

Stanisława Borkowska

Human Resource Management and Innovation in the Business Organization

Business organizations stand before the necessity of continuously striving to achieve a long-term competitive advantage. Global competition and dynamic changes in the business environment significantly increase the importance of innovation as leverage for success in growth efforts. Can strategic human resource management (SHRM) support an increase in innovation? How? The attempt at answering these questions is the objective of research undertaken by a team¹ of Institute of Labor and Social Studies staff members under my direction. Using research results as a basis, the intention of this article is to provide answers to the following questions: 1) Is there a link between the level and dynamics of innovation and the alignment of company practice with HRM strategy as well as the company's overall strategy? 2) Is the level of innovation in the organization dependent on the HRM model applied—the High Involvement Work Practices/Systems (HIWP) concept or the High Performance Work Systems (HPWS)?² The initial part of this article is devoted to a discussion covering HRM models. The two subsequent sections present the ties between HRM, its various models, and innovation. The last part contains a summary and looks at certain directions for future research.

Two SHRM Concepts and Their Impact on Innovation

The development of innovation is dependent on both “hard” tangible factors (research and development outlay, access to financing, etc.) and “soft” intangibles (human resources). What is more, the role of the latter in the knowledge-based economy is grow-

1 In addition to myself, the team was made up of M. Gruza, A. Jawor-Joniewicz, I. Laskowska, B. Sajkiewicz, Ł. Sienkiewicz, and A. Woźniakowski

2 HPWS is sometimes applied to the whole of SHRM concepts based on the principle of highly efficient work. In this paper HPWS is used in its narrower sense—i.e. excluding the group of HIWP models.

ing. This increases the importance of strategic human resource management (SHRM) as a significant factor in supporting growth in company innovation. Support for this growth may occur by way of all HRM processes. However, a special role is played by the appropriate selection of employees, investment in the development of worker competencies (especially competencies such as creativity, openness to change, the ability to collaborate with a group, and the sharing of knowledge), talent management, employee motivation, and information and communication. However, do all HRM orientations and configurations of practice foster a creative pro-innovation stance on the part of workers and do they actually support the development of innovation to an equal extent?

An almost parallel quest in search of solutions that would best foster a multiplying of organizational value and the achieving of permanent competitive advantage involved two different currents of varied intensity [Woźniakowski, 2007, p. 15] within the framework of strategic human resource management. One concentrated on the defining of the ultimate outcome of HRM as something of a lever through which it was possible to bring about the achievement of company targets. Its defining is determined by the type of primary company objective. In this day and age, key significance in a company achieving permanent competitive advantage is assigned to growth in innovation. Many specialists [Walton, 1985; Beer and Spector, 1985; and others] suggest that the main challenge and **aim of HRM is the building of involvement on the part of employees** as leverage for company innovation as well as its value.³ D. Guest [Guest, 1997] also states that the aim of HRM⁴ is the creation of behavioral outcome leverage—involvement, motivation, cooperation, and partnership. This is what leads to the creation of performance outcome leverage—innovation, productivity, and quality—that ultimately translate into a company's financial efficiency (ROA, ROE, TRS, etc.). Performance outcome leverage is especially important in long-term efficiency. This is because the effects of work on innovation, especially of strategic importance, are often differed in time. Following

3 The great weight assigned to involvement in achieving competitive advantage by a company active in a stormy environment is pointed to by not only scientists, but also practitioners, employers, and even employees. Research conducted in Poland by the Modern Firm and Management Observatory Foundation at the turn of the years 2006 and 2007 on 531 employers and 331 employees [Postawy ..., 2007] unequivocally points to the great weight of involvement among the eleven examined qualities of the ideal and most valued employee in company practice. Employers agree that involvement is the most important quality of an ideal employee. However, it is in third place with respect to the actually most valued employees in the companies. Employees also rank involvement very highly. It is in third place with respect to qualities that are desirable among ideal employees and is in fact most valued in the companies.

4 The cause and effect chain of actions determining an indirect impact on the part of HRM on the financial efficiency of an organization that he identified encompasses HRM outcomes (HRM practice tied with strategy)—behavior outcomes and performance outcomes that translate into financial efficiency in the organization.

the approach of Walton and others [Walton, 1985; Beer and Spector, 1985; and others] it makes sense to limit the behavior outcome leverage as enumerated by D. Guest to one—involvement. The problem is that motivation is strictly tied with involvement, where collaboration and partnership are elements of participation, in its broad sense, which, in its turn, is a key practice that jointly influences the building of involvement as company performance outcome leverage.

Unfortunately, nomenclature as used in literature that is applied to worker engagement creates a lack of clarity. Thus, in order to improve lucidity in the argument below, it is important to differentiate between the general word *engagement*, where *commitment* is understood as engagement in one's own work, while *involvement* encompasses both commitment and engagement understood as the identification of the worker in the company's objectives and values. Thus, involvement understood as the joining of hearts and minds [Katzenbach, 2000] includes not only engagement in the performance by the worker of his or her job, but also in company matters identified with its objectives and values as implemented on its various levels.

