

Total Quality Management for Employee Engagement: A Study

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Abstract:

Extensive studies have been carried out on Total Quality Management (TQM) practices but the effect of these practices on Employee Engagement has not been measured, especially in the Indian manufacturing organisation. This study analyses the impact of TQM practices on Employee engagement in an automobile company of north India. The Quantitative survey methodology along with a self-administered questionnaire to the employees of all the departments having different job responsibilities produced clear data that points towards concrete recommendations. The results proved that these practices have a direct impact on Human Resource Management Policies. As the HRM policies get integrated with TQM practices, they have a direct impact on Employee Engagement. The multiple regression analysis which supported the model was found to be creditable. Step wise multiple regression analysis measured the impact of each dimension of TQM on HRM policies and subsequently, for each dimension of HRM policy on employee engagement. In the present Indian eco system where digital technology has not taken root yet, employee engagement plays a major role in the growth of the organisation. The Indian organizations that have a poor employee engagement index will benefit by improving the same through the implementation of TQM practices. The resultant increase in employee engagement will have a direct impact on their mindset status as they will truly 'belong' to their organization

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INTRODUCTION

In the dynamic Indian business environment, the manufacturing sector is emerging as the leading sector, capable of influencing the economy of the country. In the last three decades, after playing a major role in the development of the economy, the manufacturing sector has geared up its operations to meet the challenge of the best in class competitors. It has maintained growth, productivity, employment and has helped the service sector to grow. After modifying business policies in order to obtain excellence in productivity, Human Resource Management and Marketing, it has tweaked

customer-oriented policies in order to lay more emphasis on customer delight. This sector has realized that the only way to grow is by keeping an eye on customer requirements and that is possible if the manufacturing unit is efficient, effective, flexible and competitive (Ahmad and Yusof, 2010). The new business environment has attracted foreign manufacturers to set up manufacturing units in India. They bring with them rich experience, new cost effective methodology and innovative technology. Learning from their expertise, Indian manufacturers have adopted their style of operations and have been able to excel in their respective domains. Total

Quality Management (TQM) is one such way of working, which helps to maintain quality in an organisation. In a recent study, Gupta (2019) states that adopting Quality Management Practices leads to changes in organizational culture and this culture change leads to the successful implementation of TQM. According to Flynn et al.(1994) TQM is a philosophy for the growth of the organisation and is based on committed leadership at the top, defined vision and plan, process control, adherence to quality systems, human resource management and engaged employees. According to Zairi and Youssef (1995) TQM is a philosophy to improve infrastructure, attitude of employees, their behavior and their engagement. It lays emphasis on consistency of processes, consistency in product quality and cost competitiveness with an aim to satisfy the customer. According to them, the implementation of TQM leads to improvement in job satisfaction index and an increase in market share through product quality improvement. These benefits culminate in a major change in the business performance parameters, thus ensuring continued growth.

For any company, employees are the key resource. Be it a manufacturing or a service organisation, be it a small scale or a large scale unit, be it a local organization or an MNC, employee engagement is the key to success. In a similar study, Swathi (2013) states that employee commitment impactsthe accomplishment of the mission and vision of the organisation. The emotional and intellectual commitment of the employee is employee engagement. The author further elaborates that the engagement is the level of the ownership which an employee contributes towards the success of the organisation. Kaliannan&Adjovu (2014) identify that though the success of an organisation is measured by the increase in market share and revenue, yet the real impetus behind this success is the employee's engagement with the organization. However, some of the reports suggest that there is a low level of employee engagement worldwide. According to the report of Gallop (2017) only 15% of employees are fully engaged with their respective

organizations and the remaining 85% are either partially engaged or not engaged. The report by Forbes (2014) describes the cause as the absence of support to the employees due to Human Resource Practices. Jain (2013) concludes that a strong correlation exists between HRM and employee engagement. Formulation and adherence to Human resource policies to keep employees satisfied is crucial to success. Through the creation of a friendly environment at the work place and maintenance of employee friendly relations, employers these days are able to attract the best talent. Human Resource Management (HRM) is a crucial part of management strategy. In their study, Elarabi&, Johari (2014) state that the role of HRM is significant as it helps in enhancing employee performance, enhancing cooperation between the employees and improving technical and managerial talent. It also helps in improving employee engagement. Researchers have carried out various studies to find if any relation exists between TQM practices and HRM practices. Madanat&Khasawneh (2017) in a study have concluded that TQM practices have a significant impact on the effectiveness of HRM. They further state that continuous improvement and customer focus play a significant role in the effectiveness of HR practices. Their findings also state that improvement in implementing TQM helps the management to use the people and other resources optimally for the benefit of the organisation. Though some studies have been carried out to understand the relationship between TQM and Employee engagement, the author proposes to first study the relationship between the TQM Constructs and Constructs of HRM. Then the relationship between these HR Policies and Employee Engagement (EE) can be studied.

