Methodical Bases of Tariff System Development at Small and Medium-Sized Enterprises

S I Babina[1], E A Morozova[1]

[1]Kemerovo State University, Kemerovo, Russian Federation

Abstract. Tariff systems of small and medium-sized businesses are mostly poorly structured, which is very often the cause of conflicts in the team, employee dissatisfaction with the wage system due to its incomprehensibility, low productivity. The article presents the mechanism of developing a tariff system for small and medium-sized businesses based on the concept of internal worth, according to which the work/position has value due to its influence on the organization performance, depending on the level of responsibility and competencies required for its implementation. To determine the internal worth the method of a point estimation on compensation factors reflecting the properties and characteristics inherent in all types of work/positions is used. This method described in the scientific literature is widely used by well-known consulting companies (Hay Group, Watson Wyatt and others) to develop personnel remuneration systems in companies around the world. Due to the dissimilarity of the tasks facing each enterprise, its own set of factors with different significance strength of each of them for a particular business is used. In the methodology proposed by the authors, the method of positions distribution by grades is also used. Posts assigned to the same grade have equal worth and the same wage range should be used for them. The authors propose a linear mathematical model for calculating salaries by grades. The approach to the tariff system development and its successful implementation in practice can create a motivational circuit, which will provide the desired message for all other enterprise remuneration subsystems.

1. Introduction

The development of small and medium-sized businesses is one of the strategic goals of the Russian economy for the period up to 2030 [1]. As of the beginning of April 2019, 266740 enterprises (without micro-enterprises) with a total number of employees of 8468.5 thousand people were registered in the unified register of small and medium-sized enterprises (SMEs) in Russia [2]. The competitiveness of any business, regardless of its volume, is determined by the existence (availability) of the necessary resources and the efficiency of their use. In the current economic situation for entrepreneurs of small and medium-sized businesses in the foreground there are issues related to the attraction of financial resources, production and marketing of products, hiring workers. At the same time, the issues of staff remuneration (tariff wage, bonus systems of remuneration, and compensations of social nature), which form the motivation of employees to raise productivity, to increase the professional level, very often are less important for many employers. Facing with problems of poor productivity, low product competitiveness, conflicts in a team, high staff turnover, such employers tend to explain the reasons for their failures by the low skill level and irresponsibility of employees. Firing some employees and hiring others, they face the same problems after some time. Ultimately, underestimating the deep motivational role of the remuneration system in the management of personnel labor behavior can have a detrimental impact on the existence of the business itself.

According to M. Beer, one of the founders of the human resources management concept at Harvard Business School, "The development and management of the remuneration system is one of the greatest difficulties of human resources management for the General Director"[3, p. 811]. These difficulties lie in the difficulty of reconciling multifunctional remuneration systems for different categories of personnel performing different duties and activities with the business strategic objectives. Large companies with a great number of positions and types of work use the services of consulting companies and professional developers to solve these problems. For small and medium-sized businesses, this approach is not acceptable, primarily because of its significant financial costs. Therefore, as a rule, the main way to determine how much to pay for a particular job/position is to focus on the average market rates in the regional labor market, the employer's own ideas and attitudes about the wage level, financial capabilities of the enterprise.

The business of the enterprise is developing gradually, respectively new types of work and positions appear. In the end, it becomes increasingly difficult for the employer to control remuneration costs. The salary system imbalance is increasing. Indicators of this process are differences in the wage level of the same levelspecialists in different structural units or performing the same duties, but hired at different times; the existence of different allowances, additional payments to compensate for wage gaps. If the existing enterprise "Regulations on remuneration" (if any) does not correspond to the real remuneration practice, the system becomes opaque, incomprehensible. As a result, many workers develop a sense of injustice in terms of wages level and other compensations, which reduces their motivation to work [4].

Remuneration systems, built more on an intuitive approach, are characteristic of autonomous compensation policy [5, p. 94]. They are characterized by the lack of interconnection of remuneration systems with business strategic objectives, and the structure of the basic wage has an individualized form. The latter means that the company does not have a tariff grid, but there is a staff timetable indicating each employee salary, that is, an employee is evaluated, but not the work/position. This ultimately leads to an imbalance in the wage structure.

