



SOFIA UNIVERSITY "ST. KLIMENT OHRIDSKI"
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**Information Systems in HRM as a strategic tool for competitive
advantage in business administration**

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Our era is characterized by intense competition, rapid technological change, globalization of the economy. In this environment, businesses must face the challenges of modern market conditions by improving their efficiency, increasing their efficiency and productivity, reducing their operating costs, in order to survive and with the ultimate aim of maximizing their profits.

Businesses now rely heavily on information and communication technologies and sophisticated information systems to be competitive and to offer their products and services. What role do Information Systems play in Human Resources Management, how do they transform “business” and what is their relationship to business performance? Research and studies have been conducted around this issue which have shown that the benefits of the companies from the use of an integrated Information System in Human Resource Management, are the reduction of operating costs, the optimization of business processes, the saving of resources and finally the increase its productivity and profitability. Research by Wiklund and Shepherd (2003) showed that knowledge-based resources are positively related to business performance. Shang and Seddon (2002) propose a multidimensional, detailed framework for categorizing the benefits that a company derives from the use of Human Resources Management Information Systems (HRMIS). The existence of such an integrated information system facilitates a company to operate with as few errors as possible, to avoid inconvenience and possible burdens, while its customer service is done more correctly, more directly and more quickly. Kaplan and Norton (1996) argued that companies need specific management and control systems in order to remain competitive, especially in terms of intangible assets (e.g. labor force, infrastructure, technology). Papastathopoulos (2009) states that in the business world balances are directly affected by the development and application of new technologies, pushing entrepreneurs to find new ones, or to develop and adapt existing business models-balance points.

- *The basic problem to the solution of which the researcher wants to contribute by the dissertation research is formulated in the following question: by implementing Human Resources information systems, companies are able to*

eliminate production processes that do not add value and transfer this benefit to their customers, employees and shareholders? (Athanasopoulos, 2001:125).

When geographical borders are abolished, new information and communication technologies are introduced and markets are liberalized, the proper organization and use of new technologies seems to be the competitive advantage of enterprises (Jones and Tilley, 2003:17). Information Technology (IT) is the one that shows the way to the internationalization of a business, where a prerequisite for access to global commercial markets is the complete design and management of information systems (Levy and Powell, 2005:1) and it is information systems that provide the means of obtaining information in order to make more efficient and competitive business management (Levy and Powell, 2000).

- Another basic problem to the solution of which the researcher wants to contribute by the dissertation research is that: businesses with the application of modern information technologies, such as integrated business systems (HRMIS), gain a valuable ally in their effort to survive but also to succeed (Spathis and Constantinides, 2004).

HRMIS systems are now an essential tool to keep businesses competitive in a new business environment, while also offering the opportunity to reorganize their operations and update both their information systems and practices. There was, however, several years ago, a controversy in a United Kingdom survey of the small and medium-sized enterprises carried out in 2000 (Management Services, 2000:6), which revealed that more than half of companies considered that the Internet (which then offered far fewer services) and IT had absolutely no effect on their businesses.

- *My thesis deals with the value of Human Resource Information Systems (HRMS) for the operation of the business. The value that Human Resources Information Systems have for the company is formed based on its Strategy regarding Human Resources Information Systems, while the way the company operates is reflected in its Business Processes, and their management. Therefore, the aim of this research is to investigate the impact of the “Human Resource*

Information Systems (HRMS) Strategy” on the way of “Business Process Management (BPM)”.

