to face a competitive business environment, increased human capital and skilled labor force, efficient infrastructure, and a policy environment that attracts private investments. Other development priorities include diversifying exports beyond the RMG sector; deepening the financial sector; making urbanization more sustainable and strengthening public institutions (*Overview* n.d.). Therefore, in order to achieve its vision, it is important to keep pace with the global economy. Proper implementation of international standards will help organizations to redefine their goals in order to achieve competitive advantages in international trade. In this situation, it has become essential to study the current situation of ISO standards implementation in Bangladesh. So far, only limited studies have been carried out regarding ISO certification in Bangladesh. The main motivation of this study is to explore the progress of ISO certifications and the prospect of opportunity for future growth in different industrial sectors of Bangladesh. The study also tries to answer the following specific research questions:

RQ1. Trends of ISO implementation in Bangladesh

RQ3. Future prospect of ISO adoption in Bangladesh.

## RQ2. Regional share of South Asian countries to the ISO certification

Besides contributing to the existing literature, the study intends to support policymakers to update policies and strategies in different sectors. This study would be an important source of information to specify the gap and opportunities in different business sectors to adopt international standards.

The rest of the paper is organized as follows. The second section discusses the literature on the ISO standards which are mostly relevant to this study. The third section describes the research methodology. The fourth and fifth section presents the data collection as well as findings of the research. Finally, the last section concludes the practical and theoretical implications, limitations of the study and recommendations for further research.

## 2. Literature Review

Standardization is a strategic tool that influences several areas, such as industrial competitiveness, human health protection, and innovation (Tenera and Varajão 2022). The ISO standards set out requirements to help organizations manage their policies and processes to achieve specific objectives. Every year ISO performs an annual survey of certifications to its management system standards with the classification of the number of sectors for each country (ISO - *The ISO Survey*, n.d.). Numerous researchers contributed to the study and analysis on international management practice as well as ISO standards to gain an understanding of the theory and practice. In Bangladesh, limited study has been conducted regarding the implementation of ISO standards in organizations. (Samad et al. n.d.) highlights the importance of ISO and its implementation process in Bangladeshi industries for ensuring product quality. He conducted a case study at RANGS workshop limited. (Talapatra et al. 2020) explored factors that enhance the implementation of total quality management (TQM) in Bangladesh's ready-made garment sector (RMG). It is important to note that structure, strategy, context, and human resources are all important enabling factors when it comes to TQM implementation in Bangladesh's RMG industry. But this study was limited to one industry and one geographic region. (Hasan et al. 2021) conducted a comprehensive investigation of energy management practices within energy intensive industries in Bangladesh through case study and questionnaire survey. In the studied industries, energy management and energy efficiency are relatively new concepts, and there is a lack of awareness as well as information systems. Energy managers have limited authority, which leads to barriers to energy efficiency management. There is still lagging in the implementation of energy efficiency solutions and energy management practices in the studied industry. This research can contribute to existing literature by investigating the trends and scope for the implementation of ISO standards in Bangladesh.

## 3. Methods

This study was conducted using the desk research method for preparing, analyzing, and drawing conclusions from the data. ISO survey data and ISO related literature review are the main data source for the study. Besides, relevant data of ISO certification were also collected from a variety of sources, including websites, reports, publicly available online information etc. The methodology which will be followed to conduct the study is shown in Figure 1.



Figure 1. Methodological flowchart for the study.

#### 4. Data Collection

Data collection and analysis of this study have been made mainly on the basis of ISO survey available on ISO websites in the scope of 39 defined sectors. In addition, related literature review, reports and publicly available online information have also been considered.

#### 5. Results and Discussion

To be competitive in global market, companies need to look upon every aspect of their business according to the regulations of global standards. ISO standards play vital role to ensure compatibility in global trade situations by establishing credibility within consumers, stakeholders and other business partners. The progress and opportunities of Bangladesh in terms of ISO standards are presented in the following sub-sections.

##### 5.1 Trend of ISO certification in Bangladesh:

Over the last decades, Bangladeshi industries are implementing ISO standards to increase their competitive edge and comply with the buyers obligations. Table 1 shows the number of ISO certificates on different management standards in Bangladesh from 2011 to 2021, where Figure 1 illustrates the trend of ISO implementation in Bangladesh during the last ten years.

Table 1. Number of ISO certificates on different management systems in Bangladesh (Year:2011 to 2021)

ISO Standards	Number of ISO Certificates											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
ISO 9001	173	258	263	346	453	470	445	502	559	495	652	4616
ISO 14001	21	39	57	59	101	119	137	154	181	176	222	1266
ISO 45001								4	40	73	110	227
ISO/IEC 27001	1	9	9	15	9	11	4	8	12	43	40	161
ISO 50001									0	0	0	0
ISO 20000-1					1	1			0	0	0	2
ISO 22301				7					0	0	0	7
ISO 37001									0	0	0	0
ISO 39001						1			0	0	0	1
ISO 28000									0	0	0	0
ISO 22000	23	17	18	16	25	23	29	35	32	28	33	279
ISO 13485		1	3	2	3	2	2	2	3	3	3	24
<b>Total Quantity</b>	<b>218</b>	<b>324</b>	<b>350</b>	<b>445</b>	<b>592</b>	<b>627</b>	<b>617</b>	<b>705</b>	<b>827</b>	<b>818</b>	<b>1060</b>	<b>6583</b>

