INVESTIGATION THE RELATIONSHIP BETWEEN HUMAN RESOURCE MANAGEMENT PRACTICES AND FIRM'S FINANCE PERFORMANCE

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Abstract
This paper briefly describes the practices of human resource management as an idiosyncratic source of competitive advantage. It discusses various authors' views on the relationship between human resource management practices and firm's economic performance. The paper also discusses the complexity of studying the said relationship. It concludes that despite statistical analysis revealing a positive correlation, the causality of the effect was not proven. The experimental research studies the link between human resource management practices and economic performance on a sample of 102 organizations, studying basic management practices, such as strategy, organizational structure, corporate culture and operational management. The research reveals a positive correlation between HR practices and economic performance, but only if the management practices were provided on average or above-average levels. For other practices, the study showed evidence of a statistically relevant correlation only in the case of remuneration.

Keywords: Practices of human resource management, organizational performance, operational efficiency
1. Introduction
Although the issue of human resources management has recently received considerable attention both in research and practice, we still do not have the appropriate tools which would be able to present, if possible quantitatively, the contribution of human resource management practices on organizational performance. Therefore, in many cases, human resource management practices are the object of outsourcing. Quantitative presentation of their contribution is however much more problematic. Therefore, the aim of the presented paper is to analyze previously published works dealing with issue of the impact of HR practices on economic performance, to explore problems that are associated with them, to present the results of own research on the matter and to outline possible solutions.

2. Literature review
If we accept the assumption confirmed by several previous studies that human resources are the company’s most important asset, then it is necessary to examine what is their true effect on the economic performance of the firm. This raises considerable interest in research into the effects of various practices on economic performance. So far there have been no studies in Slovakia which would investigate the relationship between the practices implemented and the firm’s economic performance. In developed countries, studies which were carried out in most cases confirmed a statistical dependency of the practices and economic performance (Husselid, 1995 Delenay and Huselid, 1995). However, it should be noted that there were also some studies which failed to prove the benefits of the practices.

Historically, a significant shift in the study of the practices in terms of their effect on the economic performance occurred in the mid-90’s, when Huselid (1995) published a paper, which demonstrated on a sample of 1000 of American firms, that the implementation of certain practices HR increased efficiency and productivity (Truss, Mankin, Keliher, 2012). This significant contribution has inspired many other scholars and researchers to analyze which practices are the most helpful in increasing efficiency and what is the mechanism of the influence of the individual practices.

An important achievement in this area was the application of an originally purely economic approach – "resource-based approach" or "resource-oriented approach" (RBV - Resource-Based View) on the issue of human resource management (Barnay, 1991).
The central question of RBV is to give theoretical background on when, how and under what circumstances, a company can gain a sustainable competitive advantage. Many researchers dedicated to this issue have focused on the relationship of businesses to their environment. Little attention was paid to what is happening inside the company.

The idea of the RBV is based primarily on the assumption that companies possess different resources at different levels and on the assumption that resources are not necessarily marketable and therefore their heterogeneity persists for quite a long time. This means that competition within a specific industry segment may depend primarily on internal resources and this drew attention to the importance of management and leadership.

Boiswel and Wright (2002) described a typology of different HR practices, according to the following criteria:

- According to the number of practices; whether it is one single practice, i.e. recruitment, selection, remuneration or multiple practices.
- According to the level of analysis, i.e. whether the investigation is undertaken at the organization level or at the individual level.

According to the resource-oriented approach towards the firm, the differences in the performance between firms can be attributed to difference in company’s resources and capabilities companies.

The approach is based on the assumption that strategic resources are deployed in a heterogeneous organizational framework of companies and that these differences are relatively stable over time.

Resources which are valuable, unique, hard to copy, hard to substitute, therefore form the basis for a sustainable competitive advantage. A resource-oriented approach is therefore crucial for understanding how resources are combined, what constitutes a sustainable competitive advantage and the nature of income. Resource-oriented approach promotes the view that it is the immaterial, company-specific resources, such as human resources, which form the competitive advantage.