- *The trigger for this specific research topic was the questioning of the value of Human Resource Information Systems (HRMS) by reputable academics. The focus on Business Processes arose partly due to the fact that Human Resource Information Systems (HRMS) are the means by which Business Processes are executed, and partly due to the need to align the company's strategy (and therefore the way it operates) with its HR Information Systems strategy. Otherwise, adopting HR Information Systems without aligning them with the company's Business Process Management strategy is like adding an engine to a car, which will allow the car to move, but without knowing whether the direction in which it will move will be the right one (Russell, 2005). Therefore, the main research areas are “Human Resource Information Systems (HRMS) Adoption”, “Business Process Management (BPM)” and “HRM Performance”. The research areas are studied and analyzed based on relevant literature, in order to clarify the wider context in which they are included, as well as their conceptual structure.*
- *The necessity of my thesis arises from the lack of research on the specific subject. Academic research on how Information and Communication Technology (ICT) adoption affects BPM performance is quite limited, while the area of “HRMS adoption-HRM performance” is an emerging field of research. Specifically, the adoption of Information and Communication Technology (ICT) affects BPM performance was initially shaped by the market and business consultants, rather than by some think tanks or academic institutions. Therefore, the combination of these two areas of research, and the interactions between them, was considered as an area that needs further investigation. Although there are many academic discussions about business process management (BPM) and the stable performance relationship, while for the inverse relationship - which is the subject of this research - no relevant studies were found.*

- *The significance of my thesis is theoretically assessed through its contribution to unquestioning the value of Human Resource Information Systems (HRMS). Also, practically, it contributes to highlighting the factors that play an important role in the orientation of the business, which can help businesses to identify those areas regarding Human Resources Information Systems (HRMS), which significantly affect the way they operate, so that they focus their interest on them.*

A conceptual model was developed with a strong theoretical background incorporating the works updated by Lee et al. (2012) and Paauwe and Richardson (1997) to test various hypotheses.

By its nature, this study is quantitative research that falls within relativistic epistemological hypotheses and therefore presupposes deductive theory approach. The focus of this study (i.e. “HRM performance model with HRMIS capability” in sight of business process management) is a fairly new area of research that’s not found in any existing literature. In this research, the target population is human resources professionals who have access to HRMIS within their organizations in a Greek context.

The research part of the thesis is implemented through targeted field research with a questionnaire. The selection of companies was made from the catalog of S.E.V., in conjunction with the list of largest companies based on turnover, Greek enterprises. An attempt was made to include as many sectors as possible in the survey sample from as many geographical areas of Greece. Large enterprises were mainly included. In particular, questionnaires were sent to companies that had installed HRMS systems. Each company was asked to answer the questionnaire by an IT professional and management executive.

- My thesis that I defend is the relationship “Adoption of HRMIS-HRM performance”, from the perspective of strategy. Specifically, my thesis focuses on the contribution of Information and Communication Technology (ICT) to Business Administration (BPM), by analyzing the relationship between the effects of HRMIS on HRM performance. Through this dissertation the researcher wants to find out that HRMIS-enabled HR transaction, when applied

correctly, significantly affects its HRM performance. The type and size of organization, the control variables in this study add no value to the research findings. This study confirms that traditional HR management practices with HRMIS enabled HR development and communication practices mainly affect HRM performance. In other words, this study specifically encourages an organization to adopt integrated performance management systems (PMS), an important component of HRMIS, for the effective management of their employees.

- For the needs of this quantitative research, the methodological approach that the researcher considered suitable for measuring and evaluating the strategic performance of HRMS is: the Balanced Scorecard (BSC), based on the critical literature review of HRM's measurement and evaluation systems and methodologies and its approach to this paper as a business strategy, which helps to achieve a competitive advantage.

In conclusion, the findings of the studies in this thesis are applied to organizations seeking to improve their performance in HRM through HRMIS-enabled HR practices. Therefore, organizations planning to review and update the HRM of their business processes are informed by this study that adopting an appropriate HRMIS, specifically a performance management system (PMS), will be critical to their success.

The adoption of information systems in Human Resources Management is evolving into a basic input, which directly affects both the quality and quantity of output generated by modern enterprises (Laudon and Laudon, 2015:16).