The results of a sociological study conducted by the authors of the article at one of the machine-building enterprises of the Kemerovo region, LTD "NN" (a conventional name) confirm stated above. In terms of the average number of employees, the company belongs to medium-sized businesses. By the time of the study (January 2019), the company had been operating for less than a year. The purpose of the study was to examine the enterprise employees 'attitude towards the current practice of labor organization, to various aspects of industrial activity, to socio-managerial processes. One of the research objectives was devoted to the study of workers motivation to their work and the factors identification of its formation. Without going into details, we note that the main conclusion made by the study results suggests that the most problematic factor at the enterprise is the employee 'slow motivation to work. At the same time, as shown by the correlation analysis, the formation degree of the employee's motivation to work affects his satisfaction with all other working conditions. It is important to emphasize that the employees of the enterprise under the study are concerned not so much with the payment level as with the opacity, incomprehensibility of the remuneration system; 70 % of them are more or less thinking about changing their place of work.

The basis of remuneration is its tariff subsystem, which forms the motivational circuit of the entire remuneration system. If the tariff system is built in accordance with the scientific principles of organization and remuneration, it sets a positive motivational potential to other subsystems of remuneration and compensation. If the scientific principles in the development of the tariff system are violated, the other subsystems, at best, do not have a motivational impact. The worst option is demotivation of employees and their desire to leave the company.

Taking into account all aspects of the stated problem, the purpose of this study is to justify the method of a tariff wage system construction for SMEs based on the concept of the work/position worth for business, as well as to develop a mathematical model for calculating salaries by stages (steps) and grades (of tariff grade). The proposed method will allow specialists to minimize wage

structure aligning costs. 'Step-by-step' actions of the methodology are demonstrated on the example of the tariff system development for LTD "NN", which is a subject of SMEs.

2. The Degree of Knowledge of the Problem and Theoretical Basis of the Research

Methods of a tariff wage development are covered in fundamental scientific works on remuneration problems of R. I. Henderson (salary structures architecture, salary tariffs development) [7], D. T. Milkovich and D. M. Newman (salary structures construction on the basis of strategic decisions) [8], M. Armstrong and T. Stevens (methodology of a point-factor assessment of a position, tariff grids development) [6], P. T. Chingos (tariff systems development on the basis of qualification assessment scales [9], G. Dessler (labor evaluation methods, labor activity classification methods) [10] and of other authors.

The collection of works edited by D. Berger and L. Berger 'The Compensation Handbook, Sixth Edition: A State-of-the-Art Guide to Compensation Strategy and Design' [11] presents the authors' works on topical issues of remuneration formation: the works content analysis; methods of the work complexity assessment; salary structure development; payment for qualification, knowledge and professional qualities; connection of professional qualities with wages, etc.

Modern approaches to the basic wages structure development have been made in research works of Russian scientists. In the works of I.P. Povarich, S.A. Babin, S.I. Babina the formation issues of the organization compensation policy are considered, in particular the tariff system formation based on the post worth evaluation on compensation factors and posts grading [5]. Strategic issues of remuneration are covered in the fundamental work of N. Gorelov [12]. Articles by A. Laptev, V.V. Goroshchenko, S.S. Platonov, L.A. Zigangirova [13; 14; 15] are devoted to the issues of ranking posts on the basis of their worth assessment and distribution by grades. Formation issues of intrafirm wage systems, including the tariff system and its role in the staff remuneration system are considered in works of A.V. Rebrov, D.A. Zalozhnev, D.A. Novikova, T.A.Kostenkova, B.M. Genkin, L. T. Sabirova, T.Y., Stoken [16; 17; 18; 19; 20].

In the Labor Code of the Russian Federation (article 143), the wage system is defined as "wage system based on the wage differentiation tariff system of different categories workers". Different bases can be used as a basis for differentiation. The most commonly used bases are the complexity of the work performed (for workers) and the work/position worth for the organization (for all personnel categories). "The concept of intrinsic worth states that any work has value due to the impact it makes on the organization performance results and depending on the level of its responsibility and the skills required to perform it. Increasing the degree of influence and the level of responsibility or skills lead to an increase in the level of payment" [6, 64]. It should be noted that the employee's wage increase should be connected, first of all, with the salary rise, that is, its permanent part. Differentiation of the tariff component of wages for the performance of various works/positions represents the structure of the basic salary, which is formally stated in the tariff grid of the organization.

Experience shows that the majority of large companies, including Russian ones, to develop the structure of basic wage (tariff grid) use a point assessment of the works/positions worth by compensation factors, positions grading with the subsequent development of the tariff grid. The use of these methods is aimed at the creation of flexible tariff systems which allow taking into account all the merits of the employee and increase his salary without transferring to a higher position through the differentiation of wages within the same grade . It is this possibility of modern tariff systems that motivates employees to develop their competencies, which ultimately contributes to the labor productivity growth and increases business competitiveness.