Wright and McMahan (1992) argue that human resources represent a firm’s unique source of competitive advantage that is difficult to copy. Human resources represent a sustainable competitive advantage if they meet the four following conditions (Wright and McMahan, 1992).

1. Staff adds value to the products and processes of the company in a way, that is based on each individual.
2. Skills which the company is looking for and uses must be rare and cannot be easily copied by the competition.
3. Knowledge and skills must be firm-specific, i.e. tied to the organization and cannot be easily imitated.
4. The firm’s human resources cannot be substituted by technology or by other means.

Delery and Doty (1996) In: Moideenkutty (2011) state that there are three perspectives from the aspect of the implementation of human resource management practices.

The first perspective is universalistic, claiming that certain practices are better than others ("best practice") and these are the ones which contribute the most to the organization’s economic performance.

The second perspective is the contingency approach, which claims that HR management practices should be in the context of other aspects of the organization, in particular with the strategic position of the organization.

Third, the configuration perspective, claims that effective HR management practices are those which consist of certain patterns that are internally and externally consistent with the characteristics of the organization.

One of the proponents of this approach is Pfeffer (1996). The author published a series of posts and books on this subject. In his exploration of this issue, he describes a set of 13 HR practices (Pfeffer, 2005, In: Truss, Mankin, Keliher, 2012, p.91).

Although this set of practices seems very solid, some of the opponents criticize it for weaknesses in their implementation as well as the lack of theoretical justification. These shortcomings were attempted to be remedied by another approach – the configuration approach.

**Complementarity between the different HR practices**

The individual human resource management practices are mostly studied separately. The departments that are responsible for their implementation and their application into different areas of the HR, also apply them individually. In result, the coordination between the different practices and the way they interact with each other is frequently neglected (Saal and Knight, 1988). It therefore seems, and researchers in the HR field try to remedy this, it is better to examine these practices in a more systematic manner which would explore the complementarity of the different practices
and they would be coordinated with respect to how they affect each other (Huselid 1995; Mac Duffy 1995). Complementarity (influencing each other) is a combination of HRM practices that have a significant impact on productivity and therefore the resulting effect is greater than the sum of the individual components (Milgrom and Roberts, 1993).

Complementary HRM practices developed and implemented simultaneously, have a greater positive impact on the economic performance, compared to practices implemented in isolation without coordination (Ichniowsky, 1990).

Ichniowski (1990) In: Truss, Mankin, Kelliher (2012), states that certain practices, i.e. individual or group remuneration are not sufficient to achieve high performance. It is needed to have additional practices to support employee motivation and their loyalty to the organization, such as training, communication mechanisms, and so forth. Macduff (1995) argues that the HRM practices promote high economic performance only when individual interests are aligned with those of the company. According to Macduff (1995), complementary practices should also include ones such as job security, remuneration based on the performance evaluation, extensive training, work teams, total quality management.

Reich (1992) states that the current economy requires a highly flexible and cooperative labor. Bailey (1993) argues that the practices that increase the skills and knowledge of workers should be accompanied by practices that increase employee motivation.

Likert (1967) provides a set of practices, consisting of education, the participation of employees in decision-making, autonomy of employees, motivating remuneration, control over resources.

Dalanay, Ichniovsky and Levin (1989) identified ten practices that affect efficiency and productivity. This includes the following practices:

Flexible work arrangements, employee engagement, profit-sharing programs, formalized conflict resolution procedures, information sharing programs, feedback collection, flexible schedule, day-care program for employees, implementation of outplacement and counseling for employees.

**Economic performance**

In the context of the current analysis, economic performance is a dependent variable. The main objective of the study is examining the relationship between the independent variables, i.e. human resources
management practices and the dependent variable, which is economic performance.

The concepts of economic performance and its measurement are currently much discussed in literature and current research. Despite this fact, the contents of these terms are not clearly defined, the individual definitions differ mainly in the universality also in the way of quantification.

In principle it is possible to split the performance into two dimensions:

- Individual performance or work efficiency,
- Performance at the organization level.

