Processes, Performance Drivers and ICT Tools in Human Resources Management

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Abstract

This article presents an insight to processes, performance drivers and ICT tools in human resources (HR) management area. On the basis of a modern approach to HR management, a set of business processes that are handled by today's HR managers is defined. Consequently, the concept of ICT-supported performance drivers and their relevance in the area of HR management as well as the relationship between HR business processes, performance drivers and ICT tools are defined. The theoretical outcomes are further enhanced with results obtained from a survey among Czech companies. This article was written with kind courtesy of finances provided by VŠE IGA grant „IGA – 32/2010".

Key words: human resources management, performance management, ICT, HRIS, process

1 INTRODUCTION

The goal of this article is to present results of a recent scientific project, focused on research of relations between personnel performance, HR-related business processes and supportive information and communication technology (ICT).

The article presents resolutions of the following research questions:

- What are the main generic performance drivers, handled by HR managers?
- How can a dedicated human resources information system (HRIS) support HR managers in build-up and support of these performance drivers?
- How are HRIS currently being used (as performance management tools) in Czech companies?

In order to resolve these questions, the article is divided into four main chapters.

First of all, a theoretical basis is set using normative analysis of authoritative literature – human resources management as a research topic is defined and related business processes are identified. Attention is paid to contemporary trends in HR management, accentuating HR contribution to overall organization performance.

Secondly, with regards to identified business processes, the main performance drivers, handled by HR managers, are described as important management instruments. Main methods used in this chapter are normative analysis and induction, resulting in generalized overview of commonly valid performance drivers.

Thirdly, relevant ICT context is elaborated on the basis of authors' modular enterprise information system concept. Contribution of HRIS to performance drivers, accounted for by HR management, is analyzed. Eventually, findings from previous sections are integrated in a relationship matrix of business processes, performance drivers and corporate IS components.

Last chapter presents results of a survey, conducted among selected Czech companies and

HR professionals. In order to provide practical perspective to some of the above mentioned topics, individual correspondents from different branches were asked to participate by means of a web-based questionnaire, aimed towards evaluation of traditional topics (internal communication, motivation factors, information system support) as well as towards assessment of practical implications of emerging ICT trends (usage of social networks, key performance indicators (KPI) management systems, employee websites etc). Feedback gained from this survey is discussed and incorporated in article conclusion.

2 HUMAN RESOURCES MANAGEMENT

Human resources management was recently re-defined by Armstrong (2009) as a "strategic, integrated and coherent approach to the employment, development and well-being of the people working in organizations… it covers activities such as strategic human resources management, human capital management, corporate social responsibility, knowledge management, organization development, resourcing (human resource planning, recruitment and selection, and talent management), performance management, learning and development, reward management, employee relations, employee well-being and health and safety and the provision of employee services".

During the last decade, a "holistic" approach to managing people in organizations, corresponding to the above presented definition, largely replaced the traditional "personnel management" concept. HR managers are no longer responsible only for "bringing people into the organization, helping them perform their work, compensating them for their labors, and solving problems that arise" as described by Cherrington (1995) or "handling, directing and controlling of individual employees, … (as well as) acquisition and retention of competent employees trough proper recruitment, selection, placement, utilization, and development" (Sison, 1981). Although these tasks are still valid today, it has to be pointed out that modern approach to HR management takes into account additional perspectives, emerging from massive technology advancement as well as increasing importance of personnel performance management. Human resource managers can no longer care "only" about employees, but have to tightly cooperate with executive management and more so act as direct contributors to organizations' overall performance.

In order to be able to act appropriately in this new role, HR managers are highly dependent on correctly setup processes (i.e. "sets of activities, transforming a set of inputs to a set of outputs (goods or services) in order to fulfill other peoples' or processes' needs, using specific actors and tools" (Řepa, 2007)). This rationale is based on the currently predominant process approach to management, presented among others by Kaplan and Norton (1996). In accordance with the above listed definitions from Armstrong (2009) and additional hints from Marques (2010) and Brooks (2006), we consider HR managers to be accountable and/or responsible for the following business processes:

- preparing and reviewing capacity planning,
- interviewing and recruiting,
- managing personnel evidence,
- instituting programs for retention and growth (job trainings, certifications),

- setting up motivation programs (including management of benefits),
- evaluating employee efficiency,
- establishing tools and guidance for management reviews,
- designing administrative and supportive processes,
- outplacement and discharge.