- *The aim of this study is to investigate the extent to which the use of information systems can contribute to the improvement of business performance and through the primary research in a sample of businesses, to ascertain how the two concepts are connected to each other. To achieve this purpose this research attempts to prove that there is a correlation between the adoption of Information and Communication Technology (ICT) in Business Management (BPM). The ultimate goal is to highlight the strategic role of HRMS in the performance of HRM and to demonstrate their importance for the operation of*

the business, providing yet another argument against the position that devalues HR Information Systems and downgrades them to common technological products. Through the theoretical approach of information systems, business performance, critical overview and recording of empirical studies we will come up with the research method for this study.

The goal of this analysis is to review HR practices with HRMIS capability in HRM performance.

The objectives of this analysis are to develop an abstract HRM performance model with HRMIS capability that:

- investigates the impact of HRMIS-enabled HR practices on HRM performance, and
 - examines the effects of size and organization size on the HRM performance model with HRMIS capability.
- My hypothesis therefore was, in addition to exploring the specific areas as listed above, to examine specific research hypotheses as they emerged from the review of the literature. The main hypotheses of the investigation, appropriately grouped together, are given below:
- Therefore, my research questions are:

1. Research Questions on the application of HRM:

- Businesses that are more able to overcome the technical/integration issues that arise as well as the organizational and management issues, apply more HRM.
- Businesses that are more able to overcome the technical/integration issues that arise as well as the organizational and management issues, are more satisfied with the HRM application.
- Businesses that are more able to overcome the technical/integration issues that arise as well as the organizational and management issues, also show greater operational performance according to the proposed BSC.
- The enterprises most familiar with the technology implement more HRM.

- Companies that apply HRM also show greater operational performance according to the proposed BSC.

2. Research Questions on achieving competitive advantage:

- Companies that implement HRM achieve greater sales growth, profits and market share.
- Companies that have a higher degree of satisfaction with the implementation of strategy HRM and the development of the corresponding investment achieve greater growth in sales, profits and market share.
- Companies that show greater business performance according to the proposed BSC achieve greater sales growth, profits and market share.

3. Research Questions on HRM performance:

- The companies that are more satisfied with the HRM application also show greater operational performance according to the proposed BSC.
- Companies that are more familiar with technology achieve greater operational performance according to the proposed BSC.

4. Research Questions on the application of e-HR:

- Companies that apply e-HR show better operational performance according to the proposed BSC.
- Companies that apply e-HR show greater growth in sales, profits and market share.
- In companies that apply e-HR, HRM supports the competitive strategy of the enterprise.
- Companies that apply e-HR are more familiar with technology.

This study examines the most important Greek companies in many fields and focuses on human resources professionals who have access to human resources information systems (HRMIS) between their organization.

A difficulty for this study is the character of Greek companies as there are companies of different sizes and sectors, resulting in several incomparable sizes. At the same time, the reticence of Greek companies to share their results and data. In

order to reduce this problem, it was chosen to investigate mainly large enterprises which are more organized, and their data are available.

The originality of the dissertation lies in:

- a) to study the effect of human resources management function on the company's final performance. As the business field is increasingly competitive, it is evident that in this difficult changing environment it is necessary to study the presence of Greek companies in terms of Human Resources Management. Of particular interest is the examination of human resources management from the perspective of strategy, as in some cases this is not a strategic choice fully aligned with the overall strategy of the company, so that the results are not as expected.
- b) conducting quantitative research and formulating research proposals aimed at understanding how the Human Resources Management function using information systems creates value and seeking appropriate answers to the questions “why” and “how” and whether and how much it helped Greek companies that have used information systems in Human Resources Management become more competitive and succeed in business.
- c) the usefulness of research conclusions for human resources managers and the executives of a company / organization in order to improve the effectiveness of Human Resources Management and successfully implement strategic objectives.

The aim of this study is to make a significant contribution both to the administrations of Greek companies that implement or intend to implement information systems in the management of Human Resources, as well as to the deeper understanding and enrichment of our knowledge regarding the adoption and implementation of information systems in human resources management from the point of view of strategy.

Human resources are the “heart”, the center of business and the success of an organization depends on the effectiveness of its management (Nguyen et al., 2007).