TQM is a vast domain and has been implemented in different organizations with variable results. Studies have been carried out to understand the influence of constructs of TQM on Human Resource Practices. Atwati et.al (2013) concluded that continuous improvement has a strong relationship with improvement in HR Practices. They also found that

the implementation of TQM improves Training & Development practices. Indumathi (2016) holds that TQM is an approach to HRM that involves various dimensions of quality management. Similarly, different dimensions of HR practices display a varying degree of influence on Employee Engagement. HetalJani,&Balyan (2016) have analyzed the relationship between various constructs of HRM and Employee Engagement (EE). They conclude that Compensation and Rewards management has an impact on EE. Similarly, they concluded that Training & Development practices have an impact on EE.

Various researchers have carried out studies to understand the relationship between TQM and HRM practices. They have been able to conclude that both are interrelated to each other. However no significant study has been carried out to unearth the impact of Human Resource policies on employee engagement. At the global level, researchers have established that the organisations who have implemented TQM practices have also adopted Management Systems like Training and Recognition Participation by employees but have not studied whether these systems lead to improvement in the level of ownership, alias engagement. Although there is a great interest in employee engagement, relatively little is known about how employee engagement can be affected by HR practices. Aybas&Acar (2017) state that the impact of TQM on HRM practices needs to be verified for the Indian organisations. Since the business laws, labour laws and working environment is different in India as compared to those in developed countries, there is a need to study the effect of TQM on Employee Engagement in the context of the Indian business environment. This author tries to fill the gap by examining the effect of TQM implementation on Employee engagement. This paper contributes by answering the following research questions:

- Does implementation of TQM affect HRM practices?

- What is the impact of selected HRM practices on employee engagement in the Indian manufacturing company?

The empirical study has been conducted on one organisation that has implemented TQM at their work place and has excelled in its domain of operation. The organisation has won various Quality awards at the national and international level including the coveted Deming Prize. The study has established a correlation between the various constructs of TQM: Leadership, Vision, Continuous Improvement and Customer Focus with HRM practices. The study in turn has established a correlation between selected HRM practices: Education & Training, Rewards & Recognition, Employee Participation and Team Work with Employee Engagement.

This paper begins with the literature review of the TQM systems, HRM practices and Employee Engagement in the companies. It is followed by various researches carried out wherein the relationship between the constructs of TQM and HRM practices has been established. Similar research follows wherein the relationship between HRM practices and Employee Engagement has been established. After a brief review of the constructs of TQM (Independent Variable) and HRM (Dependent Variable) and again between constructs of HRM and EE, the hypotheses of the research study are stated. Data analysis and Research findings follow the hypothesis. The paper concludes with the practical implications of the research findings and conclusions established. **Review of Literature**

Total Quality Management

To maintain competitive advantage and improve the effectiveness of the business model, organisations world over have adopted TQM as a basis for their policy formation (Al Nasser et al., 2013). Kabak et al.(2014) states that most of the problems are a result of management decisions in an organisation. However, in many such organisations, the voice of employees is curtailed even if they have valid and

suitable ideas. Recognizing the contribution of employees, the TQM philosophy stresses that exchange of ideas leads to collaborative decision making and improvement in employee morale (Dose, 2011). Indumathi (2016) in his study has concluded that involvement of stakeholders viz employees, suppliers, top management and workforce is the backbone of TQM. Focus on human resources addresses the issue of human involvement. He has further emphasized that employee involvement is crucial to maintain quality. The HR function must align with the TQM practices.

Leadership

Leadership is one of the driving forces for successful implementation of TQM. Verma (2014) has stated that committed leadership is one of the important factors to achieve organisational growth. The success of an organisation depends on the ability and attitude of the leaders. Ulle and Kumar (2014) state that visionary leadership leads to improvement in organisational performance as compared with financial performance alone. The style of leadership should be such that it gives a value system to its employees so they can manage their domain of work themselves and unite to attain the goals. Mosadeghrad, (2014) has expressed that strong commitment from the top and a supportive environment is required to create employee ownership.

Vision & Plan

For communicating the values and aspirations of the organization, a vision statement is formulated. On the basis of the vision statement, employees make strategies which are in line with the objectives (Meredith and Shafer, 1999). Groth (1995) in his study states that a clearly defined vision helps in identifying and selecting attainable goals. This helps to motivate the employees to achieve the desired goals. Johnson & Omachonu (1995) have identified the role of vision as a compass to point the organisation towards customer-oriented goals and a process-driven culture.

Continuous Improvement (CI)

Continuous Improvement is ongoing improvement in systems, processes, quality and products. It is achieved through incremental improvement and innovation. It has been a basic principle of TQM for the last three decades. The organisations which have embedded CI in their policy have achieved high growth (Lahidji and Tucker, 2016). Mora (2014) explains the important characteristics in his study and states that the need for building a continuous learning process and the participation of every employee in the improvement process are essential for growth. He also lays emphasis on the empowerment of employees in the improvement process.

