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## BONUS FOR QUALITY OF PRODUCTS AND SERVICES IN THE TQM CONCEPT. THE PROBLEMS OF REALITY AND JUSTICE

**Abstract:** *The article discusses the importance of remuneration systems in organizations using Total Quality Management (TQM) and presents the current state of knowledge regarding the role of remuneration systems in quality improvement.*

*The main objective of this paper is to determine the role played by (rarely researched) bonus systems in the process of motivating employees to improve product and service quality.*

*Firstly, the authors indicate to what extent quality criteria are included in the designing of remuneration systems. Secondly, they provide employee feedback on how motivating their pay systems are. Thirdly, they determine to what extent different pay solutions are assessed as fair.*

*Findings: decisions on bonus granting are based on not only objective product/service quality criteria but also opinions such as assessments made by superiors and criteria such as zero work-related accidents, zero sickness absences, or customer satisfaction levels. Thus, it is difficult to assume that bonus granting criteria are completely fair. The conducted analysis shows that a considerable group of the respondents consider bonus awarding as a source of perceived injustice. The most important factors influencing employee motivation include commendations from superiors (in service enterprises) and the possibility of self-control in production enterprises. Contributions: the conducted research extends the knowledge of the role of bonus systems in processes aimed at improving the quality of services and products.*

**Keywords:** *TQM; Bonus; Motivation; Justice*

### 1. Introduction

The forerunners of TQM dealt with the issue of rewarding employees properly for quality. In principle, they were against rewards for quality and rejected the use of financial incentives or commission-based systems

(Crosby, 1979; Ishikawa, 1985; Deming, 2018). In general, it is believed that quality improvement should be something natural that does not have to be supported by financial rewards (Dale, 2001). However, in parallel to the growing interest in TQM, specialists started to pay more attention to

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reward systems (Kaplan, 1992; Ivancevich et al., 1994; Brown et al., 1994; Allen & Kilmann, 2001; Chowdhury et al., 2007; Arshida, 2012; Cockrell & Meyer, 2012; Al Nahyan & All, 2017). Recognition and reward belong to the factors critical for successful TQM implementations (Cockrell & Meyer, 2012; Arshida, 2012; Al Nahyan & All, 2017). Organizations intending to implement and maintain TQM programmes used both intrinsic and extrinsic rewards (Ivancevich et al., 1994). Opinions on the use of reward systems are not unanimously positive. Research shows that the use of bonuses or the implementation of some types of reward systems has neither positive nor negative influence on the efficiency of an organization. If positive changes are observed, they can be explained by the fact that reward systems are a factor of organizational hygiene, influence the well-being of employees (de Waal & Jansen, 2013; Schneider & Weigl, 2018), and tend to attract talented candidates for employment (Fay & Thompson, 2001). From time to time new ideas for rewarding employees for quality are put forward. One of them is ensuring employees' participation in profits generated by their organizations. This concept assumes that higher quality translates into larger sales (Ivancevich et al., 1994). Another proposal is rewarding employees for excellent service to customers (Hodgetts et al., 1994).

Specialists continue to discuss whether rewards should be given for achieving quality goals or which rewards are more effective: individual or collective. On the one hand, organizations reward employees for the achievement of quality goals (Wruck & Jensen, 1998; Daniel et al., 2014), but on the other hand, it has been known for a long time that solutions of this type are not compatible with the interest of an organization (Blikle, 2009) and an objective assessment of individual efforts made in pursuit of such goals is very difficult (Evan, 1992). Taking into consideration the unique character of TQM – the fact that many tasks are carried out by groups of employees – it is believed that

teams should be the addressees of rewards and support (Kochan et al., 1995; Tatikonda & Tatikonda, 1996). However, research shows that team bonuses are preferred by workers with lower productivity (Torsvik, 2017).

While reward systems have been studied relatively extensively, the knowledge of one of their components, namely bonuses, is still rather limited. Bonuses belong to so-called short-term rewards as they are paid on a monthly or quarterly basis. The literature on the subject indicates that some organizations try to combine bonuses with quality or customer service targets (Dale, 2001). Quality constitutes one of the criteria for awarding a bonus (Singh & Nash, 2006; Benson & Sajjadiani, 2018; Bugdol, 2018). What is taken into account the most often is a number of customer complaints or a number of products that do not require any corrective action. In the service sector, an assessment of quality is almost always subjective (Bugdol, 2018).

The problem of rewarding for quality has been generally neglected in the majority of publications on quality management. This is why research on bonuses in the TQM concept deserves both literature studies and empirical studies.

## 2. THE LITERATURE REVIEW

### 2.1. Basic definitions

Remuneration comprises “methods, processes, and practices of rewarding employees in a given organization according to their input, skills, competences, and market value” (Armstrong, 2000, p. 487). Organizations use various forms of remuneration. They introduce remuneration dependent on profit (a fixed salary and a share in achieved profit), collective salaries, or remuneration dependent on competences or a pay grade (Armstrong, 2000; Park & Sturman, 2016). For various reasons, organizations decide to introduce special

additions to base salaries. M. Armstrong (2000) refers to such additions as “variable pay” and indicates a considerable degree of risk connected with them. The main types of variable pay include overtime, pay dependent on competency, traineeship allowances, commissions, incentives (benefits connected with the achievement of goals), bonuses (one-off payments for the successful completion of a task by an individual or a group, pay dependent of effects (referred to as merit pay) (Armstrong, 2000).

