

WAGE ADMINISTRATION IN TOTAL QUALITY MANAGEMENT

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Abstract

Purpose – This study aims to examine the wage administration system that could be able to motivate the employees to pursue quality. The goal of the research is to design this kind of wage administration system.

Design /methodology/ approach – The paper is based on the research results used worldwide for wage and salary administration systems and on their adaptation to the TQM methodology, also on the experiences of implementation of wage and salary administration systems as a personnel motivating method to achieve quality in Lithuanian companies.

Findings - The necessity of special wage administration system in total quality management was proved. The expedience of joint method for assessing all carried work in an organization was reasoned. The expedience of unified wage administration system in total quality management was reasoned. The unified wage administration system that motivates employees to pursue quality was prepared.

Originality/value – This study contributes to examine the wage administration system from the perspective of motivation employees to pursue quality. The findings of this study are useful in providing managerial implications for company administrators to make the wage administration system as a method of motivation to pursue quality.

Keywords: TQM, wage administration, motivation, job evaluation.

Paper type: Conceptual paper.

Introduction

The paper deals with the scientific and practice dilemma: what should be wage administration system that could be able to motivate the employees to pursue quality? The goal of the research is to design this kind of compensation system.

The following goals were achieved:

- The necessity of special wage administration system in total quality management was proved.
- The expedience of joint method for assessing all carried work in an organization was reasoned.
- The expedience of unified wage administration system in total quality management was reasoned.
- The unified wage administration system that motivates employees to pursue quality was prepared.

The necessity of attempt to use wage administration as employees' motivation

The main business goals are to satisfy its customers and to do that better than the competitors, to build customer loyalty and to capture the market. The key aim of wage administration is to assist the organization in the implementation of its strategic goals and short-term objectives when developing qualified, competent, dutiful and motivated employees.

Specific goals in creation of the compensation system:

- To help to join organizational values, achievements, standards and expectations.
- To assist the implementation of organization's culture, processes and structure development programmers.
- To assist the implementation of organizational foremost values: quality, customer satisfaction, teamwork, innovations, professional versatility, and proactiveness.
- To stimulate the employees to pursue organization's goals.
- There is a need to answer the question when designing the compensation system:

“What behavior do we expect from employees?”

“How the wage administration system will shape expected behavior?”

Effective wage administration strategy:

- is based on shared values and aspirations;
- is determined by business strategy and alongside helps to prepare it;
- is designed according to the business needs;
- takes into account the competence;
- coincides with the organization's internal and external environment;
- rewards for good results and behavior, which is aligned with organization's key goals;
- is related to business strive for assurance of competitive future;
- is practical and easily implemented.

Accordingly, the effective wage administration strategy in TQM must be based on employees' motivation to pursue quality. If we increase the wage and this increase will not be related to employees' behavior formation, the system will not be effective and the employees will not start to work better. Therefore, it is necessary to organize wage administration system in the way that it would become a motivating factor and help to implement TQM methodology in an organization, which, as we know, is a backbone of competitiveness.

Usually the question arises if there is a need to stimulate the pursue of wage administration based on work quality. This is not a simple question. For a long time the issue about wage administration was absent in academic papers (Carr, Hard and Trahan, 1996, Maira and Scott-Morgan, 1996, Ruzevicius, Adomaitiene and Sirvidaitė, 2004). It was commonly assumed that the employee gets the pay only for a qualitatively performed work. And what is more there are widespread wage systems - piece progressive and time progressive. In the latter case, the wage consists of the two parts: fixed and variable. It does not matter if time or piece wage form is used; firstly, a fixed part of wage per hour, per piece or per month is calculated. The size of constant part of wage is fixed depending on the job content, which requires special skills and on its complexity. For defining variable or “progressive” wage part, usually certain percentage from fixed part of the wage is given; let us say it is 50 %. Next, the faults are taken into account and every fault reduces the percentage by several points. If the employee is a complicated personality, he does not get the variable part of wage. Is it a good wage administration system? What kind of employees is it orientated towards? Usually we do not have more than 3, 4 or 10 % of undisciplined employees. Is it worth while to organize such kind of system specially suited for this kind of employees? Can this system improve employee discipline? There is only one answer – no. Therefore, it is not worth to have such compensation system that does not motivate employees to perform their work well and produce quality. Moreover, what about the rest 90 % of employees? They are not motivated at all by this system. Therefore, it is necessary to organize wage administration system in the

way that the employees will be motivated to improve their department's and all organization's performance in order to meet the needs and expectations of their internal and external customers.