The economic performance of the company can be described as the company’s ability to valorize the resources consumed and to generate profit through their own activities.

**Work performance.**

One factor which does not get sufficient attention in management is operational efficiency. This concept is interesting not only for academic research but also for consumers. The presented literary review indicates that only a very few studies have been devoted to the impact of human resource management practices on work performance. Almost all the research focuses on the performance of the organization as a whole, these already have a relatively well-developed set of methods of measurement and performance indicators.

Work performance, as defined by Motowidlo (2003), represents the value that an organization can expect to gain from a specific behavior conducted by their staff in the course of time. One of the assumptions that led to this definition is the idea that working efficiency is behavioral, episodic, evaluating and multidimensional. It is also necessary to distinguish between behavior and performance. Behavior is what employees are doing and performance is the value this has for the organization.

Borman and Motowidlo (1993) distinguish two types of work performance:

1. Task performance,
2. Contextual performance.

Task performance includes items that are usually included in the job description and usually contain transformation of materials into products and services. On the other hand, contextual performance is defined as behavior
that promotes broader social and organizational psychology surrounding the organization, as opposed to behavior that supports the technical core of the organization (Borman & Motowidlo, 1993).

**Performance at the organizational level.**

As mentioned above, the performance of an organization (organizational performance) is the final performance of the whole system of human resources management. Organizational performance serves as a final output of effective human resources management. There are several reasons why the financial performance of the organization is important in terms of human resource management. The main reason lies in the focus shifting away from the growth of the organization to increasing its competitiveness. The evaluation of the performance at the organizational level is possible using standard financial indicators or can be based on individual perception of respondents. Obviously, rating based on the standard indicators is more precise and more objective, but obtaining such indicators may not be easy. Therefore, this research used an experimental method based on the individual perception of respondents.

### 3. Analysis conclusion

Empirical evidence for the existence of a link between human resource management and performance is difficult to prove. However, just because proving this link is challenging, it does not mean that the causal link does not exist. It is probably the case that this causal link exists, but the causality is so difficult and complex that it can hardly be proved by statistical methods (Hesket and Fleetwood, 2006). Finally, even if we find empirical evidence of the link between HRM and performance, statistical dependence does not constitute a theory neither it provides an explanation. Some practically-minded authors (Guest, 2001; Boselie, 2005) are aware of the lack of theoretical background, although they underestimate the extent of the problem and the causality explanation remained completely in the background.

According to Gerhart (2005) the link between the HRM practices and performance is also related to other contextual factors. These include basic management practices, such as strategy, organizational structure, corporate culture and operational management. Without assuring these basic management practices, a firm cannot successfully function in the business
environment. For this reason, the present research further assesses the impact of the HRM practices, on the level of basic management practices, which are: strategy, organizational structure, operational management and corporate culture.

4. Description and results of research

The aim of the research is:

1. Investigate a connection between the selected individual practices of human resource management (HRM) and performance of the organization (without taking into account the basic management practices) on a sample of selected Slovak organizations (102 organizations).

2. Investigate a link between the whole set of HRM practices (not between individual practices as in point 1) and the performance of organizations (without taking into account the basic management practices) on the sample set of organizations (102). And the performance of organizations (without taking into account the basal management practices).

3. Investigate the impact of human resource management practices on organizational performance on a subset of organizations including only organizations, which have the average level of securing of basic practices of less than 3.

4. The impact of the human resources management practices on organizational performance at a sub-organization established by him to have been included only organizations with an average basal level of security practices is 3 or more.

The results of the tasks defined by points 1) and 2), will show to what extent are the results of the research in Slovak conditions in accordance with the results of other authors from other countries.

The results of the tasks defined in point 3.) and 4.) should present the impact of the basic practices on the performance in conjunction with the practices of human resource management. In other words, in cases where basic practices have a lower level and the arithmetic mean of the score of the basic practices is less than 3, do the HRM practices have a positive statistically significant effect on performance?
4.1 Sampling
The sample consists of the total of 300 Slovak organizations. The organizations were surveyed by mail and in the form of a personal interview on the basis of a filled in questionnaire. In total return, there was 121 questionnaires completed, out of which 102 were usable.