Constituting a type of allowances, bonuses are “benefits for successfully completed tasks, received as one-off payments whose amount is related to results achieved by individuals, teams, or organizations (Armstrong, 2000, p. 499). In practice, employers use also a variety of rewards and recognition systems. “Reward and recognition can be differentiated that reward is tangible or intangible incentives offered to employees for some accomplishment or success such as monetary bonuses, promotions, gift certificates, flowers, whereas recognition is the public acknowledgement of an employee’s contribution to the organization such as positive feedback, appreciations, and encouragement from superiors” (Zeb, Rehman, Saeed, Ullah, 2014).

Bonuses are short-term rewards (their granting depends on the measurement of results carried out on a monthly or quarterly basis).

### **3. VIEWS OF TQM FORERUNNERS**

In general, it is believed that quality improvement should be something natural that does not have to be supported by financial rewards (Dale, 2001). E. Deming was against commission-based remuneration. He argued that cash incentives brought about effects opposite to intended ones because it was impossible to measure precisely employees’ efficiency under the influence of

factors independent of them. Furthermore, he claimed that cash incentives are destructive for teamwork. He was in favour of fixed salaries (Deming, 2012). Deming indicated that in some professions, the introduction of commission-based remuneration systems tarnished relationship with the customer. “The basis for incentive pay, according to Deming, must be abolished. The reason behind this is that performance for individuals in an organization cannot be measured in the short term. Therefore, structuring compensation on short-term performance can have a negative impact on an organization” (Petit, 2009). Remuneration does not fulfil a motivational function and measuring performance and tying pay to performance is futile. Remuneration has a different role to play – it should attract and retain the best employees (Crow, 1996). According to P. Crosby, if work is designed improperly, such a motivation system breeds errors (Crosby, 1979). Motivation based on a financial system was also rejected by K. Ishikawa (1985). Both Deming and Crosby agreed that profit-sharing was the best form of merit pay (Ivancevich et al., 1994, p. 379).

### **4. REWARD SYSTEMS IN TQM**

Within the concept of TQM, the most researches – mainly diagnostic ones – were dedicated to reward systems (Kaplan, 1992; Ivancevich et al., 1994; Brown et al., 1994; Allen & Kilmann 2001; Chowdhury et al., 2007; Arshida, 2012, Cockrell & Meyer, 2012; Al Nahyan & All, 2017).

A reward and recognition system includes working condition improvement, salary promotion, position promotion, monetary or non-monetary rewards, and financial awards for excellent suggestions (Chowdhury et al., 2007). Rewards include all types of benefits, from cash payments to working conditions (Eric, 1994). Reward practices include profit sharing, gainsharing, employment security, and comp time (Allen & Kilmann, 2001). The majority of organizations implementing TQM reward their employees for their quality-

related efforts, using certificates, letters of recognition or goods, often in combination with official celebrations, gala dinners, or similar events (Allen & Kilmann 2001, p. 80). After implementing a TQM system, organizations put into practice various ideas aimed at motivating their employees. One of them is the use of daily financial reports. Such a report provides feedback, motivation, and guides the productivity efforts of a company's operators (Kaplan, 1992). Organizations use both intrinsic and extrinsic rewards. "Intrinsic rewards are intangible psychological results of work that are controlled by the worker" (Ivancevich et al., 1994, p. 364). Extrinsic rewards are externally controlled (for example a paycheck) (Ivancevich et al., 1994).

Recognition and reward are regarded as factors critical for the successful implementation of a TQM system (Arshida, 2012; Al Nahyan & All, 2017, pp. 1-10). A lack of (or inappropriate) rewards and recognition can cause a failure of TQM. The literature on the subject indicates the positive role of reward systems and the necessity of rewarding employees properly (Brown et al., 1994; Allen & Kilmann, 2001; Fay & Thompson, 2001). It is believed that extrinsic reward practices exhibit a significantly positive moderating effect on the relationship between TQM and perceived firm performance (Allen & Kilmann, 2001). A reward system is one part of the organizational structure that is considered influential on knowledge sharing (Kim & Lee, 2006). Reward and recognition activities stimulate employee commitment to quality improvement (Brown, Hitchcock, Willard, 1994). Furthermore, it is acknowledged that rewards systems have a critical role in determining the organization's ability to attract high potential employees, to retain high performing employees to achieve greater levels of quality and performance (Fay & Thompson, 2001). Research conducted in educational organizations shows that an effective total reward system enhances the well-being of school principals and,

subsequently, their willingness and commitment to delivering quality services (Nthebe et al., 2016). Reward systems are used also in programmes aimed at developing a culture of knowledge management. The results of some research projects indicate their positive role in this respect. However, the quality of knowledge constitutes a serious problem (Purwanti et al., 2010; Yu et al., 2007).

Various research results show that the use of bonuses or the implementation of some types of reward systems have neither positive nor negative influence on the efficiency of an organization. If positive changes do occur, they can be explained by the fact that reward systems are rather a factor of organizational hygiene and influence the well-being of employees (de Waal & Jansen, 2013; Schneider & Weigl, 2018). Moreover, "rewarding employees inappropriately can be just as detrimental as not rewarding at all" (Cockrell & Meyer, 2012, s. 10).

#### 4.1. Bonuses

Bonuses can be divided into non-monetary and monetary or, with respect to a period of payment or assessment of performance, into short-term and long-term (Bareket-Bojmel et al., 2017). Short-term and long-term bonuses belong to the slightly broader categories of short-term and long-term incentives. Long-term incentives are provided in the form of shares or cash. This type of remuneration is paid usually once a year as a common component of executive pay. On the other hand, long-term incentives are rarely offered to non-executive employees (WorldatWork survey report, n.d.). This group of employees is usually awarded short-term bonuses. Referring to reports published by WorldatWork in 2014; Benson and Sajjadiani (2018) state that in the USA over 80% of companies (non-profit/government, privately held, and publicly traded organizations) use short-term bonuses to recognize notable performance in lower-level employees. The use of short-term bonuses to motivate

employees has become an organizational regularity (Bareket-Bojmel et al., 2017).