The choice of wage form in TQM

In many countries, companies use two forms of wage: timework payment and payment per piece. Using payment per piece system, the wage depends on quantity of jobs and tariff per piece, which depends on job content and conditions. Using timework payment system, the wage depends on time consumed for work and on tariff per time unit, which depends on job content and conditions. Naturally, the question is which wage form is better suited for TQM.

Payment per piece stimulates employees to perform as much work as they can per shift or other time period. Therefore, even very diligent and honest employees pay more attention to the quantity than to the quality of their work. It is necessary to do not as much work as you can but to do only the work which is essential to meet customer requirements, i.e. the employee must fulfill only his contractual liabilities. Too many products manufactured at different workplaces are not useful but even destructive as the products must be additionally stored in warehouses. Consequently, we get freeze of working capital and the company needs more of it to maintain operations. For effective management of working capital just-in time system was designed.

Having timework payment system, the employees are not interested to do as much as they can. Therefore, main efforts could be devoted to pursue work quality. However, there are business people that avoid timework payment system because the employees then are not apt to do as much work as they can. This could happen if we do not complement timework payment system with the obligatory task. It is very important for tasks to be optimal and possible to perform with reasonable work intensity. Accordingly, establishment of optimal workload in TQM is a very important scientific and practice issue.

There is one more physical and mental payment problem as we still cannot resist dividing work into physical and mental one and accordingly the employees into blue-collar and white-collar ones. But in TQM the wages system must motivate all the employees to continuously improve their work, to aspire after best quality. Continuous improvement of an organization is an integral process. There are no insignificant jobs in a well-organized system. Therefore, all the employees are equally important even if their work content and positions are different. Consequently, there is no theoretical or practical reason to have different wage system for physical and mental work. It is purposeful to have homogeneous timework payment system with the fixed task obligatory to perform. Homogeneous wage system can assure social justice. All the employees especially blue-collar workers will feel that they are valued the same as white-collar workers or managers. It will improve their satisfaction with the work and emotional environment as well as solution of quality issues.

Peculiarities of work assessment in TQM

Usually different methods are employed to assess physical and mental work. But for implementation of homogeneous wage system in TQM it is necessary to implement uniform methods for this purpose.

It is very important to separate two wage constituents in TQM. Fixed part of wage should depend on work place, its content. Variable part should depend on the employee's behavior at work. However analytical (quantitative) methods employed to evaluate job usually assess not only the content of the workplace but employee's behavior features (eg: proactiveness and resourcefulness) as well.

The experience of the author when implementing TQM and work forms stimulating total quality in Lithuanian companies evidence that it is possible to use general methodology for

assessment of all work carried at a company. Analytical work assessment by points would suit best in this case (Milkovich and Newman, 1996). Work content depends on technology employed, structure of manufacture and management, and other circumstances. Therefore, different factors could be involved in different companies. But for all jobs carried at a company it would be purposeful to use such factor as work complexity as it depends on employee qualification, demand of physical energy, strain of vision, level of responsibility. In some companies (e.g. banks) retention of confidential information is a very important factor. The same factor can exist in manufacturing companies as well, when it is necessary to keep commercial and technology secrets (Vanagas, 1994, 1996, 1997).

In some countries, we can find work conditions as a factor in work assessment system but in some countries, there is no need to take into account this factor. For example in Lithuania the payment for work under harmful, unhealthy conditions, for night work and overtime is regulated by labor payment law. Therefore, these factors in work assessment techniques are not taken into account.

Now general analytic work assessment method using points would be discussed. It is purposeful to form expert group for organizing work assessment and payment. The group should prepare the project of payment provisions including work assessment methodology.

Firstly, the factors that should be taken into account when designing work assessment methodology must be discussed.

Let's say that we decided to assess the jobs according to their complexity, responsibility level, need for physical energy to carry the work and level of vision strain. Then the essence and attributes of these factors should be find out and consequentially to decide how these factors will influence the wage (i.e. what percentage of timework payment should be allotted for work complexity, for responsibility, for need of physical energy and for strain of vision). There are no conventional proportions for this matter. Experts must decide this but usually work complexity should comprise the biggest part of payment because this factor involves the requirements not only for employee's qualification, length of service but also for his personal traits and practical skills, e.g. communicativeness, ability to take decisions independently, etc. Let's assume that work complexity comprises 45 %, physical energy – 15 %, vision strain – 15 %, and responsibility level – 25 % of pay per hour.