In the context of today's globalized economic environment, the importance of the role played by Human Resources Management information systems in the performance of enterprises is highlighted. In other words, businesses need to focus on Human Resources Management by adopting Information Systems (HRMIS) in order to maintain and / or increase their market share. Through this they will be able to have long-term performance.

The dissertation consists of four chapters:

The *first chapter* presents the theoretical approach of Human Resources Management and Information Systems. The definitions that have been given from time to time in these systems are mentioned, a historical review of the functions of the Human Resources Management is made, the categories of the systems and their possibilities according to their complexity are noted, the influencing factors and the problems encountered during the implementation of such system. Examines in detail the modern Human Resources Information Systems, their capabilities and functions, the application and the critical factors that influence the system selection process and mentions alternative models of Human Resource Management, such as outsourcing and e-HR, as an evolution of Human Resourcing Management Information Systems (HRMIS).

The second chapter includes the benefits of each business from the use of Human Resources Information Systems. Refers to the connection between Human Resource Management and Operational Performance. It clarifies the concept of operational performance and the issues of its measurement. The main focus of this chapter is to understand and strengthen this relationship. Places the operational Human Resources strategy within the broader framework of the strategy, briefly refers to the origins of the HRM strategy, examines the relationship between an operational HRM strategy and a business (competitive) strategy, analyzes the content of the former and raises the issue of fit between the two. Refers to Information Systems Strategy and Business Process Management. It includes the benefits of the business from aligning its strategy and Business Processes.

The third chapter the ways-methods by which companies can measure and evaluate the performance of the HRMS are examined and the Balanced Scorecard is extensively described, which after a critical review of the literature, has been chosen as the measurement and management methodology of HRMS strategic performance. Presents the research hypotheses and the sampling framework of the field research carried out in the context of the dissertation, as well as a brief presentation of the most basic techniques in the field of statistics that were used in this study. Also, the research methodology is presented. As well, deals with the descriptive analysis of the research findings. The analysis focuses on the appropriate presentation and processing of the data collected with the ultimate goal of drawing useful conclusions for the wider population, to which these data belong. In addition, deals with the application of the technique of factor analysis to the data presented in the previous chapters. The aim of the analysis is to gather in groups the variables that have been presented and to express them in appropriate transformations with qualitative meaning. The factors resulting from the application of the factor analysis technique are presented and a series of hypothesis tests are reported in order to establish statistically proven conclusions for the hypotheses of the field research.

In the last chapter there is a detailed presentation of the conclusions of the field research. Also, the hypotheses of the investigation are presented and verified. These results, always in combination with other bibliographic references and other research and studies, compose an image regarding Human Resource Management. In addition, a number of limitations to research and a number of research directions are mentioned, which may be a start for the continuation of the present research.

In the context of this thesis, 3 publications were made.

The 1st refers to: *Adoption of Human Resources Information System in Organizations.*

Specifically, the Information Systems were developed to affect the functions of Human Resources Management with the aim of improving them and proven according to research the development of ICT has significantly improved the design of human

resource management, the results showed that HRM programming supported by ICT increases the efficiency of human resources.

The 2nd refers to: *Outsourcing and its relationship with Human Resources Management.*

Outsourcing is the present as well as the future. The Human Resources department is perhaps one of the most important parts of the company. He faces the following double challenge every day. On the one hand, the daily operating needs of the department and on the other hand the need to align (the so-called alignment) of the strategic management of human resources with that of the organization. The intense challenges lead in many cases to the solution of outsourcing. Outsourcing appears to the eyes of HR executives as a lifeline as it can lighten their responsibilities and enable them to focus on their main activities. Design is a prerequisite for the success of outsourcing. A properly organized and comprehensive outsourcing process can safely lead to the choice of “make or buy”. Perhaps it is the only way to enable outsourcing to act as a lever for growth, increasing the efficiency of employees and creating value in the business. The practice of outsourcing in the strategic management of human resources proves to be a tool that can help a company’s in the competitiveness.