Bonuses are short-term rewards (their granting depends on the measurement of performance carried out on a monthly or quarterly basis). Bonuses can also be divided into those resulting from work regulations and discretionary. The latter is characterized by the lack of any legal or internal corporate regulations determining how they are awarded. Awarding bonuses, superiors are guided by their subjective assessment of employees' performance (Ciborski & Klimaszewski, 1999). There are also other types of bonuses, apart from those mentioned above. For example, some organizations in Norway award their best employees with bonuses aimed at postponing their retirement (Hermansen & Midtsundstad, 2018). Some companies use referral bonuses, i.e. extra pay for recommending a valuable candidate who will eventually take up employment with the firm (Pieper et al., 2018).

Some authors are in favour of additional bonuses for quality. Such ideas have appeared in the health care sector (Singh & Nash, 2006). In the USA, bonuses are awarded for employee commitment and for quality. What is taken into consideration is the quality of work, performance, and occupational safety (Benson & Sajjadiani, 2018). In Poland, short-term bonuses are granted for quality, work safety, no customer complaints, additional actions, duration of production, the speed of performing particular actions, or willingness to work overtime (Bugdol, 2018). Long-term executive incentives are usually based on financial factors. They depend on operating profit, net profit, revenue per employee, ROCE (return on capital employed) or EBITDA (earnings before interest, taxes, depreciation, and amortization) ratios, performance measures (e.g. earnings per share), performance levels, and pay-performance structures (different amounts earned at different performance levels) (Bakó & Kálec-Simon, 2017; Bugdol, 2018; Kim & Ng 2018). The payment of a bonus may depend on the

volume of sales or profit achieved by an organization (Bakó & Kálec-Simon, 2017). The amount of bonus depends on many factors. Bonuses may be bigger in the case of large organizations or long-serving employees such as financial directors (Kroos et al., 2018). It has been proved that executive salaries are poorly correlated with work performance, quality, or the achievement of long-term objectives and depend more on the size of the organization or short-term results (Carr & Valinezhad, 1994).

Organizations use various reward systems in order to improve their financial results. Some of them focus on combining bonuses with quality or customer service targets (Dale, 2001). Quality management specialists recommend reward systems allowing employees to participate in profit sharing. This is based on a rather naive assumption that higher quality translates into larger sales (Ivancevich et al., 1994). Quality constitutes one of the criteria for awarding bonuses (Singh & Nash, 2006; Benson & Sajjadiani, 2018; Bugdol, 2018). What is taken into account the most often is a number of customer complaints or a number of products that do not require any corrective action.

#### **4.2. The impact of remuneration practices on justice and motivation**

Previous researches (e.g. Tekleab et al., 2005; Jawahar & Stone, 2011; Morrell, 2011; Aguinis et al., 2013; Brata & Juliana, 2014; Adamovic et al., 2018) show that remuneration influences justice perceived by employees. Reward systems are strongly related to distributive and procedural justice. Distributive justice influences the level of employees' satisfaction with remuneration, and procedural justice has a greater impact on satisfaction with salary rises (Tekleab et al., 2005). Salary satisfaction is influenced the most by distributive justice, while procedural justice is important for satisfaction with additional benefits, salary rises, a reward system structure, and payroll administration. Informational justice influences satisfaction

with salaries as well as administrative structures and processes (Jawahar & Stone, 2011). Influenced by a sense of justice with respect to received salary, distributive justice, in turn, generates satisfaction with remuneration (Brata & Juliana, 2014). This type of justice mediates the relationships between the different performance bonus systems and employees' work engagement and organizational affective commitment (Adamovic et al., 2018).

The motivational strength of reward systems depends on how employees perceive their salaries in terms of justice (Morris & Fenton-O'Creevy, 1996). Various research shows that justice is necessary for the development and maintenance of other values such as commitment and satisfaction. Thus, justice creates favourable conditions for employee motivation, as well as effectiveness and possible also efficiency. A lack of justice causes lower satisfaction, a lack of trust and commitment. It fosters counterproductive behaviours (Skarlicki et al., 2008; Dizgah et al., 2011; Colquitt & Rodell, 2011; Bianchi & Brockner, 2012; Yelboğa, 2012). When bonuses for quality are introduced, it should be remembered that cash rewards may be a very strong indicator of employee motivation and performance, which, in turn, may result in the achievement of established objectives. Nevertheless, cash rewards not always generate the required results. One of the reasons is the impossibility of precisely defining and measuring performance as well as guaranteeing a sense of justice (Aguinis et al., 2013). Also, in the case of non-salary incentives – beneficial for organizations because of their low costs – it is necessary to guarantee just remuneration (assessed with respect to other employees) and organizational equity (Morrell, 2011). Research conducted in the health care sector indicates that the use of quantity-based bonuses not only resulted in unnecessary care but also decreased doctors' internal motivation, thus causing a fall in the quality of provided services (Qian & He, 2018).

## 5. METHODOLOGY

### 5.1. Research questions and assumptions

The conducted review of existing publications shows that while there is knowledge of reward systems in TQM, bonus systems in organisations using TQM have not been a subject of extensive research. Also, very little is known about the position of the quality criterion in the general group of factors determining the allocation of bonuses. There is also little knowledge of motivational factors (including bonuses) influencing quality improvement, employees' opinions on the fair distribution of bonuses, and their assessment of the importance of individual commitment to the performance of tasks entrusted to them.