After work analysis according to above-mentioned factors, it is important to distinguish and define the level of every factor. Then the level must be scored.

In standard work assessment by points (scoring) methodology the difference between minimum and maximum scoring usually is five times (ratio 100 : 500). Maybe this difference is satisfactory when blue-collar and white-collar employees are assessed separately. But this difference is apparently small when there is one general work assessment methodology. The difference depends on wages policy at a company.

The biggest and the smallest payment ratio (motivation coefficient) depends on company's internal factors and external conditions.

The difference of the smallest and the best payment depends on the following internal factors:

- amount of employees;
- market strategy and tactics;
- amount of means of payment.

The more management and employee levels exist, the bigger motivation coefficient should be. If a company intends to undertake aggressive market strategy, widen the range of products it is necessary to increase motivation coefficient because the employees are not as sensitive to the absolute amount of their payment as to the difference of payment among their colleagues, among top managers and subordinates.

What intervals should be taken when calculating different factor level? The widely used

arithmetic progression is not satisfactory especially evaluating levels of high-qualified work.

Let us analyze the evaluation of every factor separately. Hereinafter the examples are taken from authentic project carried out at a furniture manufacturing company, which employed 100 people.

Work complexity

What attributes show the content of the work and its complexity? There are many theories and methods to evaluate the content of work. They are very detailed and complicated, based on amount of information and other methods. Maybe they are very accurate but it is difficult to apply them for work assessment at a company. Therefore easier understandable attributes are used to define job content: time needed to learn to carry the job, method of training, need for length of service, complexity of decisions taken. Practice revealed that it is easier to define complexity levels of blue and white collar workers separately. It is also important to mention that the attributes of work complexity (time needed to learn the work, need for intelligence in taking decisions) could be assessed separately. The example of work complexity assessment is given below in Table I (Vanagas, 2007).

Level	Workers' job	Executives' job	Points
1	Simple routine jobs that require knowing few procedures. Jobs of this category can be learned at the workplace in one week. <i>(loaders, cleaners, new grinders)</i>		40
2	Simple repetitive tasks that require knowing of various procedures. Learning jobs of this category at the workplace may take up to three months. <i>(experienced grinders, operators of separate operations)</i>		80
3	equipment operators' and smiths' Jobs that are done with the surveillance of higher qualification specialists when adjustment, readjustment or repair of equipment is not carried out. Therefore, it is not necessary to know composition of equipment aggregates or kinematics. Accomplishment of this category jobs requires for specific education at the industrial school or at the organization up to 6 months. <i>(smiths, vaneerers, varnishers, packers, constructors repairers).</i>	"Standard" jobs that are clearly practice-defined and well known, jobs delegated by specialists and managers. Accomplishment of this category jobs requires for assessment of the situation, use of several procedures based on personal opinion and specific knowledge. Learning and accomplishment of this category of jobs requires for secondary education, studying specific courses or learning at the workplace that may take up to 3 months. <i>(store-woman)</i>	120
4	Independently performed jobs.	This position requires for knowledge in	160

Level	Workers' job	Executives' job	Points
	Accomplishment of this category of jobs requires for specific education at technical (industrial) school or at the organization up to 6 months and also previous experience (seniority) of one year is necessary. <i>(electricians)</i>	the specific field obtained in vocational schools (colleges) in order to be able to select one of the familiar decisions. <i>(accountants, bookkeepers)</i>	
5	Independently performed the most difficult jobs of woodworkers that require learning in specific technical (industrial) schools and afterwards experience (seniority) of 3 years is necessary. <i>(woodworkers)</i>	This position requires for knowledge in the specific field obtained in vocational schools (colleges), wide range of work procedures and facts for analysis in order to be able to select one of the familiar decisions. <i>(secretary, cashier-bookkeeper, supplier-driver)</i>	220
6		This position requires for knowledge in the specific field obtained in vocational schools (colleges), wide range of work procedures and facts for analysis in order to be able to select one of the familiar decisions. Previous experience (seniority) of 2 years is necessary <i>(administrator)</i>	280
7		This position requires to know policy and procedures of the organization, to be able to manage departments of the organization or complex field of its activity. This position requires to strive for results by creating new products, techniques or adapting known cases for new conditions. Decisions are made based on personal experience and policy of the organization. Specific education is necessary. <i>(shift supervisors, manager)</i>	340
8		This position requires to know policy and procedures of the organization, to be able to manage departments of the organization or complex field of its activity. This position requires to strive for results by creating new products, techniques or adapting known cases for new conditions. Decisions are made based on personal experience and policy of the organization. Specific education is necessary as well as	420