A second current concentrates on the search for a HRM structure that would increase its efficiency, understood as **direct impact** on organizational efficiency, to the greatest extent possible. This lies at the basis of the HRM concept founded on High Performance Work Systems (HPWS). Indeed, an entire HPWS family has developed. Systems in line with the stated principles of HPWS often vary significantly in their sets of key practices and are seen under various names. Moreover, companies applying such solutions are not always aware of the fact that they are a part of the HPWS family [Sajkiewicz 2007, p. 171].

Several main principles lie at the foundation of HPWS. Specifically:

- Comprehensiveness,
- Coupling HRM strategy with company strategy and translating it into the lowest organizational rungs by way of:
 - A common philosophy based on a **bundle** of practices, or more specifically, a loop with feedback serving as the pillars (foundations) of HRM architecture,
 - A specific, difficult to copy, and diverse **configuration** of best practice within the pillars that is adapted to organizational aims and **situational** context, a **cohesiveness of practices** not only within the realm of each pillar, but also among them, as well as with practices from other areas of organizational activity, including the technical and technological spheres,
- The idiosyncratic character of HRM systems as stemming from the above-specified characteristics.

The tying together of an orientation aimed at engagement with the basic principles of HPWS finds its reflection in the concept of HRM based on High Involvement Work

Practices/Systems (HIWP). Thus, it is possible to speak of the appearance of two models, or even two families of HRM models, based on a unity of common qualities (principles), but different in terms of target orientation—HPWS and HIWP⁵ [Guthrie, 2001; Konrad, 2006]. Strictly speaking, this is a matter of discussing differences in questions of succession⁶ in the chain of SHRM influence on organizational efficiency as well as with respect to the character of ties between the bundle of practices and company outcomes [compare with Legge, 2001, pp. 21–36]. HPWS also sees the weight of engagement, but it is placed amid the bundles of practices as one of its elements or even as an element of one of those practices, not as behavior outcome leverage. On the other hand, in line with the HIWP model, it is an **effect** of the influence of the entire bundle of key HRM practices and is the last link in the chain of HRM influence on the creation of an economically efficient organization.

Key differences involve the prioritization of objectives of individual HRM concepts. As has been demonstrated, the key HRM practices (pillars) in the HPWS concept as assumed here, have a direct impact on efficiency. HIWP, for its part, has as its target the building of engagement as behavioral outcome leverage, creating a company's performance outcome leverage, which successively influences financial efficiency.

The discussed models are based on both theoretical foundations and on the wealth of experience tied with the functioning of HRM. Their source is seen in behavioral, resource, and strategic asset theory [Huselid, Becker, 1995, p. 3], in motivational theory, where it implies the weight of empowerment and involvement [Lawler, 1992; MacDuffie, 1995; Ichniowski, et al., 1997; Lawler, 1998; Wood, 1999; Wood, et al., 2001; Applebaum, et al., 2000; Lawler, et al., 2001; Benson, et al., 2006; and others], as well as in the concept of human and social capital [Gittel, Seidner, and Wimbush, 2007]. Each of the two HRM concepts has also been the subject of various studies presented in publications in the field of HRM.

In its practical concept layer, HIWP makes reference to the experiences of various countries in terms of actions fostering a harmonizing of employee and employer objectives as well as developing employee autonomy and responsibility on various organizational levels [Lundy, Cowling, 2000, p. 63]. For example, the “from control to involvement” school [Walton, 1985] makes reference to American methods of job design

5 Solutions that defer somewhat from the set of HRM practices may occur within the framework of each of them. Albeit, HIWP is also sometimes considered at part of the HPWS family, because of its demonstrated distinctness in the presented research, it is considered separately in this discussion.

6 In part, they may result from organizational differences (e.g. due to type of activity, level of worker qualifications, or degree of flexibility) encompassed by research that served as the basis for building defined HPWS concepts.

(job enlargement, job enrichment, and job rotation), team-oriented work organization (a task force and problem-solving group approach), gain-sharing, profit-sharing, British methods of socio-technical planning, quality of professional life improvement, and European representative participation in the form of works' councils. For its part, the "Japanese school of perfection" [Ouchi, 1981; Pascale and Athos, 1981] involves Japanese experience in creating quality circles, productivity circles, TQM, and others.

HPWS makes reference to what is known as the humanization of work (the nineteen-sixties and seventies) as well as new forms of work organization (the nineteen-seventies and eighties) known through Japanese experience, which was targeted at making work more friendly for people as well as at improving the quality of professional life. At the same time the transfer of new forms of work organization was not comprehensive. It did not involve any significant modification to organizational culture, and neither lifetime employment nor seniority found application in shaping remuneration. Moreover, Western employers, mainly Anglo-Saxon, in striving for growth in work output and an improvement in the company's competitive position introduced Japanese solutions in a form that was modified in terms of their stronger targeting of growth in benefits for the company. This changed the nature of these practices (ILO, *Supporting ...* <http://www.ilo.org/public/english/employment/skills/workplace/contents>). Trade unions did not accept the instrumental use of new forms of work organization as a way to increase work productivity, however.