Customer Focus

Customer Focus is the development of the comprehensive needs and expectations of the current and potential customers, meeting those needs and delivering the perceived value to them (Sharabi, 2015). He further elaborates that the outcome of the focus should be to create perceived value for the customer. Chiguvi (2016) concludes that wherever Customer voice is captured, it has a tremendous effect on customer satisfaction. Improvement in the Customer satisfaction index has been seen where responsiveness and reliability are given priority. Yaacob (2014) in his study demonstrates that customer focus has a significant effect on Employee motivation and innovation. His findings indicate that the advantages of customer focus reach much beyond customer satisfaction. Customer satisfaction is the result of a positive relation between employee engagement, job satisfaction and innovation. Training employees adds to the level of customer focus.

Human Resource Management

HR is a potential source for the growth of the organisation. Usrof & Elmorsey (2016) in their study have concluded that HRM is associated with new and innovative methods of working so as to achieve business excellence as a part of the implementation

of TQM philosophy. Cechet al. (2015) emphasized that HRM policies are expected to integrate a series of processes and programs which result in the growth of the business. TQM is one such methodology which can pave the way for forming such processes. HRM practices act as the guardian of the employees. Starting from hiring the talent, providing Education & Training, keeping them informed of the business scenario to the empowerment of taking decisions are a part of HR policies (Chughtai, 2013). Siddiqui (2019) argues that HRM policies are the key to achieve worker dedication. These policies create, retain and motivate the employees to work with dedication and achieve results. According to Rundle (1997) the organisation must recognize that it is the employees and not the organisation which will shape the future. Therefore, they are the heart and soul of the organisation. To nurture them, implementation of HRM practices which also involves participative management is a must.

Education & Training

Education & Training helps the employees to perform their duties as per the requirement and further improve their knowledge base. Zahari & Zakuan (2016) have stated that TQM has a positive correlation with employee performance and is an output of their training. Tessema & Soeters, (2006) have emphasized that effective training must be provided to employees for performance improvement, strategy planning and implementation of actions in a disciplined way. Such skill sets will help the organization to face the challenges thrown by the business world today. Education & training improves the working ability of employees. They are prone to less number of errors, teamwork is improved and attrition rate is reduced (Kaynak and Hartley, 2008). Gupta (2018) in his study states that Training and Development are the key drivers for improving employee involvement, even if it means sending personnel away for training programs at great cost. Through education and training, the self-esteem of the employees is improved (Bateman, 2002). He

further states that if the employees are not given training in TQM, they face a lot of obstacles in implementing it which leads to de-motivation and tardy participation in continuous programmes.

Rewards & Recognition

HR policies should be formed in line with organisational goals. Reward & recognition policy should be aligned to the goals in such a way that it motivates the employees to perform better. This policy should also be transparent so as to not only retain the skilled employees but also attract others. The goal of such policies should be to create an environment of belongingness (Kilmann, 1989). Mosadeghrad (2014) states that R&R is an influential tool to motivate employees towards quality improvement. He has concluded that financial incentives help to achieve and sustain success, where as non financial rewards help to achieve long term success of the quality objectives. The management should work towards removing the fear of termination but should develop a common vision by framing a policy which offers monetary and non monetary benefits to the employees. Gomez-Mejia and Balkin (1992) conclude that the old model of compensation having fixed pay is no longer effective. It must be replaced with a reward policy which motivates the employees to achieve a higher level of performance at the individual as well as organizational level.

Employee Participation

Whether TQM, Lean Manufacturing or Business Process Re-engineering, all management policies emphasize the employer's participation in the improvement process. Research carried out to establish the role of employee's participation in the change process has been the highlight of most studies. Welikala and Sohal (2008) have highlighted the influence of employees' involvement in change management as one of the success factors to achieve the goals. They also hold that lack of emphasis on employee participation in HRM policies has resulted in failure to implement TQM. Pun et al. (2001) hold

that active participation by the employees provides a solid foundation to quality improvement efforts and ensure that the practices are followed in true spirit. The organisations where HRM practices stress increased employee involvement are successful in implementing TQM and maximize the results through improved employee satisfaction and engagement.

Team Work

A team is a social and dynamic entity comprising two or more individuals working towards a common goal. They coordinate the tasks to be performed as per their individual capability so as to achieve the common objective (O’Leary, 2012).Khawka (2016) states that HRM policy influences the effectiveness of the team. The output of the team varies with environment and team characteristics. The environment should be such to encourage participation by employees in a team. Team work is one of the means to involve employees in various team activities like process and efficiency improvement. HR policies in general relate team work with employee empowerment. Employee empowerment comes with recognition of self worth, individual power and use of this power to achieve the goals. According to Lyth and Johnston (1996), delegation, responsibility and control are a part of employee empowerment. Empowerment discourages a rigid chain of hierarchy and encourages the employees to use their initiatives. Empowered employees are successful team players.