Level	Workers' job	Executives' job	Points
		experience of 2 years of previous practical work. <i>(manager, assistant of production coordinator, construction chief)</i>	
9		This position requires to know policy and procedures of the organization, to be able to manage departments of the organization or complex field of its activity. This position requires to strive for results by creating new products, techniques or adapting known cases for new conditions. Decisions are made based on personal experience and policy of the organization. Higher education is necessary as well as experience of 2 years of previous practical work. <i>(quality engineer)</i>	520
10		Preparation of projects and decision-making concerning new or ever-changing issues. Accomplishment of this category of jobs requires exceptional skills, assessment of mix of intricately evaluated factors or decision making under conditions of lacking information. Higher education is necessary as well as experience of 5 years of previous practical work. <i>(supply manager, chief constructor-technologist, chief accountant, chief financier, assistant manager for production)</i>	700

Table I. Complexity of work

Responsibility at the workplace

For many organizations it is very difficult to find managers for responsible positions, because the higher management level is the greater responsibility manager assumes. And it is not compensated for the latter.

It is purposeful to assess responsibility at the workplace in respect of four responsibility objects: responsibility for equipment and technology (Table II), responsibility for tangibles (Table III), work responsibility (Table IV), and responsibility for health and life protection (Table V).

Level	Description	Points
1	Responsible for equipment and tools used at the workplace	7
2	Responsible for equipment assigned for small groups of workers	35

3	Responsible for equipment and technology of the whole department	66
4	Responsible for facilities and/or technology of the whole organization	103
5	Responsible for progress of technology and the whole organization	140

Table II. Responsibility for equipment and technology

Table 3

Level	Description	Points
1	Responsible for tangibles at the workplace	7
2	Responsible for tangibles assigned for the group of workers	15
3	Responsible for the protection of organization's asset or accounting within their competence/authority	35
4	Jobs of persons with whom contracts of responsibility for tangibles are concluded	85
5	Responsible for all tangibles of organization	150

Table III. Responsibility for tangibles

Level	Description	Points
1	Responsible for his/her work only (all employees)	6
2	Responsible for work of lower qualification co-workers (subordinates)	20
3	Responsible for work of the shift of manufacture department (foreman, forewoman)	35
4	Responsible for work of the section of manufacture department (independent section managers)	60
5	Responsible for work of employees of one service or very large department (mechanic service and energetic service managers)	90
6	Responsible for work of several functions in an organization	150
7	Responsible for work of the whole organization	200

Table IV. Responsibility for work

Level	Description	Points
1	Responsible for his/her own health and life (all employees)	7
2	Work connected with health and life danger of other persons (drivers, transporters, electricians)	29
3	Responsible for health and life of employees in one single shift of the department (shift supervisors)	62
4	Responsible for protection of health and life in a manufacturing department (independent service and sections managers)	73

Table V. Responsibility for health and life protection

Strain of sight organs

Processing of hot glass and metal or driving of vehicles leads to fatigue of eyes and raises

nervous stress. In result of computerization of manufacturing processes, works contributing to strain of sight organs are proliferating in organizations. Therefore, it is necessary to compensate workers for this negative factor (see example in the Table VI).

Level	Description	Points
1	Jobs accomplished without strain of sight organs (blue-collar workers' job)	15
2	Jobs that require large amount of reading and writing (most of the works of white-collar employees, specialists and executives)	30
3	Jobs related to strain of sight organs when constantly observing small objects (cashier, weigher, laboratory assistant)	45
4	Jobs requiring for looking at the luminous monitor episodically (specialists and managers episodically using computers)	60
5	Jobs requiring constant movement and observation of setting (drivers).	75

Table VI. Strain of sight organs

The need for physical energy to complete a job

It obvious that hard physical jobs are not popular. As usual, they are not complicated and do not involve responsibility. Therefore, those jobs according to their complexity and responsibility are not well paid. Work scoring according to physical energy needed to do the work allows paying a proper amount to compensate workers doing hard physical work (see example in the Table VII).