The 3rd refers to: Strategic Human Resource Management (SHRM) - Crucial in the crisis.

The Strategic Management of Human Resources marks an effort to deal with all the human resources of an organization systematically and long-termly, which must be treated as a “resource”. One of the pioneers of modern management, Peter Drucker has mentioned that every business or institution has only one true resource, the Human. In fact, it states that “... Human resources have always been critical to the success of an organization, their importance has been always grown and this fact is recognized from within and outside organizations”. Objectives in the strategic management of personnel are focused on competitiveness, performance, survival, the creation of competitive advantage and job flexibility. Today, the majority of academics

and executives of organizations (private and public interest) have realized that the only effective way to create and implement a development strategy is through employees.

➤ *Main research findings*

Regarding the main findings of the research the majority of large Greek companies have understood the importance of HRM and for this reason they collect the necessary data of their employees. However, they are lagging behind in the processing of these data. Consequently, the largest percentage of enterprises take systematic HRM actions although there is room for growth mainly in the categorization of employees and in the provision of personalized information. Most enterprises have a separate HRM division.

A large proportion of businesses use the Internet to implement HRM (e-HRM) and specially to communicate with employees and collect data, while most businesses consider themselves familiar with technology. Although most businesses carry out HRM there is no clear understanding as to whether HRM is a business strategy or a set of employee-focused business tactics that helps the business achieve better results. However, all the findings show that HRM has much better results when it is aligned with the company's strategy and is a strategic choice. Overall, the majority of companies agree that HRM is part of their strategy, as has been mentioned in international literature (Brewton and Schiemann, 2003).

In their effort to develop HRM, most companies collect and use employee data from various channels and sources, and technology plays an important role in this. Similarly, they also use different means to develop relationships with employees, although compared to other international studies there is considerable room for growth in some instruments and practices that are successfully applied internationally.

In the development of HRM, businesses have to deal with a number of technical/integration, management and organization issues with technical being the biggest obstacle. The achievement of financial goals, the creation of maximum value for employees, the better functioning of internal processes and the development of the personal abilities of business employees are the criteria that have been selected based on the international literature as criteria for evaluating the performance of HRM

and with everything being considered important for Greek businesses in line with the corresponding international studies. This is an indication of the growing interest of Greek businesses in the development of both economic and non-economic measures to evaluate the performance of the HRM strategy, as shown in the international literature (Shaw and Mazur 1997; Clark, 1999; Moorman and Rust, 1999; Schultz, 2000).

Another encouraging finding is that most companies are relatively satisfied with the performance of HRM according to the above criteria while they are more satisfied with the creation of maximum value for employees and less with the development of employees' personal abilities of businesses. This result also indicates the areas that Greek companies need to improve in order to achieve greater HRM performance.

The most important financial benefits that Greek companies have obtained from the implementation of HRM are the loyalty of employees as both the employees who stay in the company for years and the profitability of its good employees have increased. This result, although expected, is encouraging as these are some of the main advantages of HRM. Similarly, the most important benefits in terms of improving the company's products/services are that the services provided to employees are constantly being improved and renewed while the behavior of human resources has become more human centric. The benefits in terms of employees are that the support provided to employees has increased, the transfer of employee complaints to the relevant people has been made faster and easier, and thus the speed of resolving employee complaints has been improved, as well as that employee satisfaction and loyalty has increased. The benefits in business processes are that the use of technology in business has increased and the reliability of business processes has increased. These results confirm the international literature highlighting the reported benefits (Peppers et al., 1999), while HRM software consolidate and disseminate the information that the enterprise has throughout the organization resulting in the automation of processes (Öztaysi et al., 2011).

Overall, Greek companies consider that the implementation of HRM increases competition between businesses. This suggests that companies must be employee-oriented, as well as that they must devise and implement a human-centric strategy so

as not to be overtaken by their competitors (Gable et al.,2008). In any case, it is observed that the HRM strategy supports the company's competition strategy.

