



*Stručni rad/Professional paper*  
*Primljen/Received: 19. 09. 2019.*  
*Prihvaćen/Accepted: 03. 12. 2019.*

## DEVELOPMENT OF HUMAN RESOURCES MANAGEMENT MODEL IN CONSTRUCTION

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**Summary:** Human resource management is a business function that includes tasks related to people, their provision, selection, education and other activities necessary to ensure the development of employees. It is a strategically organized activity that manages and directs employees in order to achieve long-term, strategic goals of the company.

Human resource management is considered to be a strategic business function if implemented through a systematically formulated human resource management strategy that is in accordance with the company's strategy. In this paper, the emphasis is on the importance of human resource management in practice through recognition of human factor as the key potential of a successful construction company. This paper deals with the importance of rewarding the employee as special practice of human resource management and presents a proposed model of rewarding the employee in real construction company.

**Key Words:** human resource management, human resource management strategies, construction companies

## RAZVOJ MODELA UPRAVLJANJA LJUDSKIM POTENCIJALIMA U GRAĐEVINARSTVU

**Sažetak:** Upravljanje ljudskim potencijalima poslovna je funkcija koja objedinjuje poslove i zadaće vezane uz ljude, njihovo pribavljanje, izbor, obrazovanje i druge aktivnosti osiguravanja i razvoja zaposlenih. To je strateški organizirana aktivnost čiji je zadatak upravljanje zaposlenicima s ciljem postizanja dugoročnih, strateških ciljeva poduzeća.

Upravljanje ljudskim potencijalima smatra se strateškom poslovnom funkcijom ukoliko se ono provodi kroz sustavno formuliranu strategiju upravljanja ljudskim potencijalima usklađenu sa strategijom poduzeća. U ovom se radu nastoji prikazati koncept upravljanja ljudskim potencijalima u praksi prepoznajući ljudski faktor kao najvažniji potencijal uspješnog građevinskog poduzeća. Rad se bavi važnosti nagrađivanja zaposlenika kao posebne prakse upravljanja ljudskim potencijalima te prikazuje predloženi model nagrađivanja zaposlenika u stvarnom građevinskom poduzeću.

**Ključne riječi:** upravljanje ljudskim potencijalima, strategije upravljanja ljudskim potencijalima, građevinska poduzeća



## 1. Introduction

Nowadays, human resources are the most important factor of success and achievement of competitive advantage of all, including construction companies in the domestic and foreign markets.

People are a key resource for successful businesses operations because, as the foundation of any company, it is only people that can learn, grow and contribute to it. Without people, who move material resources such as equipment, machines, raw materials and materials and who control financial resources, they would be of no use.

In construction, the need for a more complex way of managing a construction project and human resources emerged after the first industrial revolution, when construction was undergoing a major shift from the handicraft production, where the entire process of design, construction and maintenance of a structure was left to a single person (master), introducing division and specialization of work. Therefore, the importance of human resource management is particularly emphasized in construction, where the success of a construction project depends on a large number of people of different expertise and education who must be well coordinated with each other and organized. Most of the total costs of a construction project falls on human capital or labour. All this makes the construction industry one of the most challenging environments in which successful human resource management contributes to the success of the company (Loosemore et al., 2003).

In order to achieve an enviable competitive advantage in the market and implement an appropriate business strategy using human resources, today every company must realize the importance of investing in all dimensions of human resource management, such as obtaining and selecting human resources, motivating and rewarding them, educating and developing them and managing their performance. Construction industry as a project-oriented branch of the economy is one of the most risky, complex and dynamic environments. By successfully managing people, they contribute to the success of the construction project, achievement of strategic goals, and growth and development of the construction company as a whole.

Therefore, the objective of this paper is to describe the importance of human resource management in construction, and to present the human resource management policies and practices on an example of a real construction company with special emphasis on motivating and rewarding employees.

## 2. The concept and definition of human resource management

To explain the concept of human resource management in any organization, it is sufficient to remember the definition by the American management theorist Mary Follett of management as the art of getting things done through people. In order to better understand the concept of human resource management, it is necessary first to understand what human resources are. Human resources means the total knowledge, skills, abilities, creative capabilities, motivation and loyalty managed by an organization or company (Bahtijarević - Šiber, 1999). Human Resource Management (HRM) as a business function integrates activities and tasks related to people, their recruitment, selection, education and other activities of providing and developing employees (Lackovic, 2008). There are also other definitions of human resource management, so Dessler (2011) understands the term human resource management as determining what kind of people to recruit, acquiring potential employees, selecting employees, training and developing them, setting efficiency standards, evaluating efficiency, advising employees, and rewarding employees.