Employee Engagement

Markos&Sridevi (2010) have distinguished Employee Engagement from other concepts such as employee participation, job satisfaction, employee commitment, team work. According to them, Employee Engagement is a two way exchange of effort between the employees and top management. Few of the drivers of EE are the management’s interest in thewell being of the employees, providing respect to them and providing them career opportunities to grow. Boikanyo&Heyns (2019)

have concluded that when employees are well-engaged in an organisation, the attrition rate is lower. Such organisations have high productivity, long lasting growth and a high level of customer satisfaction. DDI (2005) has stated that if the HR policies align the efforts of the employees with strategies, empower the employees, help them to grow, provide support when required, the employee engagement index of the organisation will be quite high. According to Biswas and Bhatnagar (2015), the engagement of employees is a critical factor in the implementation of TQM. The level to which the employees are engaged determines the level of TQM implementation and the growth of the business.

Theoretical Framework

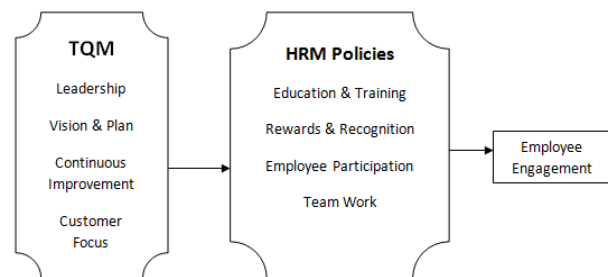


Figure 1: Theoretical Framework

A theoretical framework has been drawn as depicted in figure 1. It depicts the relationshipamong TQM, Employee Engagement and HRM Policies.

Hypothesis

The objective of this study is to examine the relationship between TQM and Employee Engagement. To establish this relationship, HRM policies have been considered as the moderator. Hence, the first study is conducted to establish the relationship between the four TQM constructs and HRM policies and further on, the four constructs of HRM policiesandEmployee engagement. The hypotheses that follow were constructed.

Total Quality Management - HRM policies relationship

Madanat&Khasawneh (2017) while studying the impact of TQM implementation on HRM practices conclude that the organisations which focus on TQM principles benefit as TQM has a strong positive correlation with HRM practices. They further analyze that if an organisation is focused on improving quality, it will modify its quality policy from traditional quality inspection practices to quality oriented practices. The effective management of human resources will encourage the employees to work towards achieving the organisational goals. Hence the first main hypothesis is:

H1: There is a strong positive correlation between TQM Practices and HRM practices.

The relationship between TQM practices and Education & Training

The commitment of top leaders has a direct impact on the performance of an organisation. Foster (2012) in his study has stated that the leader forms the policies for organisational growth. The vision of the organization must support the development of the employees. Jorgensen (2007) states that as the organisation adopts continuous improvement as one of the principles, the opportunity for education and training arises. The first sub hypothesis is:

H1-1: TQM dimensions have a positive influence on Education and Training policy.

TQM practices and Rewards and Recognition policy

Allen & Kilman (2001) in their study on organisational strategy and reward system have argued that alignment of the organizational strategy with reward policy helps to improve organizational effectiveness. Rusoo et.al (1992) in their study on Rewards & recognition in the TQM environment have concluded that any organisation which embraces TQM strategy and undergoes corporate cultural change must plan HR policies so that reward and recognition becomes a basic tool for creating such change. They recommend that any organisation

implementing TQM must reward the employees who excel in process improvement, problem prevention and customer satisfaction. The HR representative should ensure that organisational practices are integrated with a Rewards programme. The second sub hypothesis is:

H1-2: TQM dimensions have positive correlation with Rewards and Recognition policies.

TQM Practices Employee Participation

Yacoob (2014) holds that customer focus has a significant effect on employee participation. This positive effect is due to the role played by the employees who have built in the culture of 'customer first'. As the emphasis on customer focus is increased, HR policies of employee empowerment and transparency in sharing customer information are modified. Empowerment and access to information further encourages employees to be proactive in solving problems. Taiwo, (2016) states that vision statements inspire the employees who can suggest rare ideas and opinions which can transform into creativity and innovation. If continuous improvement through innovation is encouraged, the employee's participation improves to a large extent. A shared vision is a motivating force for the employees to initiate the achievement of the personnel goal of growth and learning. The enhanced learning will offer an opportunity to improve competitive advantage. The third sub hypothesis is:

H1-3: TQM dimensions and Employee Participation are positively correlated

TQM practices and Team work

Anaza and Rutheford, (2012) have stated that to secure the results of customer focus, the policies should be implemented through team work during the planning and implementation stage so that issues related to the customers are resolved to their satisfaction. To be pro-active while implementing customer focus is one of the strategies to improve performance and for this, the direct involvement of

cross functional teams at the planning stage is required. The fourth sub hypothesis is:

H1-4: There is a positive relationship between TQM dimensions and Team work

HRM Policies and Employee Engagement

Boikanyo & Heyns (2019) have expressed that organisations having people oriented HRM practices have demonstrated significant improvement in productivity, job satisfaction, employee engagement and financial performance. They stress that engagement should be viewed as a principle outcome and must involve all levels of the organisation. Laying emphasis on Training & Development, they state that competent employees, open communication, empowerment and delegation give a sense of responsibility to them. The second hypothesis is:

H2: There exists a positive correlation between HRM practices and Employee Engagement

The relationship between Education and Training and Employee Engagement

Sendawula et.al (2018) state that the level of ownership by the employee determines the level of performance. An engaged employee is well aware of the business environment and works to improve performance. Education and training helps the employee gain the skill and knowledge required to work for the improvement. The self esteem of the employee improves with an improvement in skill level and this leads to the desire to make more contribution towards the business growth. According to Shantz et.al (2013), vigor, dedication and absorption make an employee engaged in his work and these attributes become a part of personality through proper education and training. The sub-hypothesis is:

H2-1: Education and Training are positively related to Employee Engagement

The Relationship between Rewards and Recognition and Employee Engagement

Scott et.al (2010) has summarized the role of rewards in supporting employee engagement. They found that tangible rewards like basic pay, incentives have less effect on engagement rather than intangible awards. Intangible awards like career development, senior leadership have a long term effect on engagement. They also conclude that short term awards have more impact on engagement than long term awards. They have also found that the involvement of employees in designing reward programmes is of a low level. Hence the sub hypothesis is:

H2-2: Rewards and recognition impact employee engagement positively.

Employee Participation and Employee Engagement

Thavakumar and Evangeline, (2016) while studying the factors impacting employee engagement found that employee participation, involvement and compensation influence their engagement to a high level. They have also suggested that the HRM policies should be framed such that employee participation improves, leading to an improvement in the overall engagement index. Kulachai et.al (2018) state that employee participation has a positive effect on the organisation's growth. They have also stated that a low level of participation in the decision making process results in a low level of job satisfaction and engagement. Hence the sub-hypothesis is:

H2-3: Employee participation has a positive correlation with employee engagement.

The Relationship between Team Work and Employee Engagement

Ravikumar, (2018) in his study on Employee Engagement found that along with other factors team work plays a significant role in EE. He stated that the organisation which supports the policy of team work has more engaged employees than those who work individually. Team work gives them

motivation, spirit of oneness and recognition. The more emotionally attached they are to the organisation, the more they are engaged.

H2-4: Team work has a positive impact on Employee Engagement

RESEARCH METHODOLOGY

The objective of this study is to examine the relationship between Total Quality Management and Employee Engagement.

Scope of Study

The study has been carried out on one of the leading large scale automobile manufacturing organisations in North India.

Instrument Development and Data Collection:

To develop a tool for measuring the effect of TQM parameters on Employee Engagement through HRM Policies, a questionnaire was developed. To formulate the questionnaire, questions were adopted from the pool developed by Zang(1999). The selected questions were related to the variables under study.

The Survey method was used to collect primary data from the employees of the organization. Random Sampling Technique was used to ensure that each employee gets an equal chance of getting selected. Hence, systematic bias was ruled out. Stratifying the sample so that employees from each area of operation and from all hierarchy levels are included in the survey further reduced the bias.

The 5 point Likert scale was used to capture the response of the respondents. The scale ranged from 1 to 5 indicating [1] as 'strongly disagree' and [5] as 'strongly agree'. 100 employees were requested to fill up the questionnaire. About 46 respondents responded to the survey.

Research Instrument

SPSS (Statistical Package for the Social Sciences) version 26 was used to analyze the data. Reliability analysis has been carried out by calculating Cronbach's coefficient alpha value. Pearson Correlation and Multiple Regression analysis helped further analyze the data and verify the hypothesis.

DATA ANALYSIS AND RESEARCH FINDINGS

Reliability Analysis

To determine the reliability of measurement, Cronbach's coefficient alpha value has been calculated. The overall value for all independent variables (TQM Dimensions) lies between 0.776 and 0.832. This indicates that the constructs are reliable to measure the relation with dependent variables. The alpha range of HRM policies is 0.801, which is also within the acceptable range.

Testing of Hypothesis

H1: There is a strong correlation between TQM practices and HRM practices.

Simple regression for the impact of TQM on HRM policies has been calculated. Table 1 shows the results of the analysis.

Table 1

Table 1 indicates that implementation of TQM has a positive correlation with HRM Policies. The value of adjusted R^2 is 0.540, which indicates that implementation of TQM has 54% impact on HRM policies. The value of R, which is .736 which also indicated that model, has good correlation between the two variables.

The researcher has further analyzed the relation between each TQM dimension and HRM policies. To establish correlation between them four dimensions of TQM: Leadership (LDS), Vision and Plan (VP), Continuous Improvement (CI) and Customer Focus (CF) have been considered as independent Variables and HRM policies as dependent variable. Multiple and step wise regression analysis has been used and the results are shown in Table 2 & 3.

Table 2

As indicated in table 2, implementation of TQM has a significant effect on the HRM policies. Multiple regressions indicate that all the four dimensions of TQM have a significant effect. Leadership bring at rank one. It is followed by vision and plan. Third and fourth are continuous improvement and customer focus. The extent to which each dimension

explains the variation in HRM policies is explained by means of step wise regression.