When quantity rather than quality is the basis for pay, nobody is interested in quality improvement (Singh & Nash, 2006). However, the problem is whether it is possible to assess objectively and fairly both quality and individual or collective contribution to achieving quality.

Previous research indicates that such an assessment may be rather difficult to perform (Evan, 1992; Singh & Nash, 2006; Aguinis et al., 2013). It is possible to take into consideration two other proposed solutions, namely taking advantage of customer orientation and making remuneration dependent on customer satisfaction (Hodgetts et al., 1994; Wruck & Jensen, 1998) or allowing employees to participate in profit sharing (Ivancevich et al., 1994). The former proposal does not take into account the diversity of tasks performed by employees and may lead to competition among individual employees or teams of employees (Bugdol, 2008). Based on trust and used more and more often by various organizations, the latter solution is worth recommending, with the proviso that high quality does not always guarantee profitability as profit depends on many variables such as an overall economic

situation, fashion, currency exchange rates, taxation, etc. Thus, the following questions arise:

1. How is the quality criterion assessed in existing bonus systems?
2. Do existing bonus systems motivate employees to improve quality?
3. How do existing bonus systems influence the perception of justice by employees?

On the basis of the conducted analysis of the literature, the following assumptions can be formulated:

1. It is assumed that quality, being one of the criteria for awarding a bonus, is assessed on the basis of the number of customer complaints or rejects (in the case of manufacturing organizations) or the level of customer satisfaction (in the case of service providers).
2. It is assumed that existing bonus systems do not motivate employees to improve quality. Consequently, it is assumed that the forerunners of quality who were in favour of fixed salaries were correct to believe that short-term financial bonuses had no positive impact on quality.
3. It is assumed that bonus systems used at present influence negatively the perception of justice if the quality of final products or services depends on a whole quality chain.

Preliminary findings indicate that bonuses in manufacturing organizations depend on quality only indirectly, taking into consideration the number of customer complaints, rejects or necessary corrections (Bugdol, 2018). In the case of service providers, quality is assessed by means of subjective methods (e.g. mystery shopping). Some organizations used the SERVQUAL model to measure service quality, but also in this case, what is generated is declarations rather than true and objective assessments. Furthermore, research indicates that in the service sector, the decision about the granting of bonuses are made by superiors who thus

want to show their appreciation for the high quality of provided services (such opinions are not always objective and may result from managers' momentary satisfaction with their employees' work and performance). (Bugdol, 2018).

Especially discretionary bonuses create opportunities for various interpretations of particular provisions of work regulations. They are also preferred by managers who want to deal with flexible and submissive employees (Ciborski & Klimaszewski, 1999). As it has been mentioned above, individual performance bonuses are attractive from the perspective of the employer because one-off cash payments do not increase fixed labour costs (Park & Sturman, 2016). Salary rises increase personnel costs, while bonuses can be withdrawn easily, especially if they are discretionary or are not provided for in work regulations. Therefore, the use of bonuses lowers the risk of increasing personnel costs (Bakó & Kálec-Simon, 2017; Bugdol, 2018; Kim & Ng, 2018). This type of remuneration encourages decision-makers to adopt a short-term perspective oriented towards financial rather than quality results. In the case of industrial enterprises there exist qualitative data that can undergo analysis, but it is not always possible to assess the performance of individual employees. As it has been repeated many times, the quality of final products depends on many internal (social, organizational, technical) as well as external factors (e.g. the quality of soil, fertilization, agricultural conditions, etc.). All these assumptions indicate that in the majority of cases, bonuses are not an effective tool of motivating employees and the rules of their awarding are perceived as unfair.

## 5.2. A selection of a research sample and a description of respondents

The authors applied non-probabilistic selection, taking into consideration data availability (Babbie, 2004). They were interested in the opinions of employees

working for organizations following the basic TQM principles. It was assumed that organizations covered by the research had implemented and continued to maintain a quality management system based on the ISO 9001 standard. The sampled entities were companies having quality management systems consistent with the ISO 9001 standard, holding certificates issued by organizations accredited by the Polish Centre for Accreditation. A formal management system certification process carried out by an independent and professional organization authenticates the application of TQM principles in the surveyed enterprises.

Also, particular TQM elements such as a process approach, a systemic approach, fact-based decision making, employee involvement (e.g. in the improvement actions notification process) need to be visible. The other condition is the existence of bonus award systems. Thus, respondents were employees working for organizations following the basic TQM principles (however, the maturity of TQM programmes was not evaluated). Following the application of the aforementioned sampling criteria, 92 companies were selected for the research, including 49 manufacturing and 43 service enterprises. The authors received responses from 277 persons asked to fill in the questionnaire. Questionnaires were sent to participants and returned by them by mail. There was a slight majority of men – 142 persons or 50.9% of the sample. There were 137 women, who constituted 49.1% of the sample. The work positions held by the respondents are presented in Table 1.

A considerable part of the respondents represented the production sector (88 persons) or fulfilled the role of specialists (82 persons). A little bit fewer respondents worked in administration (45 persons) or held middle-level managerial positions (35 persons). Direct customer service workers and top managers had the smallest groups of representatives (11 persons and 5 persons respectively). Furthermore, the sample included 11 persons that did not hold any of

the general positions specified in the table.

**Table 1.** The positions held by the respondents

Position	Number (N)	Percent (%)
Production worker	88	31.8
Customer service worker	11	4.0
Specialist	82	29.6
Administrative worker	45	16.2
Middle-level manager	35	12.6
Top manager	5	1.8
Others	11	4.0
<b>Total</b>	<b>277</b>	<b>100.0</b>

The decisive majority (179 persons) had higher education; 67 respondents had secondary education; and 31 respondents – vocational or lower-level education.