The above reasons coupled with the dearth of alignment between these forms of work organization and other management actions resulted in their twilight. Although some are still applied, this is not being done comprehensively and any application is clearly to a lesser extent.⁷ This is reflected in OECD [OECD, 1999] and other studies that also broadly encompass the countries of Asia [Osterman, 1994; Gill, Krieger, 1999; Pil, MacDuffie, 1999; van Buren and King, 2000]. An important conclusion flowing from this experience is that all actions tied with HRM must be based on the harmonizing of employer and employee objectives.

Both groups of HRM models utilize experience tied with new organizational forms of work organization. They eliminate reasons for failure such as a lack of comprehensiveness and systemic approach. They also assume a harmonizing of the interests of the organization and all its stakeholders, including employees. However, is this true to an equal extent?

7 New forms of work organization were best implemented in the Scandinavian countries and it is there that they are being maintained. Only a few of them survived in other European countries.

In the case of HPWS, there is an assessment of the direct impact of HRM on an organization's efficiency:

- Market (market value) and book on an organizational level as a whole [Ichniowski, 1989; Huselid, Becker, 1995; Becker and Huselid, 1998; Becker, et al., 1997; and others], group/team [MacDuffie, 1995; and others], and individual [Gerhart, Trevor, and Graham, 1996], and
- The whole **system** of highly efficient work, not just individual HRM practices (hypothesis: the synergy effect is greater than the total of individual policies and practices).

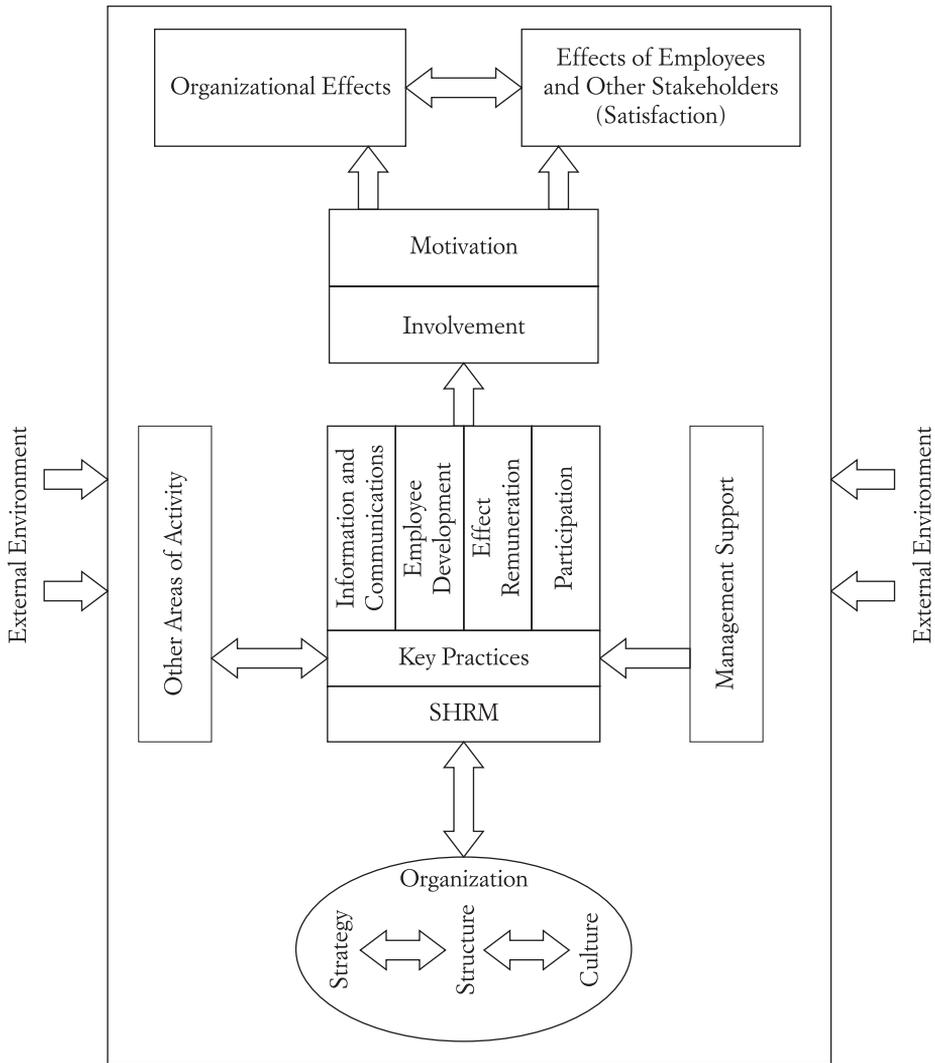
On the other hand, in the case of HIWP it is the direct impact of HRM practice on involvement that is examined, where it is not its types—in work and in the company—that are looked at and only then are the ties between involvement and innovation and/or efficiency examined (Figure No. 1).