As usually in process decomposition, this list represent only one of many possible outcomes (different approach would inevitably lead to another set of processes). Nevertheless, detailed description of these processes would, in our opinion, depict the main factual, administrative and formal duties of any manager, responsible for carrying out key HR management tasks.

3 PERFORMANCE DRIVERS

The term "performance driver" will be henceforth used to mark activities (as repetitive atomic processes) or actions (as one-run events) that increase potential to achieve higher level of corporate performance, i.e. deliver increased outcomes with available resources.

The definition is deduced from concepts presented by Kaplan (1996) and Grundy and Brown (2003). Kaplan describes performance drivers in Balanced Scorecards (BSC) context, where they are commonly used as differentiators: "their measures capture the value propositions that the company will attempt to deliver to its targeted customer and market segments… they answer the question 'What must the company deliver to its customers to achieve high degrees of satisfaction, retention, acquisition, and, eventually, market share?'" (Kaplan, 1996). On the other hand, Grundy and Brown (2003) describe performance driver analysis as one of the methods for implementing HR strategy, because it "helps to diagnose organizational performance, either externally or internally (or both)… focuses on those factors that have an impact on economic value generation in a business… gives a better feel of the overall business context before addressing a specific organizational problem or bottleneck (so that we do not simply respond reactively to a problem)". By aligning both concepts with our process-based approach, we derived the above listed definition suitable for the purpose of this article.

Performance drivers can be further divided into several categories. Clear distinction can be made for example between the following categories:

- generic (valid for any and all organizations with very rare exceptions) and specific (valid for given organization at given time and place),
- recurring (consequently applied) and non-recurring (single-use),
- dependent (with dependencies and relations to other performance drivers) and independent.

It is obvious that for different organizations, a similar set of performance drivers can have completely different implications for management of corporate performance, may require different actions for achieving expected results and also can be classified differently with respect to above listed categories. Also methods of performance drivers' identification will differ based on the target expectations as they can be derived from general process model decomposition, by elaborating specific situation in given organization or on the basis of case study analysis etc.

In this article, we will define a sample set of generic performance drivers. We'll be especially concerned with HR-related performance drivers, connected to extensive usage of ICT – more

specifically usage of the HRIS – which we consider crucial for sustainable performance growth. Brooks (2006) confirms this thesis by declaring that "obtaining the right tools is essential for HR to manage day-to-day activities on a number of fronts – to decrease costs, save time, and increase accuracy, while giving HR the resources to assess big picture needs and aid in advancing their increasingly more strategic roles." To maximize the benefits that ICT can bring to specific problem areas, we propose to identify the appropriate performance drivers and take them into account in defining corrective actions that will help achieve expected results (as will be described later in more detail).

On basis of several articles and case studies by Brooks (2006), Ferguson and Reio (2010), Grensing-Pophal (2008), Hurley-Hanson and Giannantonio (2008) and Reddick (2009), we identified the following HR-related performance drivers:

- attract & hire a greater share of high performers,
- monitor the effects of new policies & programs and react swiftly to trends & results,
- drive member satisfaction, profits & long-term success,
- simplify administrative,
- ensure security of valuable information over antiquated paper formats,
- define organizational policies & procedures that serve to positively motivate workers,
- maintain learning & development activities that stimulate optimal task & contextual job performance,
- align employee activities with the needs of customers or clients,
- support advanced strategic decision-making tools.

The improvements emerging from these performance drivers may include:

- free up time for critical management tasks,
- increased human resource processes/practices contribution to organizational outputs,
- attention to security and the necessity of "being prepared for anything",
- quick return to adequate performance levels.

Again, as for the business processes, this list of performance drivers and improvements represents only one of many possible outcomes – the result is tightly coupled to the approach selected for definition. Nevertheless, they characterize a viable basis for further analysis and will be put to relation with business processes as well as ICT tools in the next chapter.

4 SYSTEM CONCEPT AND PROCESSES/PERFORMANCE DRIVERS CORRELATIONS

In compliance with suggestions concerning HRIS from Roberts (2006) and actual architecture designs of several ERP systems, we have designed a component structure of a corporate information system that we consider adequate for a mid-sized company with strong performance management awareness. The presented structure of "modules" represents a conceptual framework that is intended to be supported either by an integrated system or a set of custom software tools, depending on the preference of the organization.