### 5.3. Method

The authors conducted systematic literature reviews in accordance with the following pattern: identify/revise the topic, scope and aim; select key words; search relevant literature; record and organize; read and evaluate (Easterby-Smith et al., 2015, p. 17). Having identified a publication gap, they formulated a research problem and research assumptions. Subsequently, they carried out sample surveys, assuming that they could be used for the purposes of description, explanation, and exploration. They are suitable for measuring opinions in a large population (Babbie, 2004, pp. 268-269).

The conducted empirical research was based on the survey method (Babbie, 2004). The used research procedure is characteristic of social sciences and consistent with the principles described by E. Babbie (2004) in “The Practice of Social Research”. The authors concluded that it was appropriate for gathering such data that could not be obtained by means of observations. They aimed to formulate adequate questions applicable to the majority of the respondents and to avoid

negative questions. The whole prepared questionnaire was divided thematically in accordance with the proposed assumptions.

To ensure the validity of collected research data, special attentions was paid to the correct structure of the questionnaire. The questionnaire items were prepared on the basis of the theoretical knowledge of the addressed issue as well as in accordance with the rules described in the literature and allowing for the minimization of errors related to their interpretation by respondents (Osterlind, 2001).

In the questionnaire validation procedure, the authors used the reliability test formula (where the survey was conducted once) based on the split-half method. Estimating reliability consisted in dividing the questionnaire into two parts, examining all respondents, and then correlating the results obtained in both parts. The result of correlation was  $r=0.86$ , which indicates a high measurement accuracy of the questionnaire. In the questionnaire validation process, a pilot study was also used in 6 of the surveyed enterprises, which was followed by necessary adjustments. Another important task was to ensure the correct selection of respondents. Regardless of their positions, they were people competent in the issues covered by the research and possessing knowledge of remuneration systems, bonus systems, and quality matters.

**5.4. Survey results**

The results of the conducted research are discussed below in the order corresponding to the proposed assumptions. According to the first assumption (A1), quality, being one of the criteria for awarding a bonus, is assessed on the basis of the number of customer complaints or rejects (in the case of manufacturing organizations) or the level of customer satisfaction (in the case of service providers). Table 2 presents the respondents' answers to the question about the major bonus award criteria used in their companies.

**Table 2.** The major bonus award criteria applied in the respondents' companies

Criterion	Number (N)	Percent (%)
Assessment by an immediate superior	169	59.5
Performance of additional tasks	113	39.8
No sickness absences	103	36.3
Undertaking improvement actions	60	21.1
Results of customer satisfaction surveys	45	15.8
Work time	28	9.9
No work-related accidents	24	8.5
Financial result / sales revenue	20	7.0
Number of non-compliant products/services detected in processes	18	6.3
Customer complaints	12	4.2
Implementation of plans / achievement of goals	10	3.5
Number of rejects identified in a warehouse	6	2.1

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 criterion.

Altogether the respondents chose 12 such criteria. The most frequently indicated answers (assessment by an immediate superior, performance of additional tasks, no sickness absences) concern relations between superiors and subordinates as well as employees' flexibility; thus, they are not related to quality. However, relations to quality can be seen in the other criteria (undertaking improvement actions, results of customer satisfaction surveys, number of non-compliant products/services, customer complaints, implementation of plans/achievement of goals, number of rejects in a warehouse). An interesting supplement to the data presented above is a list of the same criteria, but divided with respect to the types

of the enterprises employing the survey participants (Table 3).

**Table 3.** The major bonus award criteria in the enterprises employing the survey participants – a distribution with respect to business types

Criterion	Type of enterprise (%)	
	Service provision	Industrial manufacturing
No work-related accidents	5.1	12.5
Customer complaints	3.8	5.0
Number of non-compliant products/services detected in processes	5.1	7.5
Number of rejects identified in a warehouse	1.9	2.5
Undertaking improvement actions	23.4	19.2
No sickness absences	15.2	65.0
Performance of additional tasks	41.8	35.8
Results of customer satisfaction surveys	25.3	3.3
Assessment by an immediate superior	55.7	64.2
Work time	13.9	5.0
Financial result / sales revenue	8.9	5.0
Implementation of plans / achievement of goals	5.7	0.0

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 criterion.

There occur significant differences with respect to the importance of the following criteria: 1) no work-related accidents – it was indicated much more often by respondents representing industrial enterprises, 2) no sickness absences – it was also selected more often by industrial sector employees, 3) results of customer satisfaction surveys – it was indicated much more often by respondents representing service enterprises,

4) work time – it was also indicated more often by people employed by service providers, 5) implementation of plans/achievement of goals – this criterion was not indicated at all by industrial sector employees.

Thus, the survey results indicate that a bonus is a tool for not only motivating but also disciplining employees (Bugdol, 2018). This is proved by the significance of such bonus reward criteria as sickness absences or work time.

Table 4 presents the quality assessment methods indicated by the respondents.

**Table 4.** The quality assessment methods used in the respondents' companies

Method	Number (N)	Percent (%)
Analysis of a degree of achieving quality objectives	129	46.6
Analysis of customers' opinions/assessments	118	42.6
Analysis of an established objective quality index	101	36.5
Analysis of assessments of immediate superiors	92	33.2
Analysis of a number of complaints	76	27.4
Analysis of statistical data concerning the course of processes	64	23.1
Analysis of a number of rejects	23	8.3

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

Altogether the respondents chose 7 such methods. Six of them (with the exception of assessments made by immediate superiors) were measurable and concerned about the effectiveness and efficiency of performed actions. In accordance with the assumptions included in assumption 1, the most important factors were customers' opinions and assessments (118 indications), the number of complaints (76 indications), and the number of rejects (23 indications). The data included

in Table 5 illustrate the aforementioned quality assessment methods, but divided with respect to the types of enterprises.