By pointing to the primacy of motivation through involvement, HIWP applies broad means of identification—information, communication, coaching, inspiration, and advising—as well as various forms of participation—consultation, empowerment, flexible work time and place, and various forms of recognition—as actions aimed at motivation [Borkowska, 2006, pp. 342–346]. In this system, growth in efficiency in the organization as a whole is integral to greater benefits for workers—tangible (gain-sharing and profit-sharing) and intangible (work satisfaction, development capacity, and work-life balance).

The already mentioned principles serving as a basis for the discussed system demonstrate that, in practice, concrete solutions within the framework of the two HRM models may diverge as a result of an organization's different functional context (business strategies, type of activities, employment and organizational structures, cultural aspects, and external environment). This explains the divergence in the views of HRM specialists relating to sets of practices that should create bundles.

In cases of the discussed HRM models, key practice bundles are often formed out of four chosen from among recruitment and selection, investment in the development of employee knowledge and skills, outcome remuneration, especially group/team achievements, developed information and communication systems encompassing all workers, as well as worker participation, mainly direct, but also indirect, representative, concerned with relations between the management and trade unions and/or other worker representative organizations. The first type of participation primarily stresses work in teams and independent or autonomous groups, and quality/productivity circles, as well as the empowerment of employees, consultations, partner-like work relations, participation in company effects as a whole and in that of the teams and groups, as well as job design leading to an enriching of work content and a broadening of the scope of responsibility.

Figure No. 1. Simplified HIWP Diagram



Source: Own research

In knowledge organizations, however, major importance is linked to group and team forms of work organization. This is because they facilitate the development of knowledge and worker skills by teaching through action, sharing knowledge, and managing diversity. This fosters and stimulates the emergence of innovation. Moreover, by stressing group cooperation, the range of control becomes limited. Participation, in its broad sense, is an important tool in building worker involvement.

The great importance of flexible forms of organization facilitating the actual influence of employees on implementing company objectives as well as identifying with them have simply led to an identification of effects with their causes, or with a restricting of such forms of job design.⁸ In certain HPWS concepts it is considered one of the pillars of the bundle of key HPWS practices. It replaces participation – <http://www.ilo.org/public/english/employment/skills/workplace/contents/overview.htm>. Nadler [Tushman and Nadler, 1997, pp. 147–153] actually makes a direct connection to the movement around implementing new forms of work organization.

Nadler and others [1997], for their part, stress the need for a strict coupling of the technical and social system and stress the weight of technical and technological innovation. Moreover, more clearly than others, they call attention to the technical–organizational aspects of work—relevant, flexible organizational structures and organization of work processes, work restructuring, its enriching and subdivision, clearly defined requirements in connection with broadly understood products and work effects (outputs), and measurements of efficiency.

At times, job design as an aspect of worker participation *sensu largo* as well as a tool for building involvement is identified with involvement itself and makes its appearance under the name of job design / involvement [Applebaum, et al., 2000; ILO, *Supporting ...*]. It can also be hidden away in the pillar under the name of *egalitarianism* [Belcourt, et al., 2004], where it encompasses not only job design, but also other forms of participation. Sometimes, flexible forms of work organization are identified with participation, although they do not apply to indirect participation and they do not take into account all forms of direct participation (e.g. ownership).

In conclusion, although the discussed pillar of the bundle of practices takes on various names in the individual concepts, they all stress forms of worker participation that have been known for a long time in one form or another. Thus, there is justification in calling it **worker participation—power** according to E. Lawler [Lawler, 2001, p. 46].⁹ This term encompasses all of its forms, including indirect participation, which is widely used in Japan as well as in the European Union, and strongly supported by the ILO. In practice, in line with the above principles, choice of forms of participation is dependent on the context of the situation. Thus, in organizations in which there are trade unions or other institutions representing workers, no fruitful implementation of HIWP or HPWS is possible without their cooperation.

8 At Thorn Lighting, Ltd., for example, which employs 1,000 people, the implementation process took approximately 4.5 years, while at the HBSC banking corporation it took two [ILO, *Supporting ...*].

9 Practice so defined shall be taken into account in the research presented below.

In certain HPWS concepts—e.g. developed by Becker and Huselid [Becker and Huselid, 1998, p. 55]—investment in development is restricted to the managerial staff. However, those authors stress the role of recruitment and selection as one of the pillars of the bundle of HRM practices. In a sense, these practices may serve as alternatives to investment thanks to the attracting of appropriate workers with the right qualifications directly from the market—an attraction-based architectural model according to Lepak and Snell [1999, pp. 37–48]. They also do not take into account information and communication.