The human resource management function is unique because people are the only resource that is specific only to the organization or company to which they belong. Competition can take over the same technology, accounting, finance, but it is impossible to copy people and their knowledge.



Human is the most valuable resource being present alongside natural and technical resources, but human is more than that. Human is a living, thoughtful being, the initiator of processes, the one who gives meaning to other resources, which is why human resource management is gaining importance and is one of the fundamental functions of management.

Human resource management is an integral process consisting of a series of human resource management activities or functions such as employee planning and selection, employee performance evaluation, training and development, and employee motivation and reward.

### **3. Human resource management in construction practice**

For the purposes of this paper, an analysis of human resource management in construction practice was conducted on a real construction company. The observed construction company started its operations in 1995 with its registered office in Bosnia and Herzegovina, and the main activities of this company are construction of building and civil engineering structures and their maintenance, construction of roof structures and roofs, construction of hydraulic structures, construction requiring special work and equipment such as prestressing and grouting as well as concrete production. In addition to construction activities, this company is also engaged in providing technical services such as architectural and engineering services and technical consulting, civil engineering, development of project technical documentation, professional supervision of construction works, technical testing and analysis, testing of calculations for construction elements etc.

The human resources department exists in this construction company for more than eleven years, although not as independent in the organization chart. Since this is a large construction company with about 500 employees, it can be said with certainty that today human resources form the basis of the competitive advantage of this construction company in the market, they are the main resource for survival and the driver of growth and development (Poloski Vokic and Vidovic, 2007). That is precisely why there is a need for independent operation of the human resource management department, which includes five basic human resource management policies and practices, namely professional selection of candidates, motivation and rewarding of employees, employee performance management, employee development and education, and strategy and leadership. Thus, all segments of human resource management started being taken care of, and today, based on the comparison of business operations before and after the introduction of the human resource department in the observed construction company, a significant increase in business performance of this construction company can be observed. A SWOT analysis of the construction company is conducted further in this paper.

#### **3.1. SWOT analysis of the selected construction company**

One of the key steps in the development of human resource management is certainly the previously conducted analysis of strengths, weaknesses, opportunities and threats to human resources known in literature as SWOT analysis. This analysis has identified only some of the critical issues that the observed company needs to consider in its operation (Table 1).

The strength of this construction company is reflected in the high-quality human resources that have many years of experience in major construction projects. Nowadays, due to different technological trends, globalization, migration of high-quality workforce and constant changes, the human resources of the observed company are aware of the constant need to improve quality in order to maintain and increase their competitiveness in the construction market.

The underdeveloped strategy can be pointed out as a weakness or potential strength of this company. In order to increase the competitiveness of the company and expand its operations to foreign markets, it is necessary to have a developed strategic plan. Therefore, in this company it is necessary to develop a human resource management strategy as a basic document that describes the vision, mission and objectives of human resource management in the company.



Table 1. SWOT analysis of the construction company

STRENGTHS	WEAKNESSES
Awareness of the need for continuous quality improvement Experience in realization of significant construction projects Experience in human resource management on construction projects Flexibility in adapting to changes Commitment and trust between employees and company High-quality workforce	Underdeveloped awareness of the importance of human resources management Underdeveloped strategy Absence of human resource management as an independent business function in the organizational structure of the company Lack of high-quality personnel in the field of human resource management Non-availability of state-of-the-art equipment and technology required by the foreign construction market Underdeveloped employee motivation and rewarding system
OPPORTUNITIES	THREATS
Increased interest in construction and construction works Participation in international construction projects Favourable changes in laws and regulations in the field of construction Cooperation with higher education institutions as a potential source of high-quality human resources	Competition in the construction market Development of human resource management systems in competing companies Unattractiveness of the construction sector to newer generations Trend of labour emigration Increasing demands of potential clients of construction projects

Although construction is still a traditional activity that often offer resistance to changes and trends, human resource management as a business function is still not fully recognized, but organized in the form of human resources services or departments that keep records of employees. Often, such departments are not organized so as to be able to fulfil all modern human resource management tasks and operations, that is, as such they are not engaged in attracting and keeping talents, do not work on stimulating the development of existing employees and motivating and rewarding them, are not involved in their education or satisfaction of personal needs but usually concentrate only on recruitment of new employees, dismissal of the present ones and payment of salaries. Consequently, in the observed construction company, it is necessary to develop human resource management as an independent business function and an adequate system of motivating and rewarding employees.

