

**THE ROLE OF MANAGING INFORMATION SYSTEMS TO
IMPROVE COMPETITIVENESS OF SERBIAN BUILDING AND
CONSTRUCTION INDUSTRY ORGANISATIONS**

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*Working Paper 20/07
June 2007*

**DEPARTMENT OF MANAGEMENT
WORKING PAPER SERIES
ISSN 1327-5216**



Abstract

The paper points to the importance of introducing human resource management in Serbian Building and Construction Industry organisations which operate internationally. After recent political and economic turbulence, the Serbian Building and Construction Industry faces the challenge to come back to the world market and continue the tradition of successful business. A research project of the behaviour of expatriates from Serbian Building and Construction Industry companies has been conducted. The findings supported by the in depth literature review contributed to the formation of a theoretical model of human resource management in the Building and Construction Industry. This model adds value to the existing knowledge of ways to succeed in global business.

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THE ROLE OF MANAGING INFORMATION SYSTEMS TO IMPROVE COMPETITIVENESS OF SERBIAN BUILDING AND CONSTRUCTION INDUSTRY ORGANISATIONS

Human resource information systems are “a critical tool for integrating human resource information into the organisation’s business strategy and for demonstrating the positive contribution that human resource can make to the bottom line through and for the more effective and efficient management of the organisation’s human resource” (Stone, 2005: 75)

INTRODUCTION

In this paper we have researched the role of managing information systems in human resource management in the Serbian Building and Construction Industry. The Building and Construction Industry plays an important role in economic growth in every country for three reasons. First, this industry significantly contributes to a gross domestic product. Second, it interacts with other industries while creating its products and services in a way that indirectly improves the efficiency and effectiveness of other industries. This means that when there is a need to accelerate economic growth, the government usually undertakes measures to directly improve a Building and Construction Industry’s competitive advantage. Third, the Building and Construction Industry mainly employs unskilled and semi-skilled workers influencing the rate of employment (Petrovic-Lazarevic, 1989). An additional reason relevant to Serbia is that the core competence of the Serbian Building and Construction Industry is exporting, indicating the relevance of managing information systems in human resource management (Vukotic, 2007).

In today’s literature management information systems are defined as computer systems in an organisation that provide information to support managers to make decisions in a functional area of an organization (Laudon and Laudon 2006; Stanelake search 2007; ITM Glossary 2007). Functional areas include marketing, production and service operations, human resource management and research and development (Capsim, 2007). The importance of managing information systems is reflected through its influence on organisational cost effectiveness, improved information flow from top down management levels and vice versa, and direct transfer of information to the operational level employees (Stamatovic and Kurij, 2003). Managing information systems, by all means contribute to creating knowledge of an organisation and consequently helping organisations to learn and adjust to a present market position (Turban et al, 2006).

Given that new management systems have been introduced with privatisation (Petrovic-Lazarevic, 2005), what comprises the need for establishing the human resource management accompanied by the use of new technology, the paper is divided as follows. Part two presents the core competences of Building and Construction Industry. Part three explains the present situation of the industry from the point of view of its core competences. Part four provides suggestions of what should be done to improve the exporting role of Building and Construction Industry. The final section presents concluding remarks and directions for future research.

CORE COMPETENCIES OF THE BUILDING AND CONSTRUCTION INDUSTRY

Serbia is the latest former East European socialist country to fully enter the transition period and begin the process of building an industrial base competitive with a market economy.

The transitional period comprises of the transformation of firms followed by privatization of socially owned enterprises. It was initiated by the sale of large-scale state companies to top managers, primarily to those who were close to the state elite (Petrovic-Lazarevic and Djordjevic, 2000). Before the democratic era many of the large organisations, including those from Building and Construction Industry, have been effectively bankrupt “since the collapse of former Yugoslavia...

with a largely passive workforce, as a means of maintaining social peace”, and of ensuring a degree of support for the regime. At present Serbia is faced with an unemployment rate of 20 percent of the work force, estimated gross domestic product of \$5,713 per capita and a third of its population under the poverty line (Unemployment in Serbia, 2007, Economy in Serbia, 2007). As a consequence transition is still slow, except in service sectors and major utilities where firms have been successfully privatised to international companies (International Europe, 2007).