Also important is the fact that most companies report a positive development of their sales, half a positive development of their profits and more than half a positive development of their market share, which indicates that the implementation of HRM helps businesses to achieve better financial results and become more competitive. The same is stated by businesses as the majority of them believe that HRM has contributed positively to the increase of the company's sales.

➤ *Findings on HRMS implementation*

The results of the survey show that for the implementation of HRMS companies need to have the management skills as they have to solve certain technical/integration, organization, and management issues. The more able they are to overcome these issues the more they implement the HRMS. Moreover, as has been mentioned in the literature, reorganization towards a human-centric operating model requires changes throughout the organization (Chen and Popovich, 2003).

Respectively, the companies that are more able to overcome the technical / integration issues that arise as well as the issues of organization and management, are more satisfied with achieving the financial goals and creating the maximum possible value for the employees. Especially the companies that develop applications and adopt practices tailored to each employee achieve their financial goals, as personalized communication improves the efficiency of business transaction with their employees (Mahdavi et al., 2008) and leads to increased employee satisfaction (Peppers et al., 1999) and improved employee service and support (Fjermestad and Romano Jr., 2003). At the same time, businesses that are able to resolve certain technical/integration, organization and management issues benefit from better communication with employees and their better service.

A very encouraging finding is that companies that apply HRMS also show a higher operational performance according to the proposed Balanced Scoring Card (BSC) for all components except financial. It is recalled that the performance criteria mentioned

in the previous paragraph have been selected according to the international literature and the majority of companies agree with them.

Finally, regarding the implementation of HRMS, it appears that the enterprises most familiar with the technology implement more HRM. The catalytic role of technology in the development and implementation of HRM has been reported in detail and in the literature review. Technology provides businesses with many new possibilities and makes some solutions economically feasible.

➤ *Findings on achieving competitive advantage*

Companies try to achieve a competitive advantage through their strategy or the better allocation of their resources in order to overcome their competitors. Financial results such as sales growth, profit growth and market share growth are the main performance criteria of businesses. The results show that companies implementing an HRM strategy achieve greater sales, profit and market share growth than their competitors. This result complements results from other research showing that building strong relationships with employees has been proposed as a means of gaining competitive advantage (McKenna,1993; Reichheld ,1993).

Accordingly, the results of the survey show that companies that have a higher degree of satisfaction with the implementation of the HRM strategy and the development of the corresponding investment achieve greater growth in sales, profits and market share than their competitors. The same happens for businesses that show greater operational performance according to the proposed BSC. That is, companies that show greater operational performance according to all components of the proposed BSC achieve greater growth in sales, profits and market share. This also confirms BSC as a performance measure of the implementation of the HRM strategy.

Finally, it is very important that the results show how in companies that implement HRM, HRM supports the competitive strategy of the business. The companies themselves and their executives perceive the HRM strategy as a means of achieving a competitive advantage. These results confirm the importance of human resource management as a source of competitive advantages that has been recognized

for decades (McKenna, 1993; Woodcock, 2000) and strengthened in recent years by the expansion of information technologies and the possibilities it provides.

➤ *Findings on HRMS performance*

Balanced Scorecard (BSC) has been proposed for the evaluation of the performance of HRM. The components of BSC vary according to the specifics of a strategy (Tiwana, 2001) and as this practice is also accepted by the authors and initiators of BSC (Kaplan and Norton, 2000), we consider that the proposed measurement and evaluation system meets basic requirements. The results show that the companies that are more satisfied with the implementation of HRMS also show a higher operational performance according to the proposed BSC. In this way, this model is confirmed as a means of evaluating the performance of HRM. Moreover, as has been mentioned and commented above, companies that apply HRM also show greater operational performance according to the proposed BSC and companies that show greater operational performance according to the proposed BSC, achieve greater sales growth, profits and market share in relation to competition.