Today, high demand and interest in building and construction works represents an opportunity for the observed construction company, while competition in the construction market, emigration trend of high-quality workforce, increasing demands of potential clients of construction projects etc. can be identified as threats.

### 3.2. Proposed model for rewarding employees in the construction company

Since the analysis of the situation in the field of human resource management in the observed construction company identified the underdeveloped employee motivation and reward system



as a weakness, a proposal for improvement of the motivation system based on an employee reward model is given further in this paper.

The structure of the reward model consists of tangible, intangible and status forms of employee reward. Since motivated workers are the basis for successful business operations, and thereby for achieving competitive advantage in the market, it is necessary to have a well-developed employee reward system. Consequently, the observed construction company can improve its reward system by introducing additional tangible and intangible rewards. The proposed model is shown in Table 3.

Table 3. Proposal for improvement of the existing employee reward model

<b>Proposal for improvement of the existing employee reward model</b>			
<b>Serial number</b>	<b>Reward mark</b>	<b>Reward</b>	<b>Reward description</b>
<b>Tangible forms of motivation</b>			
1	M 1	Base monthly net salary	Base salary for each worker depending on the type and complexity of the job, qualifications and scientific degree
M2 - Bonus for monthly hours worked			
2	M 2.1.	Salary incentive	Salary supplement in the form of incentive awarded as a percentage for performing the work according to the time schedule
	M 2.2.	Function bonus	Supplement for employees in management positions/functions
	M 2.3.	Compensation for difficult work conditions	Salary supplement for difficult work conditions (height, distance from residence, night work, etc.)
M3 - Additional compensations / rewards			
3	M3.1.	Transport allowance	Reward in the form of the right to use an official car for business purposes or compensation for the use of one's own car for business purposes
	M3.2.	Compensation for transport of other workers	Compensation for transport of workers by official car
	M3.3.	Allowance for cooked meal	Allowance for cooked meal (food) provided or paid to all employees
	M3.4.	Field allowance	Compensation for the stay and work of workers who do not return home after work but are provided with accommodation and food by their employer
	M3.5.	Daily allowance	Reimbursement for business travel lasting 12 hours
	M3.6.	Official payment card	Reward given to employees in management positions
	M 3.7.	Innovation reward	Money reward for ideas that contribute to the development and improvement of business processes within the company
4	M4 - Benefits / privileges		



	M4.1	Accident policy	The right of all employees to have an accident policy in order to be able to receive some compensation in the event of an accident on the basis of contracted insurance
	M4.2.	Shares	Employee opportunity to participate in company ownership realized only by long-time employees
	M4.3.	Holiday cash grant	Holiday compensation at the discretion of the company director under successful business conditions
5	M 5- Success-related material rewards/compensations		
	M5.1.	Bonus on salary upon completion of a project	Reward / salary supplement to all participants in a successful construction project depending on the number of hours spent on the project
	M 5.2.	Salary supplement after the guarantee period	Salary supplement to all employees who participated in execution of the project, which is paid after the defect liability period
	M 5.3.	Bonus for the quality of works performed	Reward for project participants if the works performed are in accordance with the contracted and planned quality
6	M6 - Material rewards / compensations related to involvement in the project		
	M6.1.	Salary supplement to project manager according to engagement in the project	Rewarding the engagement of a project manager when there are active company's construction projects
7	M 7- Material rewards / compensations based on confidence and commitment to the company		
	M7.1.	Length of service in the company	Reward based on continuous service, the amount of which depends on years of service, and is granted to employees under conditions of successful business operations of the company
8	M8	Tuition and scholarships for employees' children	Financial support for employees' children in the form of tuition and scholarships
<b>Intangible forms of motivation</b>			
1	N1	Working place organization	Providing a comfortable workplace and space, measured by the size and location of the office, possibilities of separate apartments (rooms) for managers, etc.
2	N2	Acknowledgements and rewards	Rewards in the form of commendations, acknowledgements, signs of appreciations for a job well done
3	N3	Assignment of work of greater importance	Reward in the form of assigning responsibility to employees for performing work of greater importance
4	N4	Independence at work	Reward in the form of assigning responsibility to employees for independent performance of work
5	N5	Flexible working time	Creating/setting working time depending on the possibilities and needs of employees in order to increase their productivity and efficiency