The size of organizations based on the number of employees was as follows:

Organizations with number of employees:
Up to 25 employees 11 organizations
26-50 employees 25 organizations
51-100 employees 32 organizations
101-250 employees 21 organizations
250+ employees 13 organizations

Types of organizations by sector:
Manufacturing 84 organizations
Trade and services 15 organizations
Others 3 organizations

4.2 Research hypotheses
In accordance with the objectives of the survey the following hypotheses were stated to investigate the set task:

H1: There exists a positive statistical correlation between the level of all practices of human resource management and the firm’s economic performance.(For set of 102 organizations).

This hypothesis was divided into five sub-hypotheses, namely:

H 1.1. There exists a positive, statistically significant relationship between the level of practice of "recruitment and selection" and firm's economic performance.

H 1.2. There exists a positive, statistically significant relationship between the level of assurance of practice of "training and career development of employees" and firm's economic performance.

H 1.3. There exists a positive, statistically significant relationship between the level of practice "implementation of performance management" and firm's economic performance.

H 1.4. There exists a positive statistically significant relationship between the practice of "remuneration based on performance evaluation" and firm's economic performance.
H 1.5 There exists a assumed positive, statistically significant relationship between practice "level of employee relations" and firm's economic performance

Hypothesis H2. There exists a positive, statistically significant relationship between a set of practices, human resources management and firm's economic performance, even in the case of organizations in which the level of securing the basic management practices on average falls short of the standard level, i.e. where the average basic level scores less than 3

Note: A subset of organizations (40 organizations) was selected from the total set and includes organizations in which the average level of assurance of basic management practices is less than 3.

H2: There exists a positive statistical correlation between the level of all practices of human resource management and performance level. (For subset 40 organizations)

This hypothesis was divided into five sub-hypotheses, namely:

H2.1. There exists a positive, statistically significant relationship between the level of practice of "recruitment and selection" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is less than 3.

H 2.2. There exists a positive, statistically significant relationship between the level of assurance of practice of "training and career development of employees" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is less than 3.

H 2.3. There exists a positive, statistically significant relationship between the level of practice of "implementation of performance management" and performance level in the organizations in which the average level of assurance of basic management practices is less than 3.

H 2.4. There exists a positive, statistically significant relationship between practice of "remuneration based on performance evaluation" and performance in the organizations in which the average level of assurance of basic management practices is less than 3.

H 2.5 There exists a positive, statistically significant relationship between the practice of "level of employee relations" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is less than 3.
Hypothesis H3. There exists a positive, statistically significant relationship between a set of HRM practices and firm's economic performance even for organizations where the level of securing of the basic management practices achieved an average score of level over 3. It means a standard and above-standard implementation of basic management practices. (For subset 62 organizations)

Note: A subset of organizations (62 organizations) was selected from the total set and includes organizations in which the average level of assurance of basic management practices scored 3 or more.

H 3.1. There exists a positive, statistically significant relationship between the level of practice of "recruitment and selection" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is 3 and more.

H 3.2. There exists a positive, statistically significant relationship between the level of assurance of practice of "training and career development of employees" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is 3 and more.

H 3.3. There exists a positive, statistically significant relationship between the level of practice of "implementation of performance management" and performance level in the organizations in which the average level of assurance of basic management practices is less than 3.

H 3.4. There exists a positive, statistically significant relationship between practice of "remuneration based on performance evaluation" and performance in the organizations in which the average level of assurance of basic management practices is 3 and more.

H 3.5 There exists a positive, statistically significant relationship between the practice of "level of employee relations" and firm's economic performance in the organizations in which the average level of assurance of basic management practices is 3 and more.

4.3 Research Methods.

There were 330 organizations, which were asked to participate in the study. 60 organizations were contacted in person and 270 by mail. Participants returned 102 questionnaires, which were filled, in and usable. We mostly contacted the top representatives of the companies, although most of the time the questionnaires were filled in by HR representatives.
A part of the questionnaire surveyed the level of assurance of HR practices, human resources management, identifying the level of assurance (implementation) of basic management practices as well as the perception of firm's economic performance.