Fig. 1 - Component design of corporate information system – concept. Source: authors

Brief characterization of individual modules follows in order to provide context for consequent analysis of their correlations with business processes and performance drivers:

- Performance management – scorecards, KPI measurement, drilldowns, …
- Management reporting – dashboard, regular BI reports, statistics, …
- Content management – documents repository, files sharing, …
- Projects – project and task management, worksheets, planning, …
- Personnel management – employee evidence, wages, trainings, …
- Accounting – finance accounting, payments, invoices, …
- Quality and controlling – directives and policies, ad hoc reports, …
- Logistics – electronic data interface, carpool, store, …
- Facility management – assets and material, wear-and-tear, …
- Groupware – workflow, organizational support, calendar, …
- Production – core business support, engineering, R&D, …
- Intranet – quick-access information, employee websites, …
- Customer relationship – contacts, blacklists, …
- Sales and distribution – sales plan, contracts, …

Detailed description of all components is beyond the intended extent of this article; nevertheless, we can use this basic schema as an intuitive guidance for identification of vital parts of IS and means of support that HR management can expect/require to work efficiently.

We will now put the previously defined business processes and performance drivers to relation with above listed modules of corporate IS. Thus we'll identify which modules of corporate IS are relevant for which particular HR management processes (or HR managers as their owners) and for which particular performance drivers. In this manner, we define the "human resources management information system" as the set of information sources (or IS components) that should be used by HR managers to enhance corporate performance.

Firstly, we map the performance drivers to 1-n relevant processes. In the following table, this is done on the Y axis – in the first column, we have listed the processes (as identified in chapter 2) and in the second column the relevant performance drivers (as identified in chapter 3). For the sake of readability, we always select two most important drivers for given process.

Secondly, we evaluate the correlation between business processes, performance drivers and corporate IS components. In the following table, the components (as identified in this chapter) are listed in the first row on the X axis. In the sequent rows, we evaluate the importance of utilization of given component for initiation or improvement of the related performance driver (in context of related business process). This is done on a 1-3 scale (1 = weak, 2 = moderate, 3 = strong importance). Thus we define a relationship, providing answer for such questions as: "if you want to improve the performance of XY process by boosting the AB driver, you have to empower the MN component", or "if you struggle with inefficient performance of XY process, you need to improve the AB performance driver; to do so, you should implement MN and RS components". For a specific example – fifth line implies that "in order to increase efficiency of Managing personnel evidence process, it is necessary to Simplify administrative; to do so, a Personnel management component is strongly suggested as supportive tool; also Content management and Groupware components are of minor importance".

Business process	Performance driver \ Component	Performance management	Management reporting	Content management	Projects	Personnel management	Accounting	Quality and controlling	Logistics	Facility management	Groupware	Production	Intranet	Customer relationship	Sales and distribution
Preparing and reviewing capacity planning	Ensure security of valuable information over antiquated paper formats		1			2		1							
	Support advanced strategic decision-making tools		3		1										
Interviewing and recruiting	Attract and hire a greater share of high performers					3									
	Maintain learning and development activities that stimulate optimal task and contextual job performance					2									
Managing personnel evidence	Simplify administrative			1		3					1				
	Ensure security of valuable information over antiquated paper formats			2		2					1				
Instituting programs for retention and growth	Drive member satisfaction, profits and long-term success	2													
	Maintain learning and development activities that stimulate optimal task and contextual job performance	1				2									
Setting up motivation programs	Drive member satisfaction, profits and long-term success	3	1		2	1						2			
	Define organizational policies and procedures that serve to positively motivate workers	2						2							
Evaluating employee efficiency	Align employee activities with the needs of customers or clients	3	2		2			2						1	
	Monitor the effects of new policies and programs and react swiftly to trends and results	3	2					2							
Establishing tools and guidance for management reviews	Simplify administrative	2	2	3							2		3		
	Support advanced strategic decision-making tools	2	3		3	2	3		2	2	2		2	2	2
Designing administrative and supportive processes	Simplify administrative			2				3			2		1		
	Ensure security of valuable information over antiquated paper formats			3				2			1		2		
Outplacement and discharge	Support advanced strategic decision-making tools		2												
	Align employee activities with the needs of customers or clients	2												1	1
	Related performance drivers	9	8	5	5	7	1	6	1	1	5	2	3	3	2