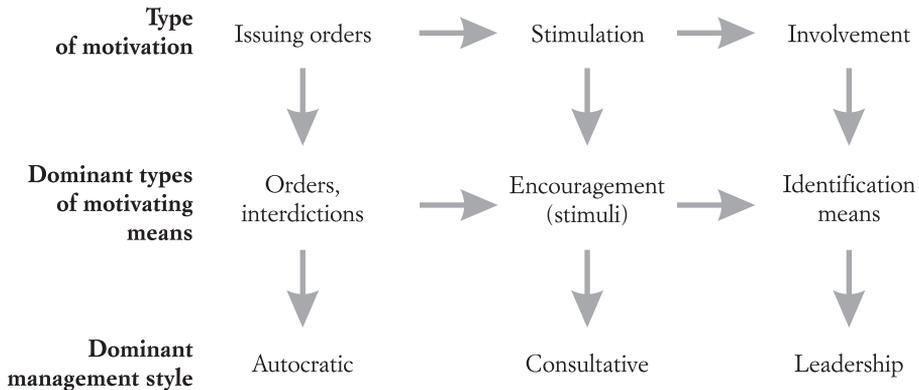
Prerequisite to any fruitful participation of workers is open and multi-directional information and communication [Nadler, et al., 1992, p. 118; Belcourt, et al., 2004, Chapter 16, p. 3; and others]. Specifically, it should make possible an understanding of the business by employees, as well as the providing of running information regarding the results of company operations and that of its specific segments so that they can take effective action fostering improvement. Without this element in the HRM practices bundle there is no sense to worker participation. It is also integral to employee development.

It should also be stressed that regardless of the structure of the HRM practice bundle, the effectiveness of its impact is dependent on many factors that are external with respect to it in both of the discussed models. A condition that is necessary for the success of highly efficient work systems is their effective managerial support (compare with Figure No. 1). This is mainly a question of leadership support in implementing the systems on the part of the upper management and the line management [Carrig and Wright, 2007] as well as strong support by the HRM department. All these entities have many levers at their disposal that can improve work efficiency. The impact of the whole family of HPWS and HIWP systems on an improvement in organizational efficiency occurs in collaboration with other processes in the company—technology, work organization, and the cohesiveness of management strategy with the company strategy [Snell and Bohlander, 2004, pp. 690–691].

The Potential Impact of HPWS and HIWP on Innovation in the Organization

In striving for high achievement, HPWS is essentially oriented at stockholder and customer satisfaction, less so with respect to employees [compare with Nadler, et al., 1992]. An orientation targeted at a direct improvement in outcomes may even prove extremely convincing when examined by the upper management. However, the problem in this case is that, firstly, company operational results are dependent on a tangle of internal and external factors, where it is difficult to define the extent to which a specific HRM

Figure No. 2. The Evolution of Motivation



Source: Own research.

system influences their emergence. Secondly, as was stressed, effects linked with innovation, especially strategic (breakthrough) innovation, are encumbered by risk and can be differed in time. This problem may only be solved partially through long-term remuneration (stock packages or stock option plans). Thirdly, the efficient implementation of such breakthrough innovation is dependent not only and not mainly on its creators, but on very many workers taking part in the process, their openness to change, or more broadly on change management. HIWP facilitates the effective management of change. Fourthly, creators of innovation are not so much oriented at benefits for the company as creative passion and the desire to solve problems that interest them. That is what brings them satisfaction. What is more, they often demolish existing methods of thinking and acting. They also tend to be overly sensitive and expect respect for themselves and their ideas, direct, open communication and information, autonomy, and a friendly work climate. They are primarily motivated by internal motivation. In their case, a major role is played by intangible motivation through co-participation (Figure No. 2). On the other hand, minor improvements, due to their effect, do not reap major benefits for their creators and can even prove to be a source of conflict among workers because of the introduction of change (the need to learn, a period of lower efficiency, etc.). Keeping this in mind, some companies (such as the already mentioned Thorn Lighting, Ltd.) do not allow for any rewards for group outcomes achieved thanks to the implementation of minor innovation. This is intended to help evade inter-group rivalry that could threaten the necessary collaboration.¹⁰ However, they do develop forms of motivation using iden-

¹⁰ This explains the justification for remuneration through sharing in the effects of the company as a whole that is recommended in HPWS systems.

tification. They cultivate a stance of openness to change, creativity, continuous learning, and the sharing of knowledge.

From the point of view of innovation, HIWP concepts seem to be particularly promising. HIWP is in agreement with the character of innovative organizations seen as organic, open, and dynamic systems [Burns and Stalker, 1961], and even as emergent organizations. Such organizations use existing knowledge to a minimal extent. They are not guided by the *measure and control* principle that is characteristic of organizations aimed at maximizing benefits for the organization, but rather by the *coach and facilitate* principle [Lindgren, et al., 2001, p. 783]. In practice, as results from views developed by the OECD [*Employment ...*, 1999] and the ILO [*Supporting ...*, <http://www.ilo.org/public/english/employment/skills/workplace/contents>], the HIWP concept is most often applied in innovative organizations that are based on hi-tech [Osterman, 1994; Weinstein and Kochan, 1995; OECD, 1999; Boxall and Purcell, 2000; Ichniowski, et al., 2000, pp. 1–37]. It is also reached for by companies that want to extract themselves from a critical situation—e.g. caused by the appearance of a strong competitor on the market—as well as by companies with a high market position that hope to maintain their competitive advantage. Organizations that belong to the service sector also apply HIWP often. It is exactly the prominence given to the role of motivation through involvement that defines the attractiveness of HIWP. It is the appropriate model for a post-industrial economy, which is best adapted to knowledge workers. In contrast to earlier models, it is characterized by rewards that are wide-ranging, complementary, and balanced with respect to outcome, which utilizing “distinguishing” means as motivational tools.