**Table 5.** The methods of assessing quality in the enterprises employing the survey participants – a distribution with respect to business types

Method	Type of enterprise (%)	
	Service provision	Industrial manufacturing
Analysis of a number of complaints	18.2	40.7
Analysis of statistical data concerning the course of processes	23.4	23.7
Analysis of a number of rejects	7.1	10.2
Analysis of an established objective quality index	29.9	44.1
Analysis of a degree of achieving quality objectives	42.9	51.7
Analysis of customers' opinions/assessments	48.1	34.7
Analysis of assessments of immediate superiors	44.2	18.6
Others	3.9	3.4

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

The presented data give an interesting picture of the quality assessment methods. It turns out that the picture is not fully compatible with the supposition included in assumption 1. An analysis of a number of complaints is decidedly more often indicated as a method used in industrial enterprises (40.7%), but it is not completely disregarded in service businesses (18.2%). The result concerning the method based on a number of rejects is also ambiguous as it is chosen by the respondents employed in both types of enterprises. An analysis of customers' opinions and assessments was identified as a popular

method by both the service sector (48.1%) and the industrial sector (34.7%) employees.

Thus, it was impossible to confirm unequivocally assumption, according to which there are differences between service and industrial enterprises with respect to the methods of quality assessment. This constitutes a recommendation for further research on this matter and looking for answers to the question about the types and role of factors responsible for the partial convergence of quality assessment methods in various types of enterprises (e.g. the role of standardized management systems or the uniform impact of implemented quality management concepts).

The second assumption (A2) is based on the supposition that existing bonus systems do not motivate employees to improve quality. Consequently, the authors assumed that the forerunners of quality who were in favour of fixed salaries were correct to believe that short-term financial bonuses had no positive impact on quality. Table 6 presents the respondents' general opinions on how bonus award systems fulfil the motivational function.

**Table 6.** The assessment of the motivational function of the bonus award systems used in the enterprises employing the survey participants

Answer	Number (N)	Percent (%)
Yes	140	50.7
No	136	49.3
Total	277	100.0

\*The question asked of the participants was the following: **In your opinion, is the existing bonus system motivating?**

The distribution of the received answers was relatively symmetrical. The numbers of positive and negative opinions about the bonus award systems with respect to their fulfilment of the motivational function were approximately the same. Also, there were no special differences in the distribution of

answers with respect to business types. It turned out that a business type was not a variable significantly diversifying the status of the bonus award systems with respect to their motivational functions.

**Table 7.** An assessment of the motivational function of the bonus award systems used in the enterprises employing the survey participants – a distribution with respect to business types

Answer	Type of enterprise (%)	
	Service provision	Industrial manufacturing
yes	51.6	51.3
no	48.4	48.7
Total	100.0	100.0

\*The question asked of the participants was the following: **In your opinion, is the existing bonus system motivating?**

Table 8 presents the survey participants' opinions on the motivational function of the bonus award systems used in their respective companies. The respondents indicated various forms of motivational effects of a particular bonus award system, choosing the most often encouraged to undertake additional tasks (106 indications), i.e. exceeding minimum standards established in particular enterprises. The other two frequently mentioned effects were an encouragement to undertake improvement actions (78 indications) and to remain in the company (59 indications). These effects refer to employees' attitudes connected with the acceptance of larger workloads, orientation towards continuous improvement, and loyalty to the employer, which should result in reducing the rate of employee turnover.

Table 9 illustrates the same issue, but with respect to the types of enterprises employing the survey participants.

**Table 8.** The respondents' perception of the motivational function of the bonus award systems used in their respective companies

Function	Number (N)	Percent (%)
Encourages to undertake additional tasks	106	76.8
Encourages to undertake improvement actions	78	56.5
Encourages to remain in the company	59	42.8
Influences the quality of interpersonal relations	26	18.8
Fosters justice	26	18.8
Allows the employment of talented candidates	11	8.0
Others	3	2.2

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

**Table 9.** The perception of the motivational function of the bonus award systems – a distribution with respect to business types

Function	Type of enterprise (%)	
	Service provision	Industrial manufacturing
Encourages to undertake improvement actions	51.3	63.3
Encourages to remain in the organization	42.3	43.3
Encourages to undertake additional tasks	74.4	80.0
Influences the quality of interpersonal relations	16.7	21.7
Fosters justice	17.9	20.0
Allows the employment of talented candidates	10.3	5.0
Others	0.0	5.0

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

The differences in the perception of the motivational function of the bonus award systems are not significant, although it can be observed that the respondents employed in industrial enterprises more often selected encouragement to undertake improvement actions as the effect of the motivational function of their respective bonus award systems. A similar relation occurred also in the case of encouragement to undertake additional tasks. These findings may indicate that industrial enterprises represent the higher maturity of the orientation towards quality.

Finally, Table 10 presents the respondents' indications concerning those factors and actions that motivated them to improve quality.