Compensation factors are properties, characteristics common to all works/positions of the organization, which help to achieve intended goals and increase the cost [6, p. 121-127; 8, p. 160]. After selecting compensation factors, their ranking is carried out depending on the significance for achieving the activity result and a point assessment is given in terms of manifestation depth (degree) of each factor properties and characteristics.

A point assessment of works/positions is carried out on compensation factors taking into account the manifestation depth of the factor in the work/position. Determining the assessment of work/positions worth (significance) allows making their grading. This process refers to the distribution of jobs/positions on the axis, which is divided into grades. Thus, "a grade is a set interval of significance within which positions are considered to be equivalent: "significance" in this interval represent the same worth for the organization and imply roughly the same pay" [21, p.45]. In different systems, the concepts of grade, tariffs and tariff category can be related in different ways. In some systems, the concepts of grade and tariff category are perceived as equivalent and a certain tariff (payment range) corresponds to each tariff category (grade). In other systems, the payment range for one-grade posts can be divided into several tariff categories.

3. Experience in the Tariff System Development for LTD "NN"

As noted above, LTD "NN" refers to the medium-sized business by the number of the staff. At the beginning of the research there were no officially recorded strategy on the enterprise; it was only in the understanding of the owner. Top management did not have a clear idea of the direction in which the company should develop and, accordingly, what methods should be used to motivate the staff. The vision of most managers was limited to the current time.

In the field of organization and remuneration, a number of facts were revealed:

-for piecework workers the company used the tariff grid of machine-building industry and a piece-bonus wage system;

- for managers, specialists and employees there was a staff timetable indicating positions, persons performing them, and salaries. At the same time, the company did not have job descriptions, which would fix the tasks, functions, requirements for education and professional competencies of employees. In the employment contract between the employee and the employer, the functional duties of the employee and his salary were specified;

- "Regulations on salary", which employees were acquainted with employment, was formal and its content did not correspond to reality. At the enterprise, there was no formalized tariff grid. Upon employment, each employee agreed salary with the Director-owner;

- during the survey, which preceded the work on the tariff system development, it was found that 70% of employees are not satisfied with the system of payment because of its opacity, inexplicability of differences in wages for the same functional duties performance. This caused tension in relations between employees, gave rise to conflict situations, did not motivate to high-performance work, to the professional competencies development, and overall had a negative impact on job satisfaction.

According to the results of the survey, the enterprise management made a decision to improve the wage tariff system, the structure alignment of the base wage for managers, specialists and employees on the basis of determining the works/posts worth for the business and building a tariff grid. First of all, the owner announced and officially fixed the strategy of LTD"NN" – "Improving the products quality through the use of robotic digital equipment and increasing the enterprise share in the regional market of products up to 30 percent by the end of 2021."

The process of solving the tasks in the field of tariff system development included seven stages:

1. Works/positions analysis and the development of job descriptions, which set out the tasks, functions, and requirements for the level of education, work experience, for the competencies necessary to achieve strategic goals and to solve current tasks of the enterprise.

2. The choice of compensation factors that reveal the properties, qualities and characteristics common to all works/positions.

3. Determination of significance and evaluation of each factor by levels in points.

4. Evaluation of the works/positions worth by selected compensation factors.

5. Works/positions distribution by grades. Grades grouping in three levels (strategic, tactical, and operational).

6. Construction of a wage strategic line and determination of the average salary within each grade.

7. Construction of a tariff grid for managers, specialists and employees.

The following factors were chosen as compensation ones: 1) impact on business, 2) knowledge, 3) solving problems, 4) experience, 5) education, 6) mental risk. A group of experts, which included the heads of the main structural units, carried out the choice of factors and the assessment of their significance for business.Further, the depth of each factor manifestation was determined depending on the manifestation degree of its properties and characteristics at each level and evaluation in points was given. Taking into account E. G. Weber's law [7, p. 349], the difference between neighboring levels was set in the range from 15 to 20 percent. Table 1 provides the evaluation of compensation factors in points.

Table 1. Evaluation of compensation factors in points.

№	Factor	Factor Significance	Weight of the Factor	Min Point	Number of Points on Levels								
					1	2	3	4	5	6	7	8	9
1	Impact on Business	100	22,5	23	23	28	33	40	48	57	70	86	105
2	Knowledge	80	17,2	17	17	20	24	29	35	42	52	64	78
3	Solving Problems	72	15,4	15	15	18	22	26	31	37	45	56	69
4	Experience	63	13,5	14	14	16	20	24	29	35	43	53	64
5	Education	58	12,4	12	12	14	17	21	25	30	36	45	56
6	Mental Risk	51	11,0	11	11	13	16	19	23	28			
7	External Communication	40	8,0	8	8	10	12	14	17	20			
		464	100,0										

Further, each post was evaluated by compensation factors, taking into account the necessary level of their manifestation for the performance of functional duties. Thus, an assessment of the each post worth to the company's activities, achievement of strategic goals and performance of current tasks in points was obtained. All postswere placed on the grades line in accordance with the points scored. It was decided that ten grades were enough for the enterprise. Positions belonging to the same grade (tariff grade) have the same worth for the enterprise and must have the same wages range. In this system, the notions of grade and tariff category are to be equivalent.