Table 3

Table 3 reveals that Leadership accounts for 41.2% variation in HR policies. Vision and Plan along with Leadership have 46.7% impact on HRMP. Similarly Continuous Improvement associated with Leadership and Vision and Plan accounts for 50.4% variation and all the four dimensions put together account for 54.8% variation.

Hence H1 hypothesis is accepted.

Impact of TQM dimensions on Education & Training(ET)

The impact of TQM dimensions on Education & Training is analyzed via multiple and stepwise linear regression. Table 4 and 5 show the results.

Table 4

Multiple linear regressions in table 4 indicate that all the dimensions of TQM have significant effect on Education & Training. Beta values confirm that Continuous improvement has the strongest influence on ET. It is followed by Vision & Plan, Leadership and Customer focus. Further stepwise regression analysis is carried out to know the extent of influence of each dimension on Education & Training.

Table 5

Table 5 shows that Continuous improvement has the maximum effect which accounts for 41.6% variation in ET This is followed by Vision and plan, which along with CI accounts for 48.6% variation, followed by Leadership which along with CI and VP results in 55.5% variation. Fourth dimension Customer focus along with other three dimensions is responsible for 62.1% variation in Education and Training. The analysis shows that the H1-1 sub-hypothesis which states that TQM dimensions have a positive influence on Education & Training policy is accepted.

Impact of TQM dimensions on Rewards & Recognition (RR) Policy

To examine the effect of TQM dimensions on Reward & Recognition policy, multiple and step wise regression analysis is carried out.

Table 6

Table 6 depicts all the dimensions of TQM has a positive impact on Rewards & Recognition policy. The Beta values on the table shows that Leadership (Beta = 0.367) is the most influential. Vision & Plan (0.332), Customer focus (0.274) and Continuous improvement (0.229) follow the Leadership dimension. The extent of influence of each dimension is analyzed in table 7.

Table 7

As examined in table 6, Leadership being the highest influencer accounts for 31.1% variation in RR policies. Vision & Plan along with LDs are responsible for 37.4% variation. Similarly, Customer focus following the above two dimensions, accounts for 44.3% variation along with LDS and VP. The fourth dimension i.e. Customer focus along with LDS, VP and CI are responsible for 50.7% variation in Rewards & Recognition policy of the organisation.

In view of these analyses, H1-2 sub-hypothesis which states TQM dimensions have a positive correlation with Rewards & Recognition policies is accepted.

Impact of TQM dimensions on Employee Participation (EP)

A similar analysis is conducted to find the correlation between TQM dimensions and Employee Participation. Table 8 gives the results of this multiple regression analysis.

Table 8

Beta value of Leadership as shown in the table is the highest (0.412). It is inferred that Leadership has the highest influence on Employee participation. Continuous improvement is the second highest influencer having a Beta value of 0.359. Customer focus and Vision & Plan follow with a beta value of

0.347 and 0.289 respectively. Step wise regression analysis is shown in Table 9.

Table 9

This table shows that Leadership is the highest influencer that has a 37.3% influence on Employee Participation. Leadership is followed by continuous improvement which along with LDS influences EP up to 41.6%. Customer focus along with LDS and CI has 50.6% influences whereas all the four dimensions put together show 52.0% influence on Employee Participation. The analysis shows that H1-3 sub-hypothesis regarding TQM dimensions and Employee Participation are positively correlated is accepted.

Impact of TQM dimensions on Team Work (TW)

TQM dimensions also exert an influence on another HRM policy i.e Team work. To confirm the same, multiple regression analysis is carried out. The results are shown in Table 10.

Table 10

Team work exerts the maximum influence on continuous improvement (Beta = 0.398). Customer focus having Beta value of 0.311 follows CI Leadership (0.278) which is at third place in influencing Team Work. Vision and plan (0.254) also influences TW though it holds the last rank. To measure the amount of influence exerted by each parameter, step wise analysis is carried out. The results are shown in Table 11.

Table 11

Continuous Improvement at rank one exerts 41.5% influence on Team Work. The combination of Customer Focus with CI accounts for 48.5% influence. Leadership along with CI and CF impacts Team Work by 53.8%. Similarly the impact of Vision and plan along with CI, CF and LDS on TW is 57.8%. Since these dimensions have a positive correlation with teamwork, hence the sub Hypothesis stating 'There is a positive relationship between TQM dimensions and Team work' is accepted.

H2: There is a correlation between HRM practices and Employee Engagement

Simple regression analysis was carried out for HRMP and EE. The results are depicted in Table 12.

Table 12

Table 12 indicates that HRM Policies have a direct positive impact on Employee Engagement. Adjusted R^2 value is 0.634. This implies that HRM policies have 60.9% impact on Employee Engagement. R having a value of 0.798 also indicates that the model has a strong correlation between the two variables (HRMP and EE). Hence the H2 hypothesis is accepted.