Privatisation brings forward introduction of new management styles well developed in Western economies. They are to replace self-management which is known as a decentralized decision making process, and greater independence and responsibilities for managing and developing companies and for selling their products in and outside the country (Bornstein, 2001; Hickson and Pugh, 1995).

In Building and Construction Industry the individuals who were facing unemployment caused by privatization of state-owned companies, established small and medium-sized enterprises. But since the former state owned firms were able to keep a monopolistic position in the market in the pre democratic era of Serbia by maintaining a close relationship with the state, and there was lack of adequate legal frameworks, development of small to medium enterprises was slow. That is, the effective enforcement did not allow enterprises to enforce contracts, collect debts and resolve disputes. Over-taxation, heavy administrative burdens and corruption further deteriorated small to medium enterprises. Finally, banks as a primary source of finance for small to medium enterprises did not show any interest in supporting them (Petrovic-Lazarevic and Djordjevic, 2002).

Although facing difficulties in running business till 2000, small to medium enterprises made a considerable step forward in order to introduce new management styles. Now, leaders in small to medium enterprises are in fact entrepreneurs that mostly run family businesses. As such they need to create and store business related knowledge with their organisation. Their intent is to reach high profitability through competitive advantage. Leaders in Building and Construction Industry are attempting to achieve high profitability by reviving the industry's core competencies in exporting (Petrovic-Lazarevic, 2005).

Building and Construction Industry in former Yugoslavia contributed up to 10% of gross domestic product (Vukotic, 2007), which makes a significant contribution to the economic development of a country (Hillebrandt, 1985). Building and Construction Industry organisations were doing their business internationally which included both building and construction and service activities (Petrovic-Lazarevic, 1989). Thus, exporting became the industry's core competence. Among other things, organisational export was characterised by expatriates, also known as employees who work outside their home country for their parent company (Vukotic, 2007). Managing expatriates requires the establishment of human resource management in organisations followed by the implementation of information technology. For the purpose of this paper, human resource management is defined as “the policies, practices and systems that influence employees' behaviour, attitudes and performance” (De Cieri and Kramar, 2005: 4)

In this paper we stress the importance of introducing human resource management from the point of view of the expatriates' role in the Building and Construction Industry international activities before the transitional era. We believe it adds value to creating knowledge within Building and Construction Industry organisations in order to be transformed into learning organisations. Expatriates being the industry's core competence should influence the industry's global competitive advantage at present.

PRESENT SITUATION: THE ROLE OF EXPATRIATES

At present in Serbia the awareness of the importance of human resource management in running business successfully is spreading among academics, while the practical application of human resource management is still limited (Vukotic, 2007).

Building and Construction Industry new privatised companies have adopted a simple organisational structure to provide specialised building and construction service and activities that include: concrete construction, steel construction, earthwork and sewerage. The organisational structure is followed by the introduction of Western management style and the use of information technology to collect data, and transfer information to the employees from managers and from employees to managers (Novakovic, 2003). That requires the reorganisation of the existing personnel service. In the pre transitional era, the organisational personnel service was in charge of basic administrative employee related activities comprising of: evidence of sick leave, transport compensation, maternity leave, preparations of documents for retirement, and recruitment of new staff (Vukotic, 2007). Now a need to plan and develop the human resource in accordance with strategic goals has occurred. It in fact requests the establishment of human resource management with the following activities: human resource planning, recruitment and selection, career planning, team orientation, employee motivation, compensation, training, employee health and safety and discrimination (Stone, 2005). For small to medium enterprises in Building and Construction Industry it includes management of expatriates, since a parent company makes selection who to send to fulfil professional Building and Construction Industry management role in managing projects or construction sites internationally (Vukotic, 2007). Consequently, the Building and Construction Industry expatriates are employees with authority and integrity. Like other industries' expatriates, they are mature, flexible, resourceful and innovative (Maksimovic, 2004).