The wage structure alignment was made by the following actions and calculations. The average wage was determined for each grade. Then the distribution ranges of wages for each grade were established. Actual wages of the posts fallen in one grade were taken into account. The average wages taken for reference wages were cleared of bonuses and other surcharges, as a result, the average salaries for each grade (tariff grade) were obtained.

For the tariff grid development, a linear relationship between the stages and the average salary in the grade was taken. Using the average salary value yi (n_0, K_i) for the n_0-th stage and the corresponding distributions of the range in percentage (K_i) for different grades, we obtained a one-parameter extrapolation dependence for the calculation of salaries by stages n and a grade number i for any number of stages N, provided that $N \geq 3$ and takes odd values:

$$y_i(n, K_i) = y_i(n_0, K_i)\left[1 + \frac{2(K_i - 1)}{(K_i + 1)(N - 1)}(n - n_0)\right], \quad n_0 = \frac{1}{2}(N + 1), \tag{1}$$

where:
i – the grade number ($i = I, II, ...X$);

n – the grade stage number ($n = 1, 2, ..., N$);

Ki – parameter that specifies the range distribution as a percentage in the i-the grade;

n_0 – selected stage;

$yi(n_0, Ki)$ – average salary values for $n=n_0$ step.

According to the owner's decision, within each grade 5stages ($N=5$) were established. Salaries in stages for each grade were calculated according to the formula (1) using Excel program. In the end, the tariff scale was obtained.It includes 10 grades with five stages in each of them within the limits of the established range (table 2).

Table 2. Tariff schedule for managers, specialists and employees of LTD "NN".

Positions (Posts)	Grade, i	Number of Points	Range Distribution, К, %	Median salary (Tariff) ($y_i(n_0, K_i)$, руб.	Grade Stages (Tariff Grade) (n)				
					1	2	3	4	5
Operational (C)	I	100 -116	1,7	27560	20415	23987	27560	31133	34705
	II	117-135	1,7	31800	23556	27678	31800	35922	40044
	III	136-156	1,7	36600	27111	31856	36600	41344	46089
	IV	157 -179	1,7	42100	31185	36643	42100	47557	53015
	V	180-207	1,7	48415	35863	42139	48415	54691	60967
	VI	207-238	1,7	55680	41244	48462	55680	62898	70116
Tactical (B)	VII	239-275	1,75	64020	46560	55290	64020	72750	81480
	VIII	276-317	1,75	86830	63149	74990	86830	98670	110511
Strategic (A)	IX	317-365	1,5	95500	76400	85950	95500	105050	114600
	X	366-420	1,5	110000	88000	99000	110000	121000	132000

Further work consisted in the development of the tariff wage regulations, where the competences requirements for the establishment and increases of salaries within each grade were set out.

4. Conclusion

Thus, the methodological tools presented by the authors, including the assessment of the post worth by compensation factors in points, posts grading and a mathematical model for calculating salaries by grades, give a clear understanding of the process of equalizing the salaries structure (base salary) on the basis of the concept of the work/position worth for business. For many SMEs, the implementation of the proposed approach will create a motivational contour of the remuneration system, and will make it more transparent and understandable. The new tariff grid developed by the method set out in the

article will make a seamless transition from "chaos" in the remuneration system to its consistency and predictability, and will allow keeping salaries stated in the contract to existing staff members that is always very important in the new pay system implementation. The salary for newly hired employees should be set taking into account the position held and the necessary level of competencies with its further increase within the limits of the accepted range when the necessary conditions are met (growth of merits). These conditions must be fixed in the regulation on the tariff wage system and communicated to employees.

To achieve the motivational effect of the remuneration system, the company should go on working on the development of all its other subsystems: bonuses, social payments and benefits, compensations aimed at the human capital development. The creation of an effective remuneration system is one of the strategic goals of personnel management. Underestimating the role of the remuneration system in the formation of labor motivation of employees, corresponding to the strategic guidelines of the business, is one of the main reasons of its low competitiveness, and sometimes death.

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