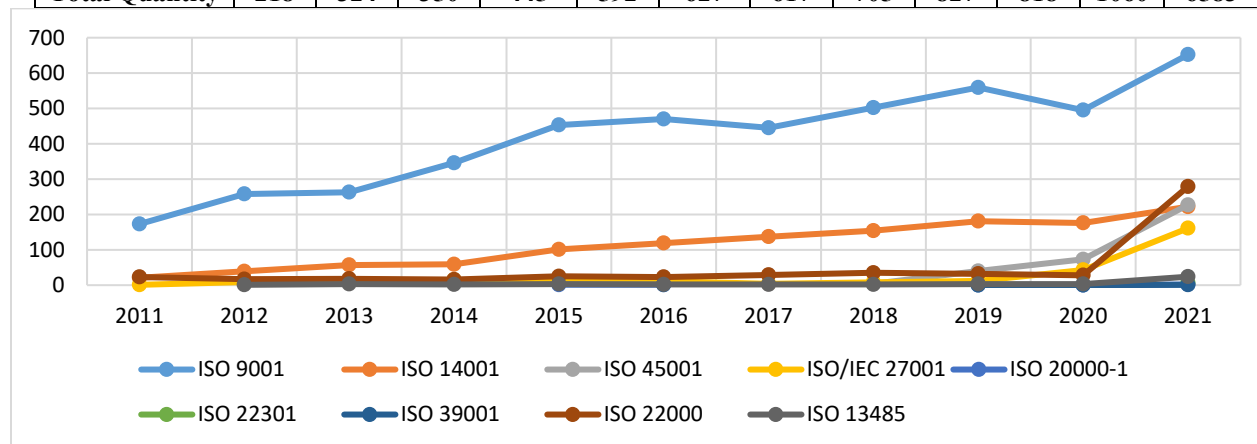


Figure 2. Trends of ISO implementation in Bangladesh (Year: 2011-2021)

From Table 1 and Figure 2, it is observed that, with the exception of ISO 20000-1, ISO 22301, and ISO 39001, other ISO standards have seen an increase in certifications in Bangladesh, where ISO 9001 and ISO 14001 show the highest growth rate compared to other certificates. ISO 22000 and ISO/IEC 27001 certified entities are growing

steadily. Recently, ISO 45001 has become a popular standard in Bangladesh after replacing OHSAS 18001 as the new standard in March 2018. During the last eleven year, the highest number of certificates was recorded in 2021.

## 5.2 Implementation of ISO certification in Bangladesh:

As mentioned in Table 1, only few ISO standards are implemented in Bangladesh. The detailed analysis for the most popular ISO certifications in various industrial sectors of Bangladesh is described in the following subsections:

### 5.2.1 ISO 9001 certification in Bangladesh:

From figure 2, it is seen that the quality management system standard ISO 9001 is the most popular one. The number of ISO 9001 certification up to the year 2021 in Bangladesh is shown in Figure 3. It shows that the overall number is still far from reaching any sort of saturation limit. The maximum number (852) of ISO 9000 certification was observed in 2009. It is also observed that, the number of certification for ISO 9001 was suddenly decreased in the year 2010 and 2011. After that, the number of certification seems to have positive growth since 2012.

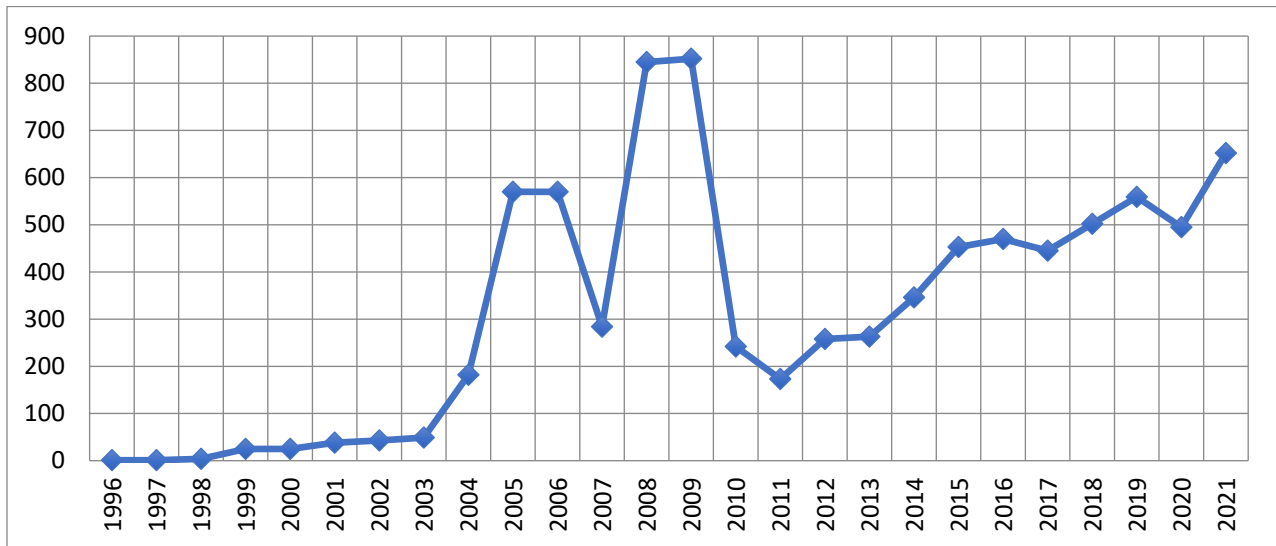


Figure 3. ISO 9001 certification in Bangladesh

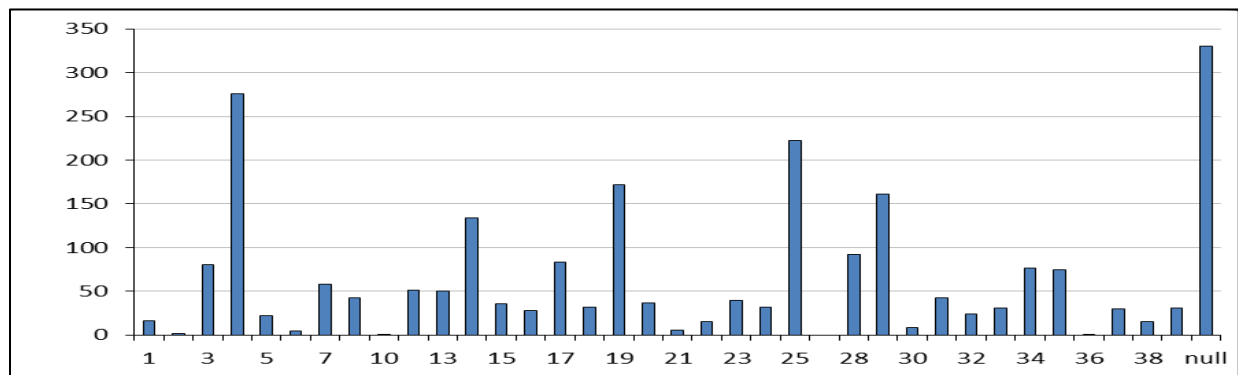


Figure 4. ISO 9001 certification in Bangladesh by Sector

From Figure 4, we observe that ISO 9001 has been implemented to various industrial sector such as textiles and textile products (sector: 4), electrical and optical equipment (sector: 19), electricity supply (sector: 25), personal & household goods (sector: 29), wholesale & retail trade, repairs of motor vehicles, motorcycles, etc. Among them, textiles and textile products (sector: 4) is in the leading position followed by electrical and optical equipment (sector: 19) and then electricity supply (sector: 25). Implementations in other sectors are almost insignificant.