Research project conducted

A research project on Building and Construction Industry expatriates was conducted in Serbia in 2006 (Vukotic, 2007). The methodology applied was based on triangulation.

Triangulation helps to check the validity of research project's findings by using different sources (Miles and Huberman, 1994). For this project the sources were: available documentary analysis of former large Building and Construction Industry organisations whose business was successful internationally, interviews of expatriates, and an appropriate in-depth literature review.

Interviewees were selected based on the recommendations of former general managers of Building and Construction Industry large organisations with over 3000 employees. Ten former expatriates were interviewed with 80 percent of them being employed by companies founded before 1970; 10 percent by companies established from 1970-1990; and 10 percent were from the companies founded after 1990. Each interviewee held a managerial position outside the country.

Each interview lasted around one hour. The interviews were taped and transcribed.

Semi structured questions were used, asking the study participants to comment on the following themes:

- Primary indicator of a company's competitiveness
- International business activity and human resource management
- Expatriates
- Return to parent company

Results

All interviewees agreed that the quality and price of their work was a competitive advantage for their company in a global market. Expatriates were chosen based on the criteria presented in Table 1.

Table 1: Criteria to choose the expatriates

Qualifications fit with strategic plan of the company	70%
Previous experience including knowledge of local rules and regulations	40%
Knowledge of a foreign language	30%
Qualifications	100%

Qualification was a primary criterion to become an expatriate. In 70 percent of cases the secondary criterion was that their qualifications matched the strategic plan of the company. It is interesting that previous experience including the knowledge of a foreign language was not that highly regarded. Such findings go in favour of a professional skill required from expatriates.

Although the age in choosing the expatriates was not relevant, the gender was underlined in most cases (90%) male expatriates were chosen.

All interviewees indicated that the personnel sector was not much of a help to the expatriates. The parent company did not organise training related to adjustments in a new work place. Some companies had some form of brochures of working conditions such as a quality of water, safe places to go and so on. But the word of mouth of those who were previously engaged seemed to be the only proper source of information.

Team work was essential to perform duties offshore. Team members were both from the parent company and local employees.

The motivation to work outside the country was in 85 percent of interviewees related to higher earnings, while 15 percent wanted to satisfy their curiosity to work in a foreign country.

The occupational health and security measures were rigorously adapted to a new environment. The responsibility to organise them was in only 20 percent of cases the role of the parent company, while in 80 of cases it was the duty of foreign company the expatriates worked for.

Contacts with the parent company were in 30 percent of cases on a daily basis, 50 percent occasionally and 20 percent never had contact. In most cases (60 percent) there was a person delegated from the parent company to contact expatriates. Contact was made by phone and fax.

Working and living in another country caused cultural shock for expatriates which significantly affected their work in the begging of their stay in the foreign country. There were no activities undertaken by parent company to overcome the shock.

Return to the parent company included having the same position held before going offshore. Majority of expatriates did not face any difficulties to work in teams at home, while 20 per cent felt that being expatriates meant having a privileged position.

Discussion

According to the research conducted, it was found that if a Building and Construction Industry Company wants to gain competitive advantage it needs to establish human resource management with at least some essential functions based on computerisation. The functions should be, apart of administrative duties of the present personnel sector, related to human resource planning and career planning. At present the managers of personnel sectors in small to medium enterprises do not have the appropriate human resource knowledge, although there is a growing demand for it.

Expatriates in the pre transitional era were professional specialists. To the extent that their profession allows, they should have broader business and management knowledge and be flexible to adapt to new circumstances. The old personnel system did not help expatriates sufficiently. Drawbacks related to the exposure to cultural shock caused by lack of training and insufficient information regarding the new working environment.