**Table 10.** The respondents' opinions on the factors/actions motivating them to improve quality

Factor / action	Number (N)	Percent (%)
Self-control	106	39.3
Praise from superiors	104	38.5
Existing bonus award system	93	34.4
Offers of training and other forms of professional development	91	33.7
Fixed salary	78	28.9
Work in a quality team	42	15.6
Manner of controlling quality	21	7.8
Nothing motivates me to improve quality	19	7.0
Others	10	3.7

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

The respondents chose the following factors the most often: self-control (106 indications), praises from superiors (104), existing bonus award systems (93), offers of training and other forms of professional development (91),

and fixed salaries (78). The existing bonus award systems were indicated as a motivating factor by 34.4% of the survey participants. Thus, it is impossible to confirm the second assumption conclusively. At the same time, it should be noted that the decisive majority of the respondents (65.6%) did not choose this factor, and 28.9% of them indicated that a fixed salary had a motivating influence on quality improvement. It should be kept in mind that E. Deming (2012) preferred fixed salaries to bonus systems. On the other hand, the distribution of the respondents' answers with respect to business types presented in Table 11 shows the preference for the variable part of remuneration in service enterprises.

**Table 11.** The respondents' opinions on the factors/actions motivating them to improve quality – a distribution with respect to business types

Factor / action	Type of enterprise (%)	
	Service provision	Industrial manufacturing
Existing bonus award system	39.3	29.1
Praise from superiors	42.7	34.2
Manner of controlling quality	9.3	6.0
Self-control	30.0	50.4
Work in a quality team	16.0	15.4
Fixed salary	24.7	34.2
Offers of training and other forms of professional development	40.7	24.8
Nothing motivates me to improve quality	6.7	7.7
Others	4.0	3.4

\*The percentage points do not add up to give 100 because the respondents were able to indicate more than 1 answer.

The respondents working in such enterprises more frequently chose the existing bonus award systems as a stimulus motivating them to improve quality. In the case of fixed salaries, the respondents answered in the opposite way. This type of remuneration was indicated as a factor motivating people to improve quality more often by the respondents working in manufacturing enterprises. This confirms partly the opinion that quality improvement should be something natural that does not have to be supported by financial rewards (Dale, 2001).

The third assumption (A3) recognizes that bonus systems used at present influence negatively the perception of justice if the quality of final products or services depends on a whole quality chain. Table 12 contains the respondents' answers to the question about their employers' treatment of individual and collective effort as a basis for awarding bonuses. It turned out that individual effort was used more often as a basis for awarding bonuses, which indicates the need for further research on employee team management and the role of bonus awarding in such management.

**Table 12.** The types of effort constituting a basis for awarding bonuses in the enterprises employing the survey participants

Type of effort	Generally		Type of enterprise (%)	
	Number (N)	Percent (%)	Service provision	Industrial manufacturing
Individual effort	177	63.9	64.7	54.2
Collective effort	100	26.1	35.3	45.8
Total	277	100.0	100.0	100.0

The data presented in Table 12 show that individual effort plays the dominant role in granting bonuses in both types of businesses, although this role is larger in service enterprises (64.7%) than in manufacturing businesses (54.2%). This difference gives rise to comparative research on the differences between the role and organization of individual and collective work in both types

of enterprises.

The respondents are divided into equal halves with respect to their opinions on justice in the allocation of tasks among employees (Table 13).

Interestingly, the same relation can be observed when these opinions are analysed with respect to business types (Table 13).

**Table 13.** The respondents' opinions on justice in the allocation of tasks among employees in their respective companies

Opinion	Generally		Type of enterprise (%)	
	Number (N)	Percent (%)	Service sector	Manufacturing sector
Yes	138	49.8	52.7	48.3
No	139	50.2	47.3	51.7
Total	273	100.0	100.0	100.0

Especially in the enterprises where the effort of the whole team constituted a basis for awarding bonuses, negative opinion on justice in the allocation of tasks could indirectly cause dissatisfaction with bonuses. An examination of interdependencies among the aforementioned variables should constitute a basis for further research.

The respondents were not asked directly for their opinions on bonus reward systems. A more general approach was used, aimed at examining the causes of injustice in remuneration systems (Table 14).

**Table 14.** The causes of injustice in remuneration systems indicated by the survey participants

Cause	Number (N)	Percent (%)
Different salaries at similar positions	91	58.7
Excessive differences in salaries between management and employees	63	40.6
Unequal allocation of duties	60	38.7
Failure to include competences as an element of a remuneration system	53	34.2
Lack of objective criteria for bonus distribution	49	31.6
Lack of additional remuneration for undertaken improvement actions	36	23.2
Loss of a bonus due to events beyond an employee's control	34	21.9
Gender pay gap	10	6.5
Punishing for mistakes that an employee has not made	5	3.2
Others	2	1.3

\*The percentage points do not add up to give 100 because the respondents were able to choose more than 1 answer.

If bonus awarding is indicated as one of such reasons, this approach allows the determination of the relative importance of this factor. It turns out that quite a few of the respondents indicated the following three causes of injustice connected closely with bonus awarding: the lack of objective criteria for the allocation of bonuses (49 indications), the lack of additional remuneration for undertaking improvement actions (36 indications), and the loss of a bonus due to events beyond an employee's control (34 indications). Summed up, all these answers show that dysfunctions related to bonus awarding are relatively often regarded as a source of injustice in remuneration systems.

The data presented in Table 15 do not show significant differences between service enterprises and manufacturing enterprises with respect to opinions on the causes of injustice in remuneration systems.

**Table 15.** The causes of injustice in remuneration systems indicated by the survey participants – a distribution with respect to business types

Cause	Type of enterprise (%)	
	Service provision	Industrial manufacturing
Excessive differences in salaries between management and employees	38.0	45.1
Different salaries at similar positions	51.9	69.0
Gender pay gap	6.3	7.0
Failure to include competences as an element of a remuneration system	39.2	28.2
Lack of objective criteria for bonus distribution	29.1	32.4

\*The percentage points do not add up to give 100 because the respondents were able to choose three answers.