**5.2.2 ISO 14001 certification in Bangladesh:**

Organizations in Bangladesh are concerned about environment which is reflected in Figure 5. The implementation is accelerated by international buyer’s pressure also. The number of ISO 14001 certifications has been increasing for the last eleven years. The maximum number (222) of certification was observed in 2021.

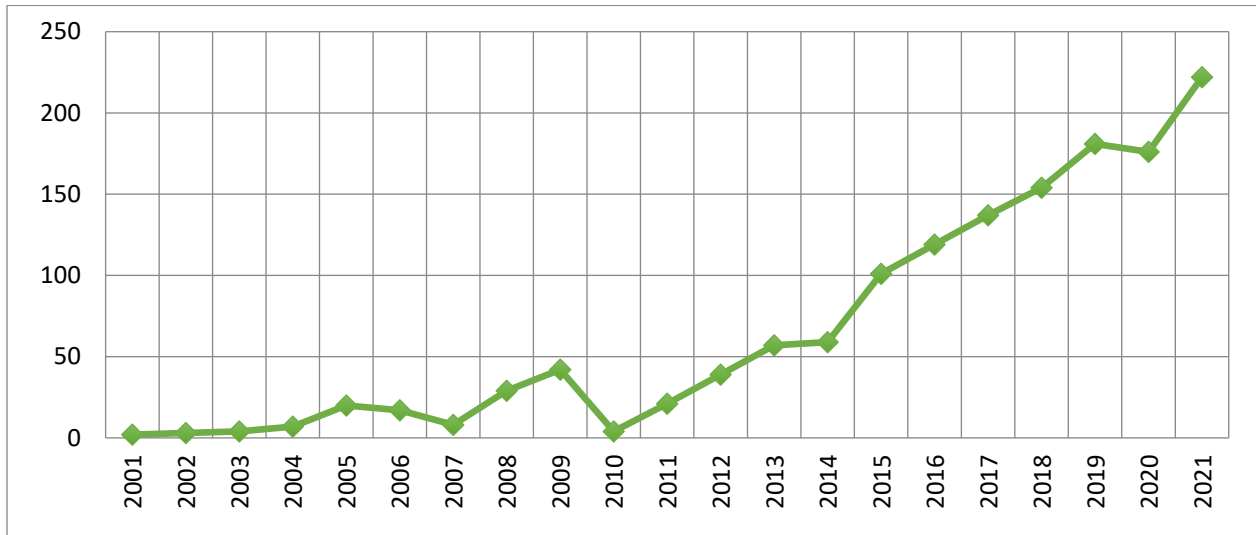


Figure 5. ISO 14001 certification in Bangladesh

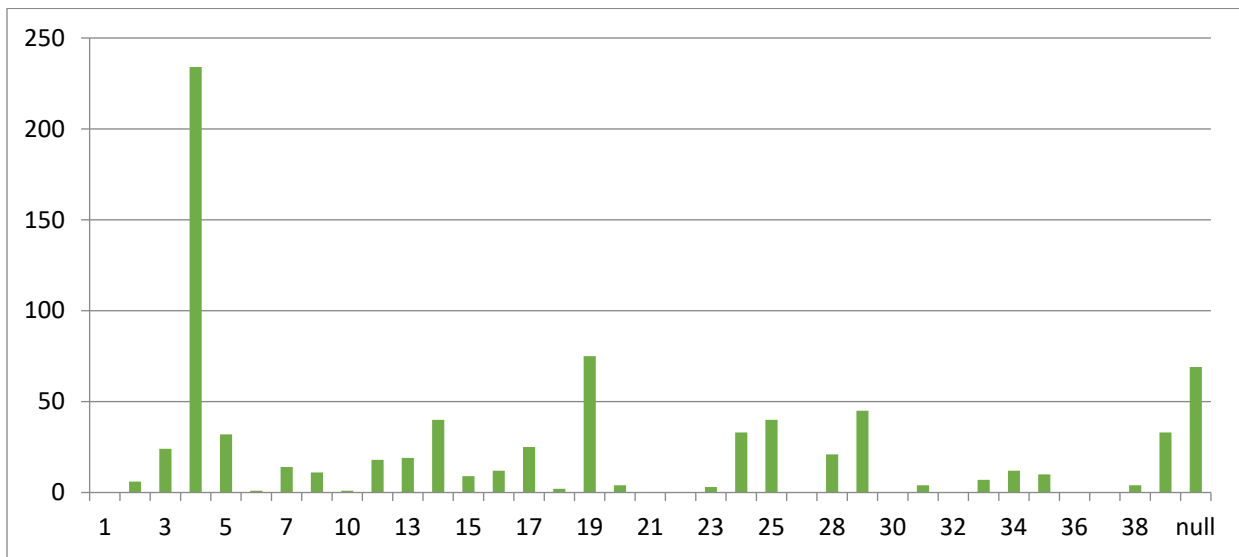


Figure 6. ISO 14001 certification in Bangladesh by Sector

Figure 6 shows that, ISO 14001 has been mostly implemented in Textiles and textile products (sector: 4), Electrical and optical equipment (sector: 19), various industrial sector (sector: null), Wholesale & retail trade, repairs of motor vehicles, motorcycles & personal & household goods (sector: 29), Electricity supply (sector: 25) and Rubber and plastic products (sector: 14).