Although true that means of distinguishing (including recognition systems) act more slowly than tangible ones, they bring more permanent effects by leading to workers identifying with company objectives [Borkowska, 2006, pp. 342, 345]. Thus, a challenge for HRM is the accurate identification of specific expectations on the part of innovators as well as adapting motivational tools to them so they serve the harmonizing of expectations (interests) of both workers and the company.

Where is the strength behind HIWP? Studies to date demonstrate that it lies with:

- Stress on people as the creators of company achievements. HIWP gives prominence to the role of worker involvement and satisfaction as the path to achieving the satisfaction of the remaining primary stakeholders.¹¹

11 Kinnie, et al. [2004] also points to the key role of involvement as a growth factor for achievements. It serves as the basis for The Bath People and Performance Model.

- An approach working with greater expectations with respect to work on the part of knowledge workers whose share in total employment is growing in line with the development of the knowledge-based economy.
- The configuration of HRM practices adapted to the specifics of various organizations, but also adapted internally to meet the diverse expectations of various groups of HRM employees [Kinnie, et al., 2004].
- Support for the pro-innovative and creative worker, where the worker-partner, co-manager identifies with the company and its objectives, and undertakes actions going beyond his or her assigned tasks, seeking solutions and ideas bringing the company benefits, and leading it to permanent growth as well as better care for customers [Nonaka, 1994].
- Greater employee openness to change, which facilitates the effective management of change. This is something that cannot be overvalued in light of the growing need for continuous change. It also fosters the achievement of a non-imitability of HRM. Based on a properly developed concept of HIWP, HRM leads to better utilization of often unappreciated levels of involvement and inventiveness on the part of workers. It supports the building of a pro-innovation culture and eases the achieving of high efficiency by the organization through the development of innovation, and therefore competitive advantage. At the same time, it builds employee satisfaction.
- Greater tying of people to the company thanks to HIWP's orientation towards motivation through involvement. Thus, the risk of losing employees to the competition is lower. This is very important, especially with respect to talented workers. Talents of a very high potential—stars—are a very scarce resource. Moreover, such people are more oriented towards success within their own profession rather than the success of the company. The project they are working on is a professional challenge. Costs and deadlines are of less significance, where they are often difficult to keep anyway. They primarily appreciate freedom of action and have a high tolerance of innovation-related risk, as well as development and self-achievement potential [Katz and James, 2005, p. 270]. The risk of loss of talent grows when the company functions in a turbulent environment and a war is being waged for their attraction. This is also true of difficult times for the company—e.g. mergers and takeovers. HIWP facilitate the efficient management of talent.
- The development of open innovation targeted at the harmonizing of the objectives and expectations of various stakeholders, which is fostered by HIWP. It serves as the basis for the building of involvement in co-creating innovation by both internal stakeholders and external people and institutions.
- Support for improvement in work quality [Lawler, 1992; Vandenberg, et al., 1999], which goes significantly beyond TQM limits. Such companies undertake not only quali-

ty-oriented strategies. Moreover, quality-oriented strategies may be undertaken by both flexible companies and those that are hierarchical and in no way fit in with the idea of high-efficiency work, especially in its HIWP variant. For this reason, it is difficult to concede that HPWS should be an integral element of TQM [Easton and Jarrell, 1998].

■ A stronger than in the case of HPWS influence on shaping good interpersonal relations on the management–trade union or works council line. This is pointed to by both Japanese experience and that of other rapidly developing countries of the Far East as well as European countries, especially Scandinavian ones [Gill and Krieger, 1999; Bacon and Blyton, 2000; and others]. Collaboration and good interpersonal relations are vital in an organizations targeted at innovation.

It is a fact that innovation is tied with contradictory interests. Thus, an exceptionally large and responsible role falls to human resource management in preventing or eliminating the seeds of conflict. Firstly, this tendency for collision primarily occurs between running and future interests, which translates into collisions between the interests of the innovators and stakeholders in the short term. As has been demonstrated, innovators are interested in success in completing the project they are working on, regardless of time spent. Success is seen more in terms of profession than company. Any management must bear in mind both short- and long-term effects. Secondly, there is contradiction between a striving towards stability and change. It may be defined as the tendency of a company to maximize the utilization of new implementations as long as they bring in benefits. This facilitates the accumulation of necessary resources for successive innovative ventures. It also gives the company a certain sense of stability and a breather in the wake of the effort involved in the introduction of novelties. On the other hand, the dynamically changing environment and conditions of harsh global competition mean that as of the moment of implementation of an idea it is necessary to undertake work on its improvement and development as well as long-term work on new, radical innovations. This may lead to a collision of the interests of the creators of new, just implemented solutions and innovators who are working on other, new ideas that may sentence the achievements of the creators of the recently implemented solutions to a short life. Thirdly, there are also signals of a divergence between the expectations of the management and innovators with respect to the manner of work and the role of a manager. The innovator's highly rated freedom to act, high risk tolerance, and need for a trusting climate remain in collision with traditional management styles (adherence to financial discipline, work discipline, etc.). By its very nature, HIWP is based on collaboration, openness to change, and worker creativity. It significantly weakens the role of the conflict that always appears around innovation, albeit it does not eliminate it completely. An orientation for the development of innovation implies a need to prepare managers to manage talent—innovators—and stresses the need to move on to a leadership-based management style.