Fig. 2 - Business processes, performance drivers and corporate IS components. Source: authors

Although the results are based on a "high-level" approach, some interesting preliminary findings can be already identified, discussed and verified on practical samples:

- Components that significantly support the HR management performance drivers (and by this also positively impacting HR business processes) include Performance management, Personnel management and Management reporting; in our approach, these modules thus represent the integral part of HRIS.
- Performance drivers with broadest impacts (dependant on significant number of components) are Support advanced strategic decision-making tools and Simplifying administrative.
- Weak ICT support can be expected in fields of Aligning employees with the needs of customers or clients, Drive member satisfaction, profits and long-term success and both main drivers of Interviewing and recruiting process; these factors probably cannot be properly supported by ICT tools, and remain soft-skill based.

However, it still has to be pointed out that these findings are tightly coupled with assumptions on which they are based – most important being that only selected business processes and performance drivers were brought into consideration and that the description is very general in order to derive generic principles, not explicit rules valid for specific organization. Nevertheless, we are certain that the applied method can be used also in such specific case to provide well understandable and usable inputs for definition of proper management actions.

5 PRACTICAL FEEDBACK – SURVEY RESULTS

In order to get a practical insight on current trends in HR management area, the research team conducted a survey among selected Czech-residing companies. Main focus of the study was the usage of ICT tools for personnel management and motivation factors related to continuous measuring of performance. Findings identified in previous chapters were, for the sake of understandability by broader audience, presented on more general terms and covered by leading questions.

The following statistics present the basic facts about the survey:

- Timeline: June 2010-September 2010
- Data collection method and tool: Web-based questionnaire, Google Forms
- Structure (overall 20 questions):
  - Respondent classification

    Identification of branch; number of employees, number of employees in personnel management department; experience, …
  - Current status evaluation

    Identification of ICT tools used for HR management support and their importance; functionality covered by HRIS; usage of web portals, social networks, community websites, intranet, e-learning; monitoring of KPIs, relation of KPIs to variable part of salary, …
  - Recommendations and personal opinions

    Usability of KPIs for motivation, structure of bonuses, …
- Data evaluation method and tool: Statistical analysis, Microsoft Excel

- Recipients: direct contacts, selected HR professionals addressed via LinkedIn.com
- Response rate: 17,2%, i.e. 68 responses out of 396 sent requests
- Usability rate: 94,1%, i.e. 64 out of 68 received responses
  - Fake responses and responses that do not sufficiently identify respondent – at least on basis of role and branch of company – were not accepted as usable

In order to receive a broad overview, professionals from different branches were asked to participate; we are sure that high response rate and very high usability rate were achieved thanks to the fact that we addressed them directly and personally. The following facts characterize the target audience in more detail:
- Average years in personnel management area: 8,2
  - Standard deviation 6,2 years, values ranging from 0,5 to 36 years
- Respondent with 10+ years of experience in personnel management: 19
- Size of company of respondents:
  - <25 employees: 7
  - 26-100 employees: 13
  - 101-500 employees: 27
  - 501+employees: 15

The following chapters present some interesting findings, resulting from survey's evaluation.

5.1 Areas covered by HRIS

The following graph shows what functionality is being covered by dedicated HRIS in respondents' companies. Not surprisingly, over 70% of companies use some sort of ICT tool for keeping personnel evidence. In larger companies, the percentage is even higher – 90% (38 out of 42) of companies with 101+ employees do have a dedicated ICT tool for keeping personnel data. The remaining companies either use their basic payroll system with necessary information or simple spreadsheet-based evidence. Interesting statistics is also that only 31% of companies use some ICT support for performance management, especially when compared to (later on also presented) answers regarding the importance of measuring efficiency and usage of KPIs.
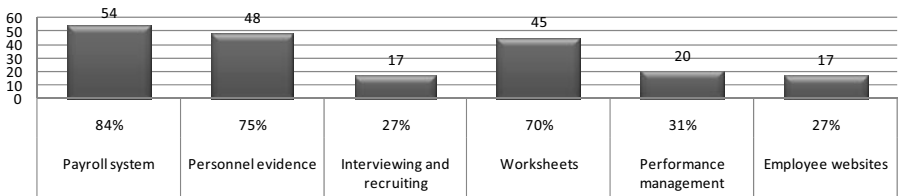
Fig. 3 - Areas covered by HRIS. Source: authors