Impact of the policies of HRM on Employee Engagement

Further analysis has been carried out to find the relation between each dimension of HRMP and Employee Engagement. The four dimensions already specified are: Education & Training, Rewards & Recognition, Employee Participation and Team Work. All these four dimensions have been considered as Independent Variables where as Employee Engagement is the dependent variable. Table 13 shows the result of multiple regression analysis.

Table 13

The analysis shows that all the four dimensions of HRMP have a significant effect on EE, Employee participation being at rank 1, team work is at rank 2, Rewards & Recognition follow team work, followed by Education & Training. To analyze the extent to which each dimension has an effect on EE, step wise regression analysis is carried out.

Table 14

The data shows that Employee participation has 45.7% impact on EE. Team work in association with Employee participation accounts for 55.1% of variation in EE. Rewards and Recognition along with EP and TW is responsible for 60.5% of variation where as Education and Training along with other three dimensions accounts for 63.9% variation.

This analysis shows that H2-1 sub-hypothesis 'Education and Training are positively related to Employee Engagement' is accepted.

Similarly, H2-2 sub-hypothesis which states that Rewards & Recognition impact Employee engagement positively is accepted.

H2-3 sub-hypothesis 'Employee participation has a positive correlation with Employee engagement' is also accepted. The fourth sub-hypothesis stating 'team work has a positive impact on Employee Engagement' is also accepted.

The above results are in line with the finding that TQM practices influence HRM policies and HRM policies influence Employee Engagement.

Discussion and Conclusion

The manufacturing sector in India is undergoing turmoil as global players have entered the scene with robust products backed by cost effectiveness. When the demanding customer confronted the Indian organisation, implementation of TQM was an obvious choice. One of the few obstacles these organisations faced was employee engagement. Though the employees were performing their duties, the ownership of their role was missing. In this context, examining the effect of TQM on Employee Engagement becomes imperative. Once the authors understood the ramifications of this paradigm, a study of effect of TQM dimensions on employee engagement became the focus.

TQM practices: The organisation under study adopted TQM methodology to improve organisational performance. Being in the automobile sector, the competition was obvious and improvement in all business parameters was the only way to success. The analysis carried out shows that TQM practices have a positive impact on HRM policies. The study has also concluded that different dimensions of TQM practices viz; Leadership, Vision, Continuous Improvement and Customer focus have a positive correlation with HRM policies. The study also finds that these dimensions have a different impact on each construct of HRM policy. The results are in line with the studies conducted earlier (Indumathi, 2016; Ulle et.al, 2014; Yacob, 2014; Zahari, 2016)

HRM Practices: TQM practices have a direct impact on HRM policies. The authors have studied the effect of HRM practices on Employee Engagement. The study shows that Employee Engagement is impacted by HRM policies. Further study showed that the four constructs of HRM which were positively affected by TQM practices also have a positive effect on EE individually. The results are in line with the finding of the authors (Hetaljani, 2016; Aybas, 2017; Siddiqui, 2019; Welikala, 2009; Thavakumar, 2016) who have carried out various studies on these parameters.

The study has concluded that TQM practices have an impact on Employee Engagement. As the implementation of TQM has improved over the years, so has job ownership. As the ownership improves, the business parameters also improve.

Implications

The findings bear practical implications for the organisations which are proposing to implement TQM practices or have already started the process. As the competition heats up, job ownership shall start playing a vital role in the growth of the organisation. To achieve the organisational objective, HRM policies should be aligned with TQM practices. The role of leadership, vision of the organisation, Continuous improvement and customer focus strategies should drive the HRM policies. HRM policies should lay emphasis on Employee Participation, Team work along with Rewards and Education of the employees. These factors should help in improving their engagement. Engaged employees are the strength of an organisation in the pursuit of excellence. The study is very useful for the managements that are facing difficult situations due to poor employee engagement and ownership. Since these guidelines help in filling the gap between the desired and current state, the organisations which have followed these guidelines have shown radical improvement in their performance.

Scope for future study

Further research can be carried out in the non-automobile manufacturing industries. The process of

achieving excellence by improving the engagement of the employees in some other automobile companies can be studied and a realistic model can be drawn. Since the circumstances vary from industry to industry and sector to sector, the researchers can build more detailed models. Future research needs to encourage the development of sound theoretical models and instruments in order to guide the industry.