HRM and Innovation in Practice: Selected Research Results

The discussed research encompassed 100 listed companies—mainly medium and large enterprises—operating on the stock market for at least three years (2005–2007). They represented various fields of business. The primary research involved an IDI questionnaire. Responses were ultimately received from eighty-three companies, but not every one of them provided information relating to all matters examined in the questionnaire. The questionnaire itself encompassed subjects relating to HRM characteristics, taking into account internal cohesion (homogeneity) as well as the alignment of HRM with the company strategy, innovation, and economic results.¹² The respondents were the leading directors of the HRM departments, but also heads of research and development departments, chief technologists, and heads of trade unions (if present in the company). These two groups received narrower questionnaires that better matched their area of interest. Their objective was to supplement or verify answers received from representatives of the company management.

Three approaches were used in examining the links between HRM and innovation:

- Research into the impact of the overall HRM index on the innovation level and innovation dynamics index (Model I). In each case the indices were calculated in an additive manner as the sum of weights assigned to specific HRM practices and the sum of the innovation measurements (indicators).
- Research into ties between innovation and the HPWS index as based on a bundle of four key practices—recruitment and selection, managerial staff development, outcome remuneration, and involvement in the performance of work (commitment)—a model close to the Becker and Huselid [1998] concept aimed at supporting company efficiency (Model II).
- Research into HIWP index ties, as based on four key practices—worker training and development, remuneration for effects, information and communication, and participation—with involvement and subsequently the links between involvement and innovation (Model III).

The homogeneity and alignment of HRM practices was also looked into. Moreover, a ranking of these HRM models was conducted in terms of their weight and impact on innovation.

12 A separate questionnaire was forwarded to employees. That study is currently underway.

Innovation Growth Index Reaction to Changes in the HRM Model

Unit growth in the overall HRM index (Model I) is accompanied by growth in the innovation growth index by 0.002 units.¹³ On the other hand, an increase in the overall HRM index by one standard deviation is accompanied by growth in the innovation growth index by 0.035 units. The HRM index calculated in line with Models I and II also has a minimally greater impact on the dynamics of innovation. It then amounts to 0.0022 and 0.0162 units, respectively. It is clearly greater in the case of growth in the HRM index by one standard deviation in line with Model II (0.134), where it is even greater (almost 2.4 time greater than in Model II) in line with Model III (0.314). A fall in HRM consistency in line with Model II has a relatively weak impact on innovation growth.¹⁴ A fall by one unit is accompanied by a fall in the innovation growth index by 0.003 units, while in the case of Model III, by 0.0029. Such consistency is unimportant in Model III as what is examined is only the direct impact of involvement on innovation. For its part, growth in the consistency of HRM strategy on the company's overall strategy by one unit is accompanied by growth in the innovation growth index by 0.015 units.

The impact of consistency is stronger when its change is by one standard deviation. Thus, with respect to Model I the fall in consistency is accompanied by a fall in innovation growth by 0.247 units, in Model II by 0.123 units, and in Model III by 0.175 units. Growth in consistency between HRM strategy and company strategy by one standard deviation is accompanied by growth in the innovation growth index by 0.187 units.

Reaction of the Innovation Level Index for the Year 2007 to Changes in the HRM Model

The conducted research demonstrates that HRM has a stronger impact on the level of innovation than on its growth. The strength of this impact varies depending on the HRM model. Thus, growth in the overall HRM index by one unit is accompanied by growth in the level of innovation by 0.05 units. A weaker impact of an increase in the HRM index by a unit on growth in the level of innovation index should be expected in the case of Model II. It is at a level of 0.0075. HRM has the greatest impact on growth in the level of the innovation index in Model III. The impact achieves a level of 0.705 units. The same is true of changes in the HRM index by one standard deviation, where the strongest impact on growth in the innovation level is tied with Model III and amounts to 13.66 units. In the case of Model I it is only 0.878, while in the case of Model II it is 0.453 units.

13 All calculations were conducted by Dr. I. Laskowska.

14 This was measured using Cronbach's α .

Significance with respect to growth in the level of innovation is much greater than in its growth when looking at the homogeneity of HRM practices and the alignment of HRM strategy to the overall company strategy. Specifically, the fall in HRM consistency is by 0.606 units, while in the case of Model II it is by 2.14 units. Consistency is unimportant in Model III (research into the direct impact of involvement on innovation only). Thus, it is a fall in HRM consistency in line with Model III that is the least favorable.