5.2 Functionality provided by HRIS

The following graph shows the evaluation of functionality provided by HRIS – it measures the level of satisfaction the respondents feel towards the functionality provided. More than 60% of respondents think that their HRIS provides them the functionality they expect or need; a strong correlation was identified between the extent, i.e. the amount of modules the company

uses, and the indicated sufficiency of functionality. More than 50% of those who consider the functionality fully sufficient use HRIS to cover 4+ of the above listed areas; only 1 respondent using more than 4 modules indicated either complete or partial insufficiency.
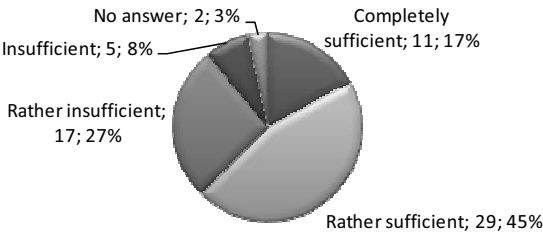

Fig. 4 - Functionality provided by HRIS. Source: authors

5.3 Intranet usage

The following graph shows detailed results the questionnaire subsection, dedicated to usage of intranet. It captures the typical means of intranet usage in respondents' companies. 87,5% of companies do have some sort of intranet implemented; the most common is document sharing (83%). Only very few companies (11%) use the intranet to "publicly" present employees results or show their performance evaluation; however, for companies with 100+ employees, the percentage is a bit higher (14%).
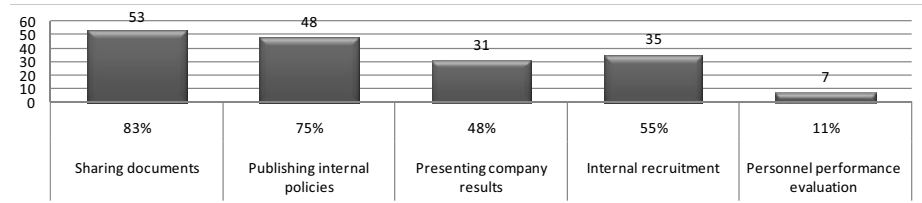

Fig. 5 - Intranet usage. Source: authors

5.4 Measuring performance

The following graphs show some of the results of a very interesting survey section, covering personnel performance measurement and management.

The first graph represents overview of general usage of performance management – expressing whether KPIs or other forms of clearly set goals are defined for individual employees. Almost 90% of respondents stated that some form of measurement is used; this is interesting when compared with the fact that, as already mentioned above, only 31% of companies use a dedicated performance management system. The means of measurement thus remain questionable and should be later on researched in more detail.
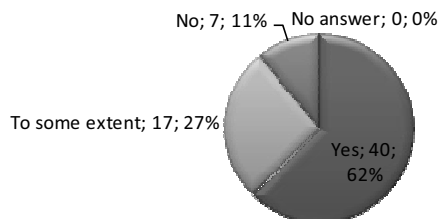
Fig. 6 - Usage of KPIs and goals. Source: authors

The second graph shows overview about the real usage of KPIs and goals – it shows whether KPIs and goals are measured on regular basis. The survey in this point showed an interesting proof of respondents awareness – 100% of respondents who declared to use KPIs/goals in the previous question (Yes: 40) also declared that they measure KPIs on regular basis.
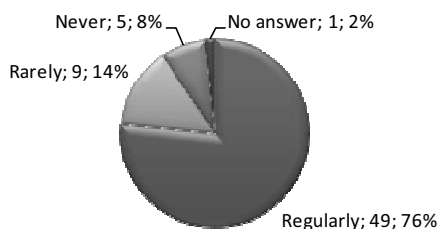