**5.2.3 ISO/IEC 27001 certification in Bangladesh:**

Recently many organizations of Bangladesh have been aware of information security from cyber-attack though the number of certification is very low. The number of ISO/IEC 27001 certification is reflected in Figure 7. The maximum number of certification (43) was observed in 2020.

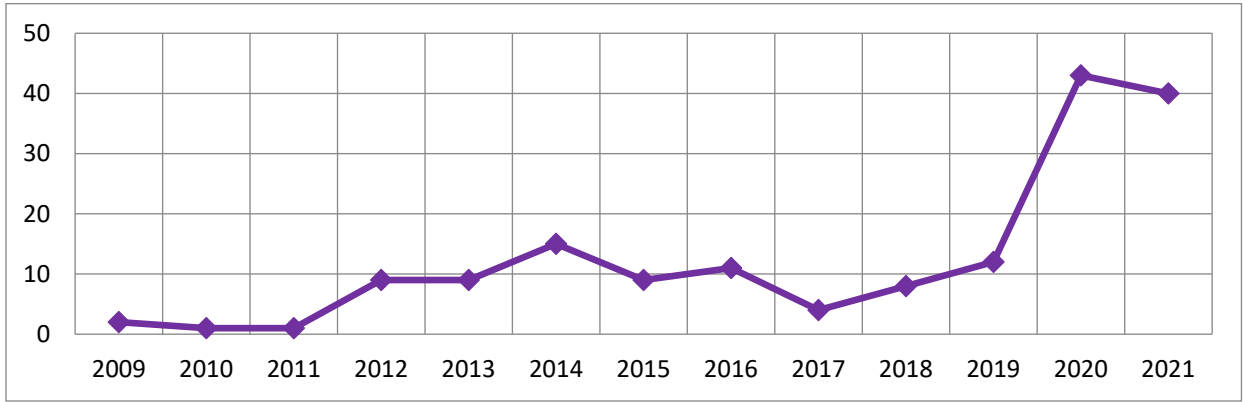


Figure 7. ISO/IEC 27001 certification in Bangladesh

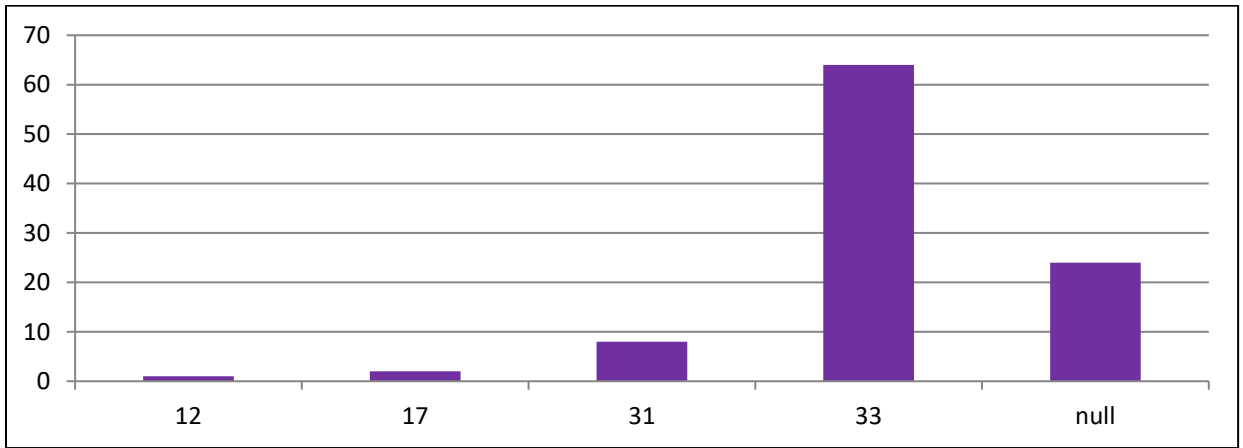


Figure 8. ISO/IEC 27001 certification in Bangladesh by Sector

Figure 8 displays that, ISO/IEC 27001 has been implemented mainly in Information technology (sector: 33). But the amount of certification is not much.

#### **5.2.4 ISO 45001 certification in Bangladesh:**

ISO 45001 was published in March 2018 as the new standard after the replacement of OHSAS 18001. Before the publication of ISO 45001, British standard for Occupational Health and Safety Management (OHSAS 18001) had been widely adopted by various organizations in Bangladesh. Some organizations migrated from OHSAS 18001 to ISO 45001 for Occupational Health and Safety Management within the organization. Figure 9 displays that the overall certification for ISO 45001 is still growing fast in Bangladesh since its publication.