6	N6	Involving employees in the decision-making process	Degree of involvement of employees in decision making and problem solving processes
7	N7	Employee performance feedback	Positive or negative information on performance that all employees receive in order to increase employee efficiency and performance
8	N8	Information and counselling program on the health of employees and their family members	Regular medical examinations and consultations to which all company employees are entitled once a year
9	N9	Informal socializing of employees	Organizing informal social gatherings, the so-called teambuilding, that take place outside working hours in order to enhance the sense of belonging to the company
<b>Status-based forms of motivation</b>			
1	S1	Use of official vehicles for private purposes	The possibility of using an official vehicle for private purposes in addition to business purposes
2	S2	Using an official mobile phone	Possibility of using an official mobile phone with or without restrictions according to the previously decided limit
3	S3	Professional development of employees	Development of employees in the form of seminars, workshops, conferences and other forms of professional development
4	S4	Advancement	Possibility of training and advancement to higher positions in the company
5	S5	Training for specific professions	Possibility of training for certain positions according to the needs of the business, where instead of hiring new employees, full-time employees are trained for the vacated position

According to the improved rewarding model, it would be desirable to introduce material rewards such as innovation awards (M3.7), material rewards or compensations related to project performance (M5), material rewards or compensations related to involvement in the project (M6), material rewards or rewards based on confidence and commitment to the company (M7) and tuition and scholarships for employees' children (M8).

In order to encourage innovation and improvement of business processes, the management of the observed company should introduce a rulebook by which the company employees who devise an adequate and innovative way of improving business processes would be rewarded. In this way, the company's employees could be motivated to contribute to the company with their suggestions and ideas. Any employee should be able to propose how to improve business processes, and the employee whose proposal is judged as contributing to the development and improvement of business processes should be entitled to a financial reward or innovation award (M3.7.).

Material rewards related to project performance (M5) consist of three types of rewards, and these are the salary supplement upon completion of the project (M5.1), which would be granted to all participants in a successful construction project, depending on the number of hours spent on the project, the salary supplement after the defect liability period (M5.2.) as a salary supplement to all employees who participated in the realization of the project, which is paid after the defects liability period, and reward for quality of works performed (M5.3.) as a reward for



project participants if the works performed are in accordance with the contracted and planned quality.

The existing compensation model is also supplemented by material rewards that are received depending on involvement in the project (M6) in the form of a salary supplement to the project manager. In the period of active construction projects in which the observed construction company is involved, a project manager would be granted a function supplement to motivate the project manager to make the active construction project successful.

Since connection and commitment to the company are exceptionally important for successful operation of the company, the proposal suggests material rewards and compensations based on confidence and commitment to the company by which, if the company operates successfully, the employees with continuous service would be granted rewards the amount of which would be proportional to the number years of their service.

Since it is important to have a well-developed system of intangible rewards alongside material forms of motivation, it would be desirable to introduce employee performance feedback (N7) in addition to existing intangible employee rewards.

All employees should receive positive or negative feedback on performance, which would increase employee work efficiency and performance, since positive performance feedback usually has a strong motivational effect on employees. Also, in order to enhance employee care as an intangible form of motivation, it is desirable to introduce a culture of health care by introducing information and counselling programs on the health care of employees and their family members (N9). In order to increase the sense of belonging to the company, connection among employees and comfortable working environment, it is proposed to organize informal social gatherings of employees in the form of the so-called teambuilding. These forms of intangible rewards substantially contribute to the mutual trust and commitment between the company and these employees, and thus form the basis of the organizational culture of the company. Today more than ever, companies need dedicated employees in order to successfully compete in a competitive environment, and for this reason more attention needs to be paid to the influence of management decisions on employee commitment (Cardona and Rey, 2008).

#### 4. Conclusion

Systematic management of human resources is one of the sources of sustainable competitive advantage of modern companies in the field of construction as well as other spheres and fields of activity and life.

Human resource management can be considered a strategic business function if it is conducted through a systematically formulated human resource management strategy aligned with the company's strategy.

When establishing a human resource management system, in addition to strategies, it is also human resource management policies that must answer key questions in the company such as what kind of employees are needed to achieve strategic goals of the construction company and what programs need to be realized in order to attract and retain employees, to develop their competencies for the purpose of better positioning of the construction company in the market.

Since companies today, while striving to obtain high-quality workforce, must pay more and more attention to how to retain and motivate the workforce for better work efficiency, motivation and rewarding as a human resource management policy is one of the most important elements that needs to be continuously developed and implemented in practice.



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