Fig. 7 - Regularity of KPIs/goals measurement. Source: authors

The last graph represents an overview of respondents' opinion concerning the impact of KPI/goals measurement. Very strong agreement was declared towards a positive impact on personnel motivation/performance and support for achieving corporate goals – in both cases more than 90% of respondents consider monitoring of personnel performance as a key factor for improvement. Not surprisingly, 55% of companies use KPIs to drive the variable part of salary for its employees on regular basis; additional 33% of companies do that occasionally.
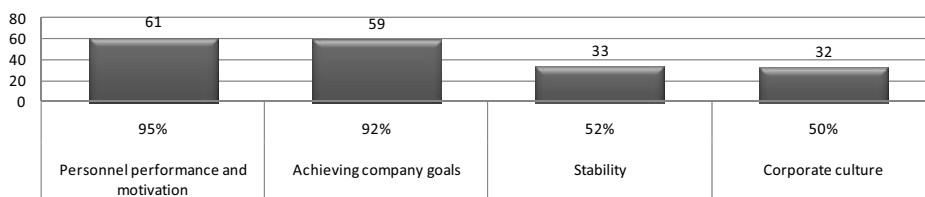

Fig. 8 - KPI/goals measurement impacts. Source: authors

5.5 Additional findings

Some other interesting findings are listed below:

- Dedicated web portals (such as jobs.cz or monster.cz) are used for recruitment by 53% of companies; however, 80% of companies do not use social networks (such as Facebook or

LinkedIn) for recruitment and for community websites (such as lide.cz or xchat.cz) the lack of interest was declared even by 95% of companies.

- E-learning is used in 53% of companies, but only in 23% on regular basis.
- Usage of internal communicators (such as ICQ or Skype) is quite rare – only 18% of companies declared usage of such tools. This was actually the only answer with doubts about authenticity – our practical experience shows that this number is significantly higher, but often not admitted by the very users of such tools.

On the basis of the survey, we also indicated some additional areas that should be considered as individually specified performance drivers, adding to the list derived in theoretical section. They were driven by hints provided by respondents and results showing their importance for overall company performance and would include:

- define performance metrics for individual employees using clear goals and/or KPIs,
- communicate openly and swiftly, streamline communication.

6 CONCLUSION

This article presented authors' contemporary insight to processes, performance drivers and ICT tools in human resources management.

Firstly, a modern approach to HR management was characterized, and, on its basis, a set of business processes, commonly handled by today's HR managers, was defined. Following the identification of main fields of HR management responsibilities, a concept of performance drivers was introduced as an instrument to indicate areas with performance improvement potential. A set of generic performance drivers, governed by HR managers, was identified later on, providing answer to the first research question: support of advanced strategic decision-making tools and simplification of administrative were indicated among the best candidates for HR-driven performance improvement in any and all organizations. The results of conducted survey confirmed the latter performance driver, but also indicated that from practical perspective, HR activities related to internal communication are very important. The fact that support of strategic decision making tools was not so highly appraised is in our opinion caused by lower ambition level and prevailing down-to-earth approach to HR management in Czech companies.

To further elaborate on recently important aspects of HR management and to provide an ICT-centric overview of the subjective area, authors' model of component corporate information system was also introduced. On its basis, important areas that should be covered by human resources information system (HRIS) were identified by definition of relationship between processes, performance drivers and appropriate ICT components. This relationship matrix also provided a means to get an answer to the second research question: by indicating valid HR business processes and performance drivers, an appropriate setup (a set of components/ functionalities) of HRIS can be defined. We presented an example, indicating how a specific performance driver can help achieve higher performance level by improving HR process using a specific HRIS component (which therefore that has to be available) – to provide a complete overview of drivers/processes/components and its practical validation is still a task that has to be done in further research. We believe that the idea presented in this article in a theoretical

manner can be later on used to solve analogous tasks in practical projects, hopefully providing us positive feedback and verification of our approach.

Nevertheless, even the partial theoretical results were reviewed using result from a survey among Czech companies, providing us with an overview of current usage of HRIS in Czech companies and indicating possible extensions of the previous findings. Thus, our third research question was also answered: most Czech companies still underestimate the full potential of HRIS and heavily rely just on its "traditional" components – such as personnel evidence and basic payroll system. To introduce the performance management tools, that can undoubtedly bring a new quality to HR management processes, is an uneasy task that has to be supported by software suppliers, HR specialists and consultants as well as academicians.

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