Coefficients of the Significance of Variables Explaining the Level and Dynamics of Innovation

The following formula was applied in order to evaluate the weights of individual variables explaining the level and dynamics of innovation in the examined companies:

$$b_j = |a_j| \cdot \frac{\bar{x}_j}{\bar{y}}$$

Where:

a_j – is the estimate of the parameter tied with the explanatory data variable (independent) – the regression coefficient.

\bar{x}_j – is the average value of the explanatory variable alongside the parameter.

\bar{y} – is the empirical mean value of the explained variable (independent).

The higher value of the significance coefficient means a stronger impact of the given explanatory variable on the explained variable. A ranking of individual approaches and their consistency is presented in Table No. 1.

Table No. 1. Significance Coefficients: Impact on Various Approaches to HRM and Their Consistency

| HRM indices | Innovation dynamics | Innovation level |
|--|---------------------|---------------------|
| Model I | 0.066782 | 0.05735 |
| Model II | 0.29778 | 0.034572 |
| Model III | 0.784606 | 1.170715 |
| Internal consistency (Model I) | 0.702322 | 0.156812 |
| Internal consistency (Model II) | 0.2089 | 0.1265509 |
| Consistency (Model III) | 0.325606 | No significant link |
| Consistency of the HRM strategy and company strategy | 0.238097 | 0.0530979 |

Nota bene: Usually, variables whose significance coefficient is not lower than 0.05 are considered significant.

Source: Own research.

The strongest connection is present between HRM in line with Model III and the level and dynamics of innovation. For its part, the weakest, albeit statistically significant connection, is found between Model I and unstructured HRM. This shows the significant advantages of HPWS and HIWP over it, but also the advantage of HIWP and HPWS (in the examined form) in the area of support for innovation growth.

Final Remarks

The conducted research demonstrates that there is a link between HRM and the level and dynamics of innovation. HRM strategy alignment with the company strategy as well as the homogeneity of HRM practices also plays a role. HRM concepts based on HPWS and HIWP are promising. This is confirmed by research results. They are useful in supporting innovation, in spite of the fact that their ties with it are not particularly strong they are significant. It must, after all, be taken into account that the research was conducted in Poland, where company innovativeness is relatively low. The summary innovation index for Poland only amounts to 0.24 as compared with an average of 0.45 for the European Union and a highest score of 0.73 in Sweden (European Innovation Scoreboard 2007). This puts Poland in thirty-third place out of a group of thirty-eight examined countries. The HRM level is also relatively low.

A range of variants of HPWS and HIWP can find application in diverse, coexisting types of organizations. The above discussion shows that it is the HIWP concept that deserves particular attention in knowledge-based innovation growth oriented organizations. However, there is no doubt that its implementation and maintenance is difficult. It requires careful preparations on the part of managers and workers, as well as the building of trust between these groups and wise talent management.

Systems of highly efficient work and those supporting innovation growth are worth greater interest on the part of science. What is needed, on the par with a greater ordering of knowledge about these systems and regarding their functioning in practice, is “merely” an expansion of research into the topic of their efficiency as well as factors fostering and impeding their implementation. Without this, they will share the fate of other management practices that spurred hope for growth in organizational efficiency and a long life. There is a need to intensify research into talent and change management within the context of innovation as fields coupled with HRM. The first of these areas was encompassed by the research discussed in this study.

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Stanisława Borkowska – Professor, Habil. Doctor of Economic Sciences, an outstanding specialist in the field of human resource management. Head of the Chair of Labor and Social Policy at the University of Łódź as well as of the Department of Human Resource Management of the Institute of Labor and Social Studies of Warsaw. Scientific accomplishments encompass many publications devoted to the topics of remuneration, income policy, the labor market, and human resource management. Collaborates with domestic and international scientific societies. Professor Stanisława Borkowska is the Head of the Labor and Social Policy Scientific Committee of the Polish Academy of Sciences, and a member of the Organization and Management Scientific Committee of the Polish Academy of Sciences as well as of the Demographic Science Committee. Member of the presidium and Scientific Council of the Polish Economic Society (PTE), the Scientific Society for Organization and Management (TNOiK), chairperson of the Head Committee of the Economic Knowledge Olympics, and board member of both the European Committee for Work and Pay and of the American Compensation Association. Editor-in-chief of the *Zarządzanie Zasobami Ludzkimi* [Human Resource Management] bimonthly, a member of many editorial boards, including of the *Journal of Pay and Reward Management*, and the head of the program Council of the "Person-

nel XXI” Initiative as well as chairperson of the award chapter of the Human Resource Management Leader Competition. Her most important publications are: “System motywowania w przedsiębiorstwie” [The motivation system in the company], PWN Warsaw, 1985, “Negocjacje zbiorowe” [Collective bargaining], PWE, Warsaw 1997, “Strategie wynagrodzeń” [Remuneration strategies], Of. Ek. Cracow, 2004, 2008.