Human resource management should focus on training expatriates before leaving the country to prepare them for a new organisational and national culture they are going to be faced with in a new environment.

Human resource management should avoid the misconception of privilege towards expatriates who have high earnings compared to those remaining in the parent company. That should be done through the proper compensation activities with the help of information systems.

International orientation of Building and Construction Industry imposes that human resource managers must be involved in strategic planning of the organisation using the appropriate information systems.

Geographical distances of construction sites request proper communication based on information technology.

The progress of applying computers in business in general is still slow in Serbia. The research project findings point to its significant application in Building and Construction Industry in a form of professional software packages (Cekic, 2004). Regarding their application to support new management styles such as human resource management, information technology is applied mainly to support different types of evidence such as coming and leaving the work place, supply of material in time, delay in delivering goods. There is no evidence of using information systems to create organisational knowledge, but a tendency to improve management related information flow to an operational level is visible.

Project limitations

The study is restricted by the small number of interviews. That limits the ability to generalize the results. However, with the additional availability of supporting documents related to the export activities of former large scale Building and Construction Industry organisations and in depth literature review, a robust qualitative analysis initiates a proposal of a theoretical human resource management model.

If the Serbian Building and Construction Industry organisations want to position themselves globally, they should concentrate on developing human resource management with an expatriate context. In the next section we propose a human resource management theoretical model that should help organisations to create knowledge and gain and sustain competitive advantage.