**Table 15.** The causes of injustice in remuneration systems indicated by the survey participants – a distribution with respect to business types (continued)

Cause	Type of enterprise (%)	
	Service provision	Industrial manufacturing
Loss of a bonus due to events beyond an employee's control	19.0	25.4
Unequal allocation of duties	49.4	26.8
Punishing for mistakes that an employee has not made	3.8	1.4
Lack of additional remuneration for undertaken improvement actions	29.1	16.9
Others	0.0	1.4

\*The percentage points do not add up to give 100 because the respondents were able to choose three answers.

## 6. LIMITATIONS

Firstly, the limitations of this paper result from the adopted research method. Quantitative research of this type focuses more on establishing respondents' declarative opinions and does not allow the identification of all factors influencing particular choices. It means that when respondents indicate the role of superiors in the allocation of bonuses, it is not clear if such decisions are consulted with employees, if superiors' assessments are objective, etc.

Secondly, the conducted analysis of the literature on the subject may have resulted in not always pertinent choices of research issues. This results from the fact that the majority of previous studies on this subject were conducted outside Poland, often in the context of different organizational cultures, in countries with different reward systems, and

in companies with higher levels of remuneration than those used by companies in Poland (even if such companies are owned by foreign corporations).

Thirdly, the authors did not take into consideration already existing motivational systems. Whether something motivates employees to improve quality is determined by many factors and depends on employees' personal wishes, i.e. their internal motivation, on the existence of employee suggestion schemes, as well as many other situational, environmental, and relational factors. Being aware of the existing limitations, the authors intend to continue their empirical research on the topic of rewarding for quality in further projects.

## 7. CONCLUSIONS AND CONTINUED RESEARCH

It was impossible to confirm unequivocally assumption 1, according to which there are differences between service and industrial enterprises with respect to the methods of quality assessment. It should be noted, however, that decisions on bonus granting are based on not only objective product/service quality criteria but also opinions such as assessments made by superiors and criteria such as zero work-related accidents, zero sickness absences, or customer satisfaction levels. Thus, it is difficult to assume that bonus granting criteria are completely fair, which is also confirmed by the research on the third issue, namely perceived justice. Such research results may constitute a perfect opportunity for undertaking further studies on the role of organizational value systems in the shaping of quality-oriented attitudes. If there is no justice, trust cannot develop freely, and trust is of paramount importance in the TQM concept.

The respondents indicated a number of factors which, in their opinion, can motivate people to act. Obviously, the specific character of TQM influenced their opinions because they chose self-control (106

indications) and praises from superiors (104 indications) as significant factors. The existing bonus award systems were indicated as a motivating factor by 34.4% of the survey participants. Thus, it is impossible to confirm the assumption 2 conclusively. If the bonus award criteria are taken into consideration, then it is clearly visible that even if some criteria such as zero absences or zero accidents are not fair, they most probably do not apply to the majority of the respondents. Further research, however, could focus on such criteria as customer satisfaction (as long as it can be measured objectively) or the number of customer complaints (in relation to employees' awareness of joint responsibility for the final results of conducted processes).

Thus, the conducted analysis shows that a considerable group of respondents consider bonus awarding as a source of perceived injustice. The dysfunctions of bonus award systems occurring in the enterprises employing the survey participants probably support the assumptions on which the third assumption is based. Nevertheless, research on a sense of justice with regard to existing bonus systems needs to be continued. For example, the importance of particular types of justice (e.g. distributive, interactive, procedural) has not been clearly determined yet.

On the basis of the previous findings, the authors pose the following questions for further empirical research:

1. If an assessment of an immediate superior is an important factor in bonus allocation, to what extent are such assessments based on objective criteria? What is their influence on a sense of justice?
2. To what extent are customer satisfaction surveys objective? Do companies perform factor analyses to establish the impact of particular factors (e.g. pursuant to the PARETO principle) on the overall level of satisfaction? Is it just and motivating to base bonuses on such assessments?

3. How are non-compliances identified? Do managers take into consideration the idea of a quality chain (the fact that final quality depends on the course of a whole process) when they make decisions about bonuses?
4. When sickness absences are taken into account in bonus award systems, is it a manifestation of a lack of trust in doctors and employees themselves or suspicion as to true reasons for absences?
5. What is the role of a low salary in the positive perception of the motivational function fulfilled by bonuses? Are employees motivated by "fight" for higher remuneration?
6. How strong is the influence of bonuses and payments related to employee suggestion schemes on undertaking improvement actions?
7. If bonuses result from work regulations, what is the relation among the particular types of justice (e.g. between procedural justice and distributive justice)?

Another thing worth examining is the influence of bonuses on internal motivation (so far, such research has been conducted only among physicians in the health care sector).

An interesting research direction could be an assessment of the particular types of justice on organizational behaviours.

The conducted research confirms that bonuses as well as wider reward systems are rather a factor of organizational hygiene and influence the well-being of employees. Furthermore, it is difficult not to agree with Deming's view that pay does not act motivationally, and measuring performance in order to tie pay to performance is futile. Pay has a different role to play – it should attract and retain the best employees.

That is why the authors propose the following practical solutions:

Tying efforts aimed at quality improvement

to annual profit sharing (both Deming and Crosby agreed that profit sharing was the best form of merit pay). Such a system to a considerable degree guarantees distributional fairness.

Giving up a bonus system in a situation where it is not possible to assess an individual's effort to improve quality (in its present form, a bonus does not fulfil a motivational function, but is only a financial risk management tool – bonuses can be easily

suspended, while any change in pay conditions involves time consuming formalities and procedures).

Tying reward systems to employee suggestion schemes. Employees are not supposed to receive money for their ideas but only points which after some time can be converted into various rewards to be chosen by employees (such a system was implemented in Land Rover).

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