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Independent	R	R Square	Adjusted R square	Sig	Statistical Decision
TQM	0.736	0.541	0.540	0.000	Accepted

Significant at ($\alpha \leq 0.05$)

Table 1 : Impact of TQM on HRMP

TQM Dimension	t	B	Sig	Statistical Decision
Leadership	8.321	0.352	0.000	Accepted
Vision & Plan	6.342	0.296	0.001	Accepted
Continuous Improvement	5.276	0.265	0.001	Accepted
Customer Focus	4.12	0.221	0.000	Accepted

Significant at ($\alpha \leq 0.05$)

Table 2 Multiple regression for impact of TQM on HRM Policies

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	.0643a	0.413	0.412	0.443	0.413
2	0.685b	0.469	0.467	0.342	0.056
3	0.712c	0.506	0.504	0.338	0.037
4	0.741d	0.549	0.548	0.436	0.043

a. predictors: constant, LDS b. Predictors: Constant, FDS,VP

c. Predictors: constant, LDS,VP,CI

d. Predictors: constant, LDS, VP, CI, CF Dependent: HRMP

Table 3 Step wise Multiple Regression

TQM Dimension	t	B	Sig	Statistical Decision
Leadership	4.812	0.267	0.000	Accepted
Vision & Plan	6.142	0.332	0.000	Accepted
Continuous Improvement	7.345	0.389	0.001	Accepted
Customer Focus	4.45	0.254	0.001	Accepted

Table 4 Multiple regression for impact of TQM on Education & Training

Tables

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	0.645a	0.416	0.416	0.336	0.416
2	0.699b	0.488	0.486	0.374	0.07
3	0.745c	0.555	0.555	0.412	0.067
4	0.789d	0.622	0.621	0.403	0.067

a. predictors: constant, CI b. Predictors: Constant, CI, VP
c. Predictors: constant, CI, VP, LDS
d. Predictors: constant, CI, VP, LDS, LDS, CF Dependent: ET

Table 5 Step wise Multiple Regression on ET policy

TQM Dimension	t	B	Sig	Statistical Decision
Leadership	7.266	0.367	0.000	Accepted
Vision & Plan	5.277	0.332	0.001	Accepted
Continuous Improvement	3.778	0.229	0.000	Accepted
Customer Focus	4.93	0.274	0.000	Accepted

Table 6 Multiple regression for impact of TQM on Rewards & Recognition

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	0.558a	0.311	0.311	0.447	0.311
2	0.612b	0.374	0.374	0.442	0.063
3	0.667c	0.444	0.443	0.363	0.07
4	0.712d	0.508	0.507	0.336	0.064

a. predictors: constant, LDS b. Predictors: Constant, LDS, VP
c. Predictors: constant, LDS, VP, CF
d. Predictors: constant, LDS, VP, CF, CI Dependent: RR

Table 7 Step wise Multiple Regression on RR

TQM Dimension	t	B	Sig	Statistical Decision
Leadership	8.653	0.412	0.001	Accepted
Vision & Plan	5.492	0.289	0.001	Accepted
Continuous Improvement	6.282	0.359	0.000	Accepted
Customer Focus	6.15	0.347	0.001	Accepted

Table 8 Multiple regression for impact of TQM on Employee Participation

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	0.612a	0.374	0.373	0.312	0.374
2	0.645b	0.416	0.416	0.478	0.042
3	0.712c	0.506	0.506	0.345	0.09
4	0.723d	0.522	0.520	0.338	0.016

a. predictors: constant, LDS b. Predictors: Constant, FDS, CI
c. Predictors: constant, LDS, CI, CF
d. Predictors: constant, LDS, CI, CF, VP Dependent: EP

Table 9 Step wise Multiple Regression on EP

TQM Dimension	t	B	Sig	Statistical Decision
Leadership	5.567	0.278	0.000	Accepted
Vision & Plan	4.572	0.254	0.001	Accepted
Continuous Improvement	6.734	0.398	0.001	Accepted
Customer Focus	5.03	0.311	0.000	Accepted

Table 10 Multiple regression for impact of TQM on Team Work

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	0.645a	0.416	0.415	0.356	0.416
2	0.698b	0.487	0.485	0.389	0.071
3	0.734c	0.538	0.538	0.328	0.051
4	0.761d	0.579	0.578	0.401	0.041

a. predictors: constant, CI b. Predictors: Constant, CI, CF
c. Predictors: constant, CI, CF, LDS
d. Predictors: constant, CI, CF, LDS, VP Dependent: TW

Table 11 Step wise Multiple Regression on TW

Independent	R	R Square	Adjusted R square	Sig	Statistical Decision
HRM Policies	0.798	0.636	0.634	0.001	Accepted

Significant at Alpha < .05

Table 12 : Impact of HRMP on EE

HRM dimensions	t	B	Sig	Statistical Decision
Education & Training	5.688	0.316	0.002	Accepted
Rewards & Recognition	6.973	0.367	0.002	Accepted
Employee Participation	7.395	0.435	0.001	Accepted
Team Work	6.987	0.411	0.000	Accepted

Table 13 Multiple regression for impact of HRM policies on Employee Engagement

Model	R	R Square	Adjusted R square	Standard error of estimate	R Square Change
1	0.678a	0.459	0.457	0.378	0.457
2	0.744b	0.553	0.551	0.423	0.094
3	0.779c	0.606	0.605	0.411	0.053
4	0.800d	0.641	0.639	0.398	0.035

a. predictors: constant, EP b. Predictors: Constant, EP, TW
c. Predictors: constant, EP, TW, RR
d. Predictors: constant, EP, TW, RR, ET Dependent: EE

Table 14 Step wise Multiple Regression on EE