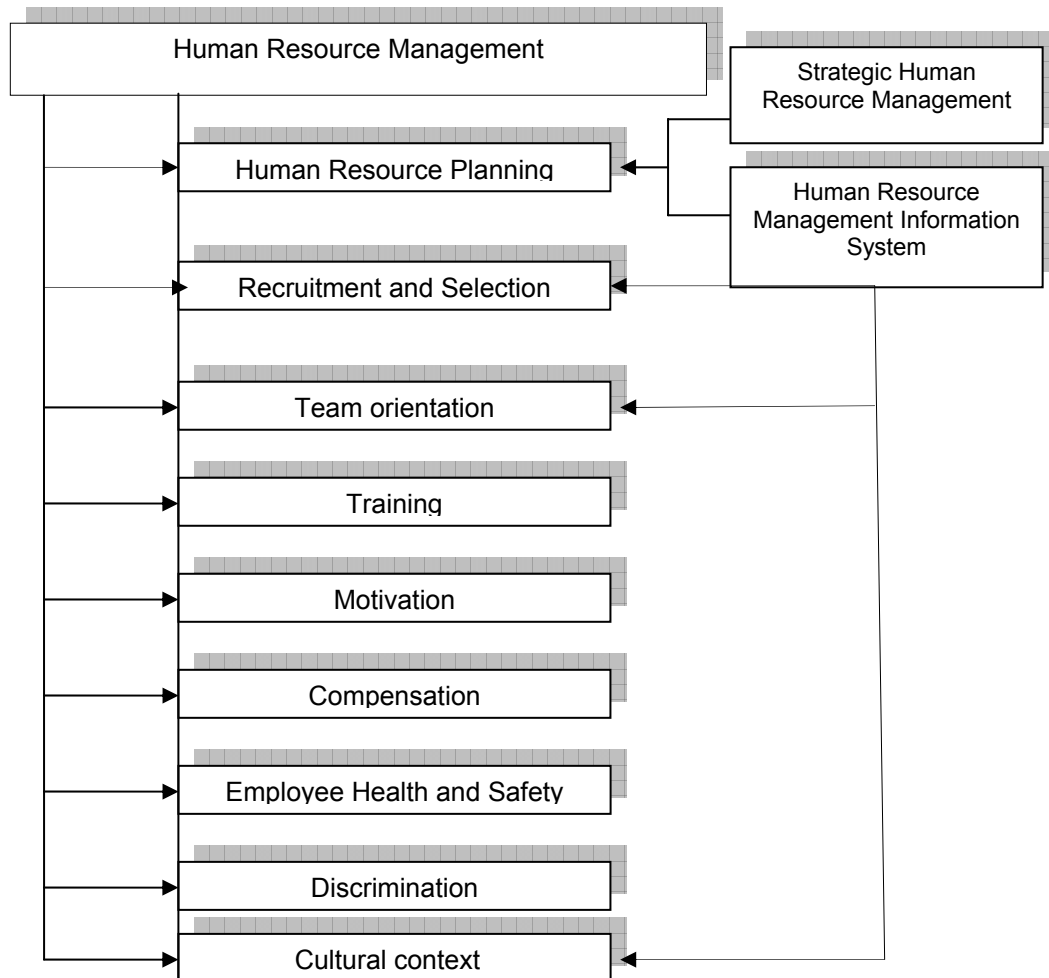
THE BUILDING AND CONSTRUCTION INDUSTRY HUMAN RESOURCE MANAGEMENT MODEL

Bringing attention to the core competence of the Building and Construction Industry expressed through the role of expatriates in improving global competitive advantage, we propose the human resource management model for Building and Construction Industry organizations in Serbia presented in Figure 1 (See Figure 1):

The human resource management components for Building and Construction Industry organisations have some characteristics typical for a learning organisation. For example, sessional employment in the Building and Construction Industry makes it difficult to plan human resources. Human resource planning is even more difficult with the internationalisation. Here the

information systems can significantly help by collecting and storing data about the availability of human resources. Data should include professional education, work experience, foreign language knowledge, and knowledge of the country where a company intends to send its experts to work. Also, data should include the capabilities to work as a team member, since this an important work related characteristics of the Building and Construction Industry.

Figure 1: Human resource management in the Building and Construction Industry in Serbia



Recruitment and selection of expatriates should be based on management information systems in order to add value to the objectivity of both processes. That is, management information systems should minimise subjective judgment and rule of thumb when selecting new employees (Petrovic-Lazarevic, 2001).

Since training was found to be a weak point of human resource management in the pre transitional era, it should be provided for expatriates before leaving the country. Here online training can help.

Employee motivation includes new dimensions in internationalisation of the Building and Construction Industry with a need to balance an international compensation with the incomes of employees from the parent company.

Emphasizing the importance of Occupational, Health and Safety measures should link to motivation as it satisfies the individual safety and security needs improve job satisfaction.

Discrimination should be addressed in trying to find ways to minimise the negative effects caused by unequal opportunities based on gender and ethnicity.

A multicultural approach incorporates both national culture and organisational culture. The expatriates should be trained to accept a new cultural environment where they will perform their duties. Here, again creating and storing knowledge through the management of information systems plays an important role.

The proposed theoretical model of human resource management in the Building and Construction Industry in Serbia can help organisations to transform their existing personnel services from having an administrative role to managing human resources. That does not mean that the administrative function should be abandoned. It should be modified. The new role of human resource managers is to be a strategic partner, to have expatriates be aware of their role in improving competitiveness of organisations and develop information flows from managers to employees and *vice versa*.

Contrary to the static role of personnel service, human resource management, including expatriates, is dynamic. It comprises that human resource managers should know how to manage changes in order to help the company to gain and sustain its competitive advantage. Further, that requires management and organisations to learn from created and stored knowledge how to be innovative and entrepreneurial in order to be successful globally.

CONCLUSIONS

With the positioning of Building and Construction Industry organisations in global markets based on the pre transitional industry expertise of doing business outside the country, there are potentials for the Serbian economy to overcome its drawbacks caused by a decade of turbulent political and social events. In this respect, the newly established small to medium enterprises should practice human resource management with paying specific attention to the role of expatriates. This should include application of the proposed human resource management model based on management of information systems *as conditio sine qua non* for creating knowledge of successful business practices.

Further research activities will relate to an analysis of existing human resource management in small to medium enterprises and their contribution to creating a learning organisation.

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