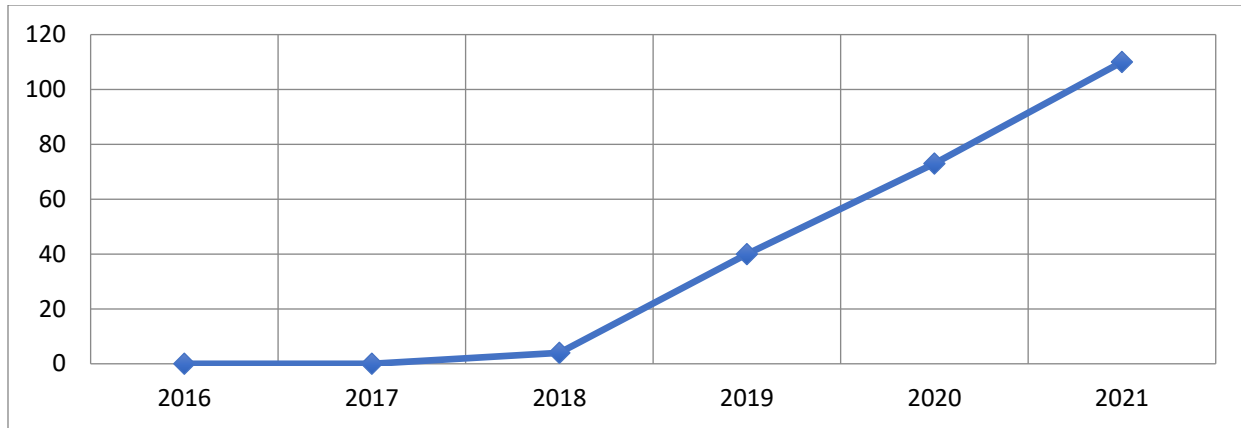


Figure 9. ISO 45001 certification in Bangladesh

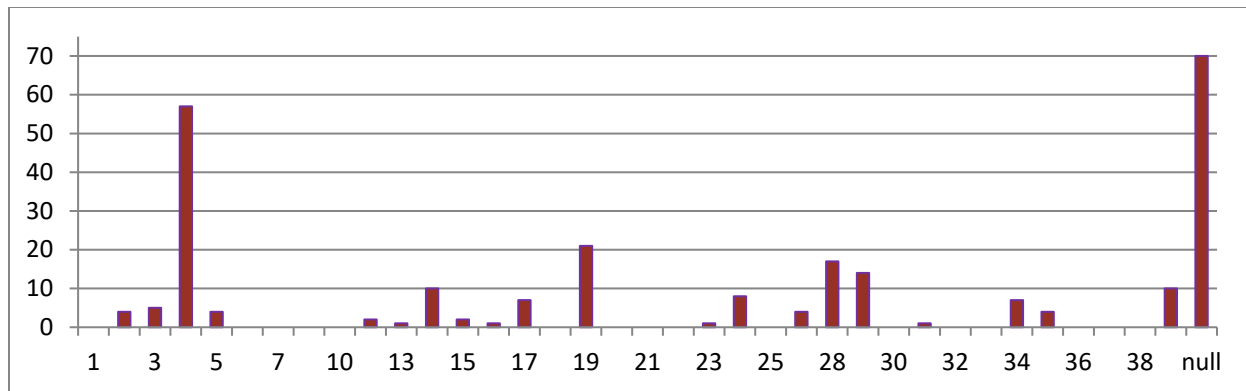


Figure 10. ISO 45001 certification in Bangladesh by Sector

As illustrated in Figure 10, ISO 45001 is most often implemented to the other industrial sector (sector: null), but ISO 45000 implementation in Textiles and textile products (sector:4), Electrical and optical equipment (sector:19), Construction (sector:28), Wholesale & retail trade, repairs of motor vehicles, motorcycles & personal & household goods (sector:29) are also increasing.

### 5.2.5 ISO 22000 certification in Bangladesh:

Figure 11 represents that, ISO 22000 certification for food safety management has frequent growth in recent years but still comparatively low compared to other common management system standards. The maximum certification was done in the year 2018. This standard does not contain data on sectors.

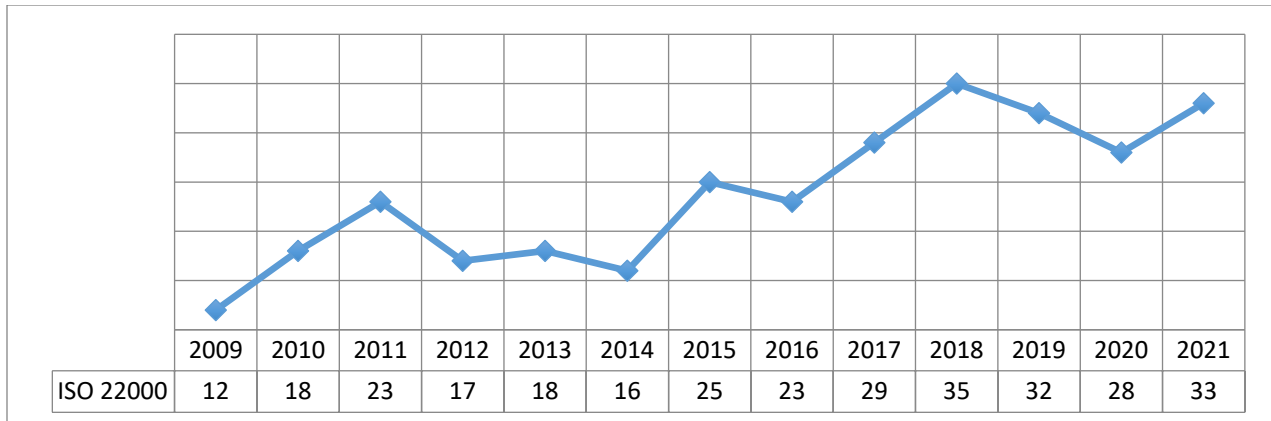


Figure 11. ISO 22000 certification in Bangladesh

### 5.2.6 ISO 13485 certification in Bangladesh:

As indicated in Figure 12, the certification of ISO 13485 has been implemented since 2012 in Bangladesh but the rate of certification is not so significant. This standard does not contain data on sectors.

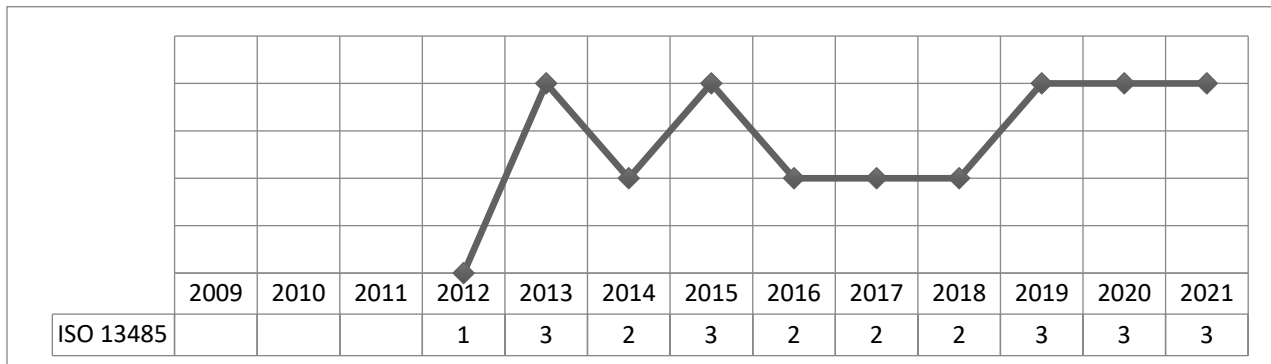


Figure 12. ISO 13485 certification in Bangladesh

### 5.2.7 ISO 20000-1, ISO 22301 & ISO 39001 certification in Bangladesh:

Figure 13 show that, there is no growth in the implementation of the standards ISO 20000-1 (for IT service management), ISO 22301 (for security, resilience and business continuity management) and ISO 39001 (for road traffic safety management) in recent years. The number of certification regarding these standards is significantly very low.