Businesses that are very familiar with technology show greater operational performance according to revenue growth benefits, learning benefits, better employee targeting benefits, better employee communication and business processes efficiency benefits of the proposed BSC, as on the one hand technology provides many new possibilities to the businesses, especially with regard to the collection, management and dissemination of information, on the other hand, the proposed HRM performance evaluation model takes into account the specific parameters.

➤ *Findings on the implementation of e-HRM*

Although much reference has been made to the contribution of Internet technology to the development of HRMS and e-HRM in particular, i.e. the development and implementation of HRM practices via the Internet, there is no significant correlation between the HRM implementation and the e-HRM performance. The main reason is considered to be the small experience of companies in e-HRM as the majority of them have been implementing e-HRM for less than a year. Moreover, many of the benefits that businesses derive from e-HRM extend over a longer-term time horizon.

Experience shows how online technology provides countless possibilities and challenges, but businesses need time to manage it, integrate it into their organization and strategy and show specific financial results. The above way also explains the absence of a significant correlation between the e-HRM implementation and sales, profits and market share. However, enterprises implementing e-HRM (data-driven e-HRM actions), HRM supports the competitive strategy of the enterprise.

Finally, as is to be expected, the results show that firms applying e-HRM are more familiar with technology. Proper implementation and development of e-HRM requires, in addition to the use of a software or the adoption of certain practices, the necessary organization and culture so that the company can successfully manage the amount of information it manages and probably shares with its employees. After all, an important parameter of e-HRM systems is the ability to interact with employees. Technology has drastically changed the balance between the business and the employee, as the employee is not only the recipient of the company's message, but it is also the transmitter of its own messages which the company must also hear, understand and respond to with specific actions. However, not all businesses are yet properly organized for such a process.

➤ *Interpretation of Results*

The results of the survey reveal how Greek companies largely implement HRM and implement specific actions to develop and manage relationships with their employees. Although the usefulness of collecting and processing a lot of information in this direction is obvious, it seems that many times companies collect information without having the proper organization and planning for its processing. Technology makes the collection and storage of information quite easy and economical, which contributes to this direction. For this reason, there is also a great deal of discussion about the proper and effective use of information and data that businesses have at their disposal or are able to collect.

Similar is the use of internet technology and the development of e-HRM. It seems that businesses are trying to take advantage of the Internet and develop corresponding applications but are still at an early stage to have specific measurable benefits from

this activity. In any case, they must be properly organized so that they can manage the flow of information in an effective and efficient way. The big change in technology is social networks and the fact that employees are not just passively reacting to the messages and actions of the business but are active, produce and share content and information for the benefit or not of the business. Happy employees are ambassadors of the company while dissatisfied employees are not content to simply move to another company but share their dissatisfaction and produce negative advertising. For this reason, the term Employee Managed Relationship is proposed instead of the original Human Relationship Management. In this way it is emphasized that the strong role in this relationship is played by the employee. This change is a result of the possibilities offered by the Internet, as research shows that Greek businesses are not yet ready to deal with it.

The encouraging conclusion is that it seems that the choice of HRM is a strategic choice that is aligned with the competitive strategy of the company and that has brought concrete results. It is also encouraging that businesses are satisfied with the implementation of HRM and have succeeded in outperforming their competition with its implementation. In other words, the application of HRM as a means of achieving a competitive advantage is confirmed.

With regard to the performance of HRM, the present research has proposed a specific model which is a synthesis of earlier models and which takes into account the specific specificities of HRM as well as the capabilities of the technology.

The results of the survey contribute to the overall assessment of the strategy of Greek companies against human resource management. At the same time, they propose specific strategies to business administrations in order to take advantage of the potential of technology more effectively. More specifically, it is proposed to integrate human resource management into their business strategy and not to develop Internet-based applications (e-HRM), simply following the example of other Greek or foreign companies. It is also proposed to overcome the simple use of the Internet as another channel of gathering information and to seek its use for interaction and interactive communication with employees.