Level	Description	Points
1	Mental work accomplished without using physical energy	15
2	Easy physical work accomplished while seated (bookkeepers and other specialists)	80
3	Easy physical work accomplished while standing and walking (all operators)	120
4	Average hard physical work accomplished in various working stances (equipment repairers)	140
5	Hard physical work (transport workers, navy, builders)	160
6	Very hard physical work (heavy load transport workers)	180

Table VII. Need for physical energy

Structure of compensation system

In Total Quality Management the same compensation principles should be applied for all workers in an organization (see example of compensation system in the Table VIII).

Wages

In pursuance of perfect work quality of the most effective form of compensation is timework payment system when it is compulsory to accomplish the rate-set task. The wage is comprised of fixed and variable part. (table VIII).

Compensation		
Material compensation		Moral compensation
Wage	Fixed part the amount of which is determined by content of work accomplished at the workplace.	Managerial means of moral influence that create psychological comfort for employees.
	Variable part the amount of which is determined by features of employee and his (her) behaviour at work.	
Bonus premium – special payments	Bonus premium is special payment awarded for a group of persons or an individual person for unique performance that significantly raised profit of the organization or improved quality of the performance that had a positive effect on its profit.	

Table VIII. Structure of compensation system

It is purposeful to establish **the fixed part of wage** using analytical quantitative techniques of work evaluation. Amount of this part should be determined by complexity of the job and specific workplace that conditions qualification required for accomplishment of specific job, nervous stress and strain of vision, physical stress, necessity of confidential information retention and other factors.

Variable part of wage should be established on the basis of personal and specific to work employee' traits and his/her behaviour at work, i.e., *depending on quality of performed work, promptness accomplishing the work, initiative, diligence, versatility and other positive behaviour at work.*

Variable part of wage for work quality should be paid in case the employee accomplishes his work in a qualitative manner and does not hide mistakes made by him or his colleagues and on his own initiative reveals their sources and ways for their elimination and prevention in future, makes suggestions on quality improvement. Variable part of wage for work quality can also be calculated based on indicators of perfect quality settled in accordance with total quality management for every single job. In the latter case, variable part conforming to this indicator should be dependent on degree of approximation to perfect quality.

This variable part should be the most significant one.

Promptness in work accomplishment should be assessed by the direct supervisor of employee and user of his work results.

Initiative and diligence should be assessed by the direct supervisor of the employee. Versatility – i.e., the ability to work in several different jobs in case of manufacture necessity – should also be revealed by the supervisor and formalized by the manager of department.

Bonus premium – special payments

Bonus premium – special payments should be awarded for unique performance that significantly raises profit of the organization or improves quality of its operations. These special payments should not be usual or regular, but particularly exceptional. Some examples of this part of compensation are presented below.

Bonus premium for individual employee or a group of employees is awarded for high-scoring performance, great economic effect (in case of fund economy or when actual profit significantly exceeds the expected one) or when economic effect occurs in the field that is not

directly connected to job of that employee (group of employees).

Bonus premium for manager is awarded in cases he/she has successfully improved quality and performance of his colleagues.

Bonus premium for individual employees or creative teams is awarded for engineering projects or results of scientific investigations that essentially improved manufacture processes within their responsibility.

This bonus premium is paid out by two steps. When commission of experts recognizes the project as being real and calculates expected annual economic effect and amount of the premium, advance payment of premium is made. The remaining part of the premium is paid to authors after complete implementation of the project and achievement of concrete economy.

Bonus premium is awarded for authors of new concepts and methods of activity when these developments are accepted for implementation.

Bonus premium for employees is awarded for the achievement of considerable success in marketing and contribution of significant increase of turnover, expansion of the old market or discovery of the new one.

Bonus premium is awarded for individual employees and managers for extraordinary merits when in critical situations organization finds a way out and successfully resolves raised issues.

Amount of the bonus premium is established by Board of Directors depending on the scope and nature of resolved issue.

Bonus premium for employees is awarded when they helped to prevent problems potentially leading to significant losses for the organization.

Conclusion

The special wage administration system development is very important factor in successful implementation of total quality management. Consequently it is necessary to develop theoretical and empirical research programs in this very important total quality management area.

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