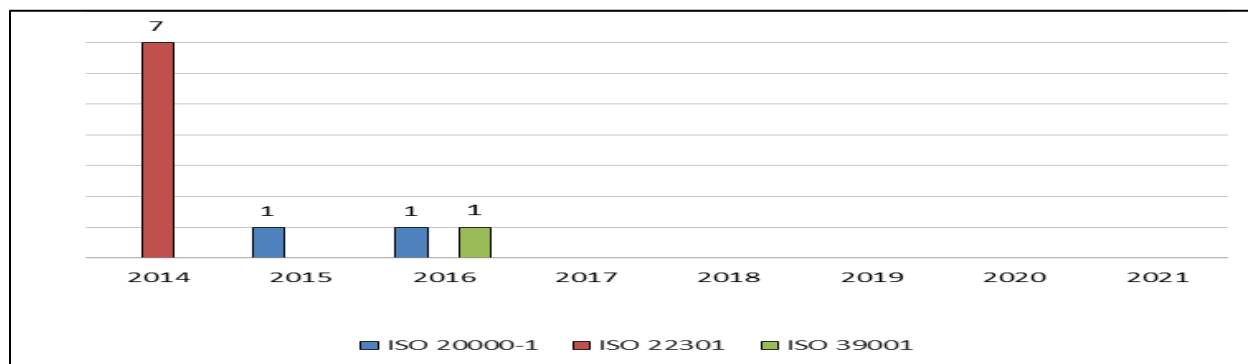


Figure 13. ISO 22000 certification in Bangladesh



### 5.3 Overall findings on ISO certification in Bangladesh:

Figure 14 shows that ISO 9001 and ISO 14001 have covered 80% and 13% of the total certification in Bangladesh respectively since 1996.

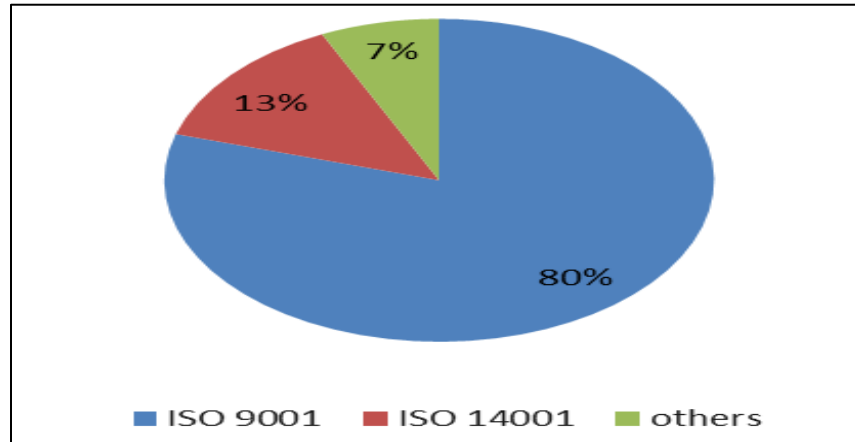


Figure 14. Overall rate of ISO certification in Bangladesh

The table below displays the total number and percentage for valid certificates highly certified standards in Bangladesh for the period 2018-2021 compared to the data across the world covered by the ISO survey.

Table 2. Total number and percentage of valid certificates for top standards in Bangladesh(2018-2021)

Management System	Standards	Year of publication (1 <sup>st</sup> edition)	Worldwide total valid certificates		Total valid certificates in Bangladesh	
			Number	% of total	Number	% of total
QMS	ISO 9001	1987	3,756,911	60.46%	2208	64.75%
EMS	ISO 14001	1996	1,388,545	22.35%	733	21.50%
OHSMS	ISO 45001	2018 (Replacing OHSAS 18001)	535,507	8.62%	227	6.66%
FSMS	ISO 22000	2005	38,507	0.62%	128	3.75%
ISMS	ISO/IEC 27001	1999	171,458	2.76%	103	3.02%
QMS-Medical Devices	ISO 13485	1996	30,240	0.49%	11	0.32%
EnMS	ISO 50001	2011	121,270	1.95%	0	0.00%

Figure 15 illustrates the overall ISO certification among the 39 sectors specified in ISO survey in Bangladesh, which represents textiles and textile products (sector: 4) is in the leading position. As reflected in figure 16, companies operating in the textiles and textile products (sector: 4) have had the leading role for years 2017-2020, whereas other industrial sectors (sector: null) has reached the leading position in the year 2021. Moreover, Electrical and optical equipment(sector: 19), Electricity supply(sector: 25), Rubber and plastic products (sector: 14)along with are showing importance of having ISO implementation for certain sectors and their businesses.