Although the research has covered a relatively classical concept such as HRM, it is drastically influenced by the development of Internet and information technology and the emergence of new applications and systems. However, these technologies are evolving rapidly and so is their effect. In many cases research is unable to keep up with such a dynamic and evolving environment and either some results have little lifespan, or there are phenomena that have not fully evolved and therefore their evaluation is partial or insufficient.

Another issue comes from the fact that conceptual measurement scales were used. Although the use of conceptual scales is the one that prevails in the literature, the use of objective measurement scales is generally preferable. The validity of the survey findings is most threatened, by each of the aforementioned factors, by the objectivity of the responses of personnel managers and business managers. In order to obtain as objective answers as possible, some clarifying interventions were made in the questionnaire, while it was made clear that the confidentiality of the data would be respected. The validity and reliability of the results would be more valid if, from each company, it was possible to obtain information from a sufficient number of employees. Objective difficulties (time limitation, financial expenditure, accessibility, etc.) did not allow the realization of this action.

Also, there is a lack of detailed financial data that would allow further and detailed analysis of specific important factors related to the financial performance of businesses (e.g. profit margins, etc.). The small participation of small and medium-sized enterprises and micro-enterprises is also considered a limitation of the research, as they constitute a significant percentage of the Greek economy.

One of the issues that could form the basis of some other research is the evolution of HRM and especially e-HRM. Besides, as has been mentioned, the experience of Greek companies in e-HRM is still small. Therefore, later there will be a possibility for more analysis and better evaluation.

At the same time, as the Greek economy relies heavily on small and micro enterprises, it would be interesting to study small and medium-sized enterprises and the degree of utilization of HRM as well as e-HRM. Similarly, it would be interesting to

explore specific sectors and make comparisons about the development, implementation and performance of both HRM and e- HRM. It would also be interesting to investigate non-profit organizations as well as public administration where the role of the client is played by the citizens.

Another issue that has not been extensively mentioned in this research and could be the subject of future research is the protection of personal data and the status and limits within which companies collect, manage and share personal data of their employees. At the same time, it is worth investigating the security of this data and what Greek companies are doing in terms of employee data security, whether they invest in security systems and to what extent this investment yields better results.

In addition, it would be interesting to compare the results of this research with similar research that has been done internationally. Such a comparison would reveal the peculiarities of the Greek market but also the peculiarities of the administrations of Greek companies. In some cases, during the analysis and presentation of this research, research work that has been done in other markets and showed the same or different results was mentioned. These points could be the starting point for new studies to investigate emerging differences.

The research topics described above, as well as others that the reader may perceive by studying the present paper, indicate that there are a significant number of directions for further research on business strategy in human resource management. Future researchers who will deal with these directions will contribute significantly both to the management of Greek companies and to the enrichment of our knowledge of business strategy.

In conclusion HRMS are the means by which businesses can start their new business journey. A journey in which there are new rules, e-rules that make up a completely new unexplored business landscape. A basic condition for active and effective participation in this journey is the integration of the company both vertically and horizontally in its internal environment and vertically and horizontally in its external environment.

In order to achieve this integration, a necessary condition is the planning, implementation and control that can only be achieved through the strategic organization and management of technologies.

Business is an organization, a living organism consisting of many different departments, which are called to work as a “body” to achieve the goal. This goal is none other than the creation of value, a value that will be characterized by duration, adaptability and efficiency. HRMS is that modern technological tool that can lead as well as guide businesses. They are not just the compass but the positioning system (GPS) or rather we would say that HRM is the business positioning system. In fact, what the generation of technology is called upon to accomplish is a system capable not only of measuring and calculating but of synthesizing and creating together with the human factor, which is the inspiration, expression and insight to move towards the new entrepreneurship, e-entrepreneurship.

Concluding this long-term research, the final conclusion we reach is that: “given the dizzying pace of changes in the world of technologies, and the changes they can bring to businesses, their use should be the result of conscious action and reasonable design. This will only be achieved if the businesses of the new era are ready to learn, unlearn and if they need to relearn”.

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