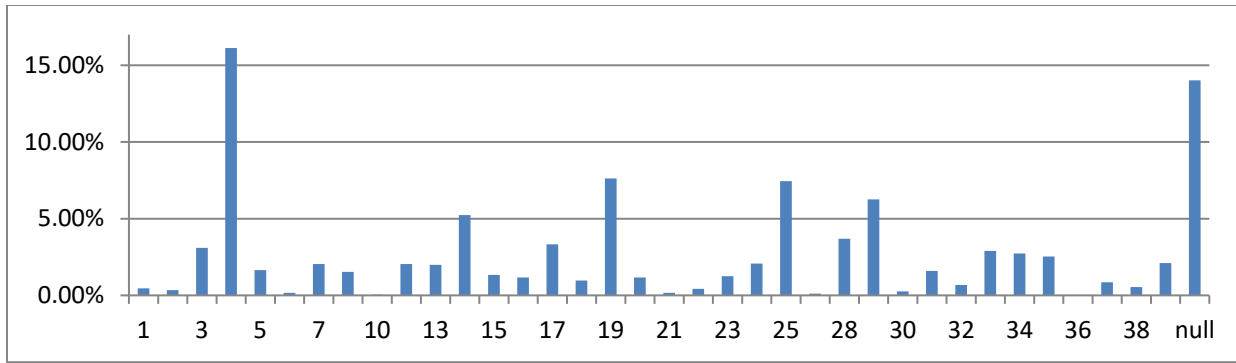


Figure 15. ISO certification in Bangladesh by sector

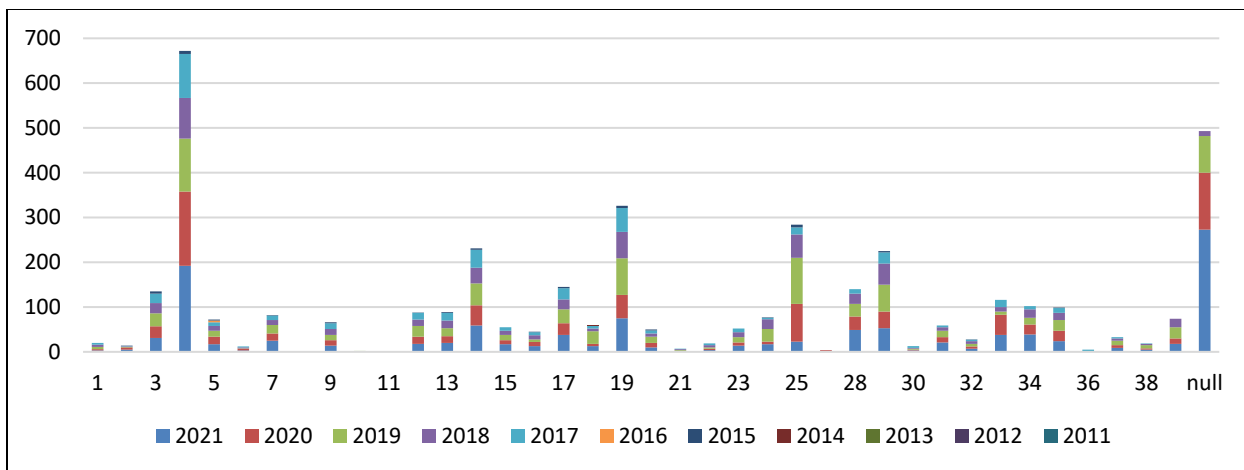


Figure 16. Yearly ISO certificates of industrial sectors in Bangladesh

From the above mentioned statistics, the top five industrial sectors regarding ISO certification in Bangladesh are as follows:

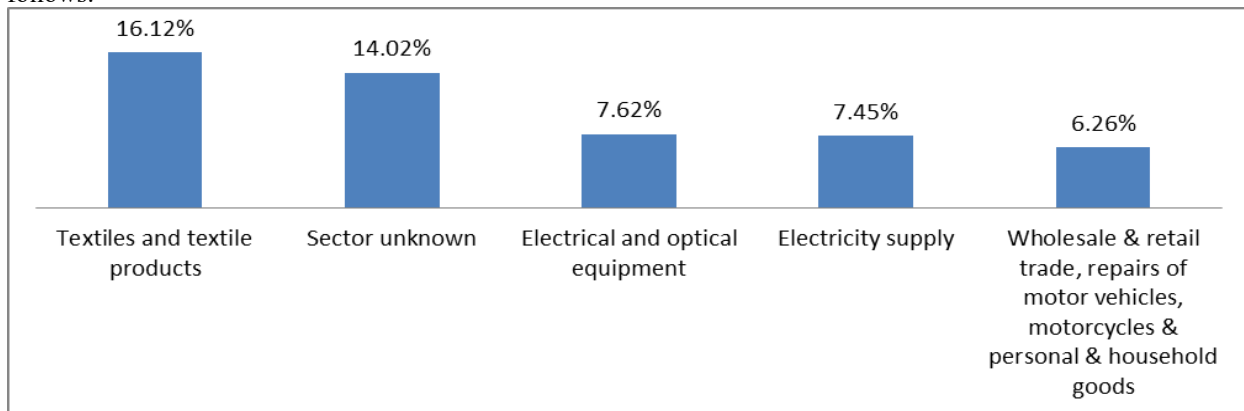


Figure 17. Top five industrial sectors for ISO certificates in Bangladesh

Above mentioned five sectors in figure 17 accumulate 51.47% of total ISO certificates in Bangladesh. Organizations of textiles and textile products are in the leading position.

### 5.4 Contribution of South Asian countries to the ISO certification:

Table 3 represents the regional share of South Asian countries for most commonly used seven management standards to the worldwide ISO certification from the year 2018 to 2021. From the table, it is observed that Food Safety Management System (ISO 22000) and Information Security Management System (ISO/IEC 27001) have increased regional share compared to other management standards in South Asia.

Table 3. Regional share scenario of South Asian countries

South Asian Countries	Regional share (%) (2018-2021)							Total	Rank
	ISO 9001	ISO 14001	ISO 45001	ISO/IEC 27001	ISO 22000	ISO 13485	ISO 50001		
Afghanistan	0.001%	0.0003%	0.0030%	0.200%	0.005%	0.000%	0.026%	0.235%	5
Bangladesh	0.059%	0.053%	0.0424%	0.060%	0.094%	0.012%	0.000%	0.320%	4
Bhutan	0.002%	0.003%	0.0039%	0.007%	0.044%	0.000%	0.000%	0.060%	8
India	3.595%	2.417%	3.0629%	6.108%	5.598%	2.276%	3.887%	26.943%	1
Maldives	0.001%	0.002%	0.0017%	0.000%	0.092%	0.000%	0.000%	0.097%	7
Nepal	0.016%	0.007%	0.0064%	0.014%	0.070%	0.001%	0.012%	0.125%	6
Pakistan	0.264%	0.174%	0.1541%	0.107%	0.602%	1.161%	0.073%	2.537%	2
Sri Lanka	0.116%	0.088%	0.0669%	0.127%	1.485%	0.023%	0.071%	1.976%	3
<b>Total</b>	<b>4.05%</b>	<b>2.74%</b>	<b>3.34%</b>	<b>6.62%</b>	<b>7.99%</b>	<b>3.47%</b>	<b>4.07%</b>	<b>32.29%</b>	

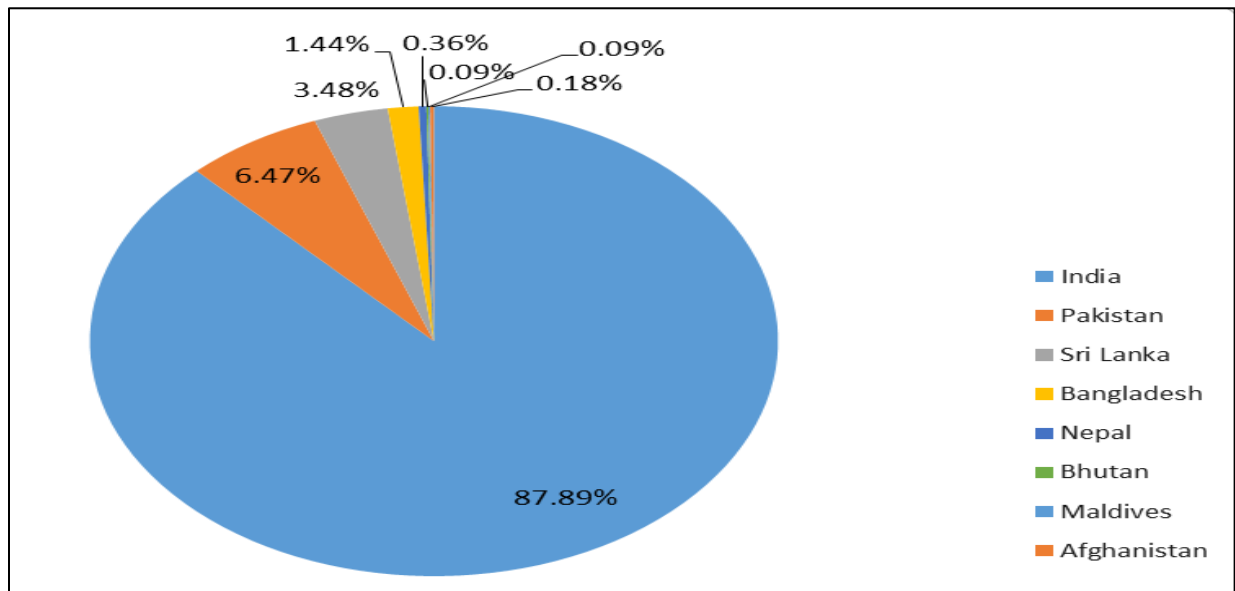


Figure 18. ISO certification rate among South Asian countries (2018-2021)

Figure 18 highlights the rate of ISO certifications among South Asian countries. These analyses have been carried out for the period 2018-2021. From table 3 and figure18, it is clear that India is the leading country in this regard (87.89%) and regional share among the South Asian countries. However, ISO certification rate in Pakistan, Sri Lanka and Bangladesh are also increasing (6.47%, 3.48%, 1.44% respectively) compared to Nepal, Afghanistan, Bhutan and the Maldives (0.36%, 0.18%, 0.09% and 0.09% respectively).

### 5.5 Driving Forces for Positive Trends and Scope of Certification in Bangladesh

#### 5.5.1 Globalization and trade:

Globalization and trade liberalization have led to tremendous growth in international trade over the past decade. In spite of limited resources Bangladesh contributes to international imports and export. Organizations in Bangladesh started adopting ISO certifications as key success factor to compete in international market.

### **5.5.2 Role of National bodies:**

Bangladesh Standards and Testing Institution (BSTI) is the national standards body of Bangladesh (BSTI-BDS, n.d.). BSTI has got the membership of ISO. BSTI as the only Govt. organization, operates Management Systems Certification through Management Systems Certification (MSC) Wing against ISO 9001 (Quality Management System), ISO 14001 (Environmental Management System), ISO 22000 (Food Safety Management System) to different Industry, Business and Service Organization (Bangladesh Standards and Testing Institution (BSTI), n.d.). There are number of private certification agencies working for issuing management systems certification, but, Business and Service organization achieves ISO certificate in low cost from BSTI other than private and foreign certification organization (Bangladesh Standards and Testing Institution (BSTI), n.d.).

### **5.5.3 Prospect of ISO implementation:**

ISO certification has become increasingly important for different business sectors in recent years. It is important to note that Bangladesh has fallen far behind developed countries in terms of implementation of ISO standards and the practices associated with them. Although increasing awareness and growth of ISO Certifications in few business sectors have been found satisfactory in Bangladesh recently, which has led to the implementation of ISO management systems. There exists a huge potential for all ISO certifications. With passage of time, increasing competition and empowerment of regulatory agencies, focus on these certifications is increasing. Government of Bangladesh has also taken initiative to implement the standards as well as to improve the quality of products and services to comply with international trade requirements and ensure sustainable & inclusive business growth. As a consequence, it is asserted that there could be good future for ISO Certification and positive trends and expansion in scope of application is very predictable for coming years.

## **6. Conclusion**

The international management standards have become very essential to cope with the modern way of business. This study intended to focus on the implementation trends of ISO standards in Bangladesh along with the comparison with other South-Asian countries. From the study, it is explored that various organizations of Bangladesh have implemented ISO standards either individually or as an integrated management system. Based on the above-mentioned information, highly adopted management standards in Bangladesh are ISO 9001, ISO 14001, ISO 45001, ISO 22001 and ISO/IEC 27001, where the growth of ISO 9001 is in leading position. Furthermore, it has been observed that textiles and textile products is the sector with high growth of ISO certification. This study also indicates a growth for adoption of different management standard in future. The outcome of the study will contribute to add value to the existing literature as well as guide managers and policy makers to improve management practice in terms of quality, safety, environment etc. This study recommends conducting an in-depth future analysis in different context, location and culture to analyze the influence of the geographical variable. Moreover, future study could identify the challenges and scopes during implementation and integration of different management system standards in context of Bangladesh.

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