For analysis, we used traditional methods of descriptive and inductive statistics, the methods of induction, deduction and comparative method.

4.4 Variables and their scaling

The individual practices of HRM served as independent variables. Each of these practices was described in details so that the evaluator could correctly assess the level of their assurance in the organization. Based on the analysis, selected HRM practices were chosen as independent variables:

- Recruitment and selection of employees
- Training and staff development
- Performance rating and performance management
- Appropriate remuneration based on performance evaluation
- Employee relationships

For the assessment of the implemented practices of human resource management (HRM) a five-scale range with a score of 1-5 was used, with point 1 representing the minimum level of assurance of the practice, while 5 is the maximum, providing above-average practices.

In addition to determining the level of HRM practices, the survey also investigated the level of assurance of basic management practices, which include:

- Business strategy
- Organizational structure
- Organizational culture
- Operational control

The evaluation of these practices was made the same way as for human resource management practices – on five-point scale. 1- minimum level of assurance practices in question, 5- maximum above average level of assurance practices. The score of 3 represents an average level of the assurance of basic practices, the levels 1 and 2 represent substandard level of practices. Based on the scoring of basic practices, subsequently all of the 102 organizations) were divided into two subsets: I and II. The first subset contains organizations in which the average level of assurance of basic management practices is less than 3 (40 organizations), and the second set is
made of organizations in which the average level of assurance of basic management practices is 3 or more (62 organizations).

Perceived firm's economic performance was selected as the dependent variable. The perceived performance was also evaluated on a five point scale as follows:

1. The perceived firm's economic performance is much lower than the industry average
2. The perceived firm's economic performance is less than the average performance of the sector
3. The perceived firm's economic performance corresponds to the industry average
4. The perceived firm's economic performance is higher than the industry average
5. The perceived firm's economic performance is much higher than the industry average.

4.5 Research results

The evaluation of the link between the selected five different practices of human resource management and firm's economic performance as well as the set of HRM practices and performance of the whole set of studied organizations (102) are given in Table 1.

Table 1 The calculated values of the Kendall’s correlation coefficient and p-values for correlation dependence between the HRM practices and the set of practices and performance on a sample of 102 subjects (Significance level 0.05).

<table>
<thead>
<tr>
<th>Economic performance</th>
<th>The practices of human resource management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A set of practices</td>
</tr>
<tr>
<td>Kendall's Tau</td>
<td>0.199</td>
</tr>
<tr>
<td>p</td>
<td>0.56</td>
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<tr>
<td>N</td>
<td>102</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>H1:</td>
</tr>
<tr>
<td>Confirmed</td>
<td></td>
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<tr>
<td>Unconfirmed</td>
<td>X</td>
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</table>

Source: own research
X- confirmed or unconfirmed hypothesis
As is evident from the table 1 the individual HRM practices show weak or very weak correlations. The strongest correlation relationship, although still relatively weak, is between remuneration and economic performance. The only statistically significant relationship was found between recruitment and selection and economic performance, as well as between management performance and organizational performance. A set of practices as a whole shows a weak and statistically insignificant relationship.

The Table 2 presents the results of the examination of the links between the various practices and the economic performance as well as between the set of practices carried out in the subset of 40 organizations in which the average level of assurance of basic management practices is less than 3.

**Table 2.** The calculated values of the Kendall’s correlation coefficient and p-values for correlation dependence between the HRM practices and the set of practices and performance on a sample of 40 subjects (Significance level 0.05).

<table>
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<th>Economic performance</th>
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<tbody>
<tr>
<td></td>
<td>A set of practices</td>
<td>Recruitmen t and selection of employees</td>
</tr>
<tr>
<td>Kendall's Tau</td>
<td>0.207</td>
<td>0.381</td>
</tr>
<tr>
<td>p</td>
<td>0.200</td>
<td>0.09</td>
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<tr>
<td>N</td>
<td>40</td>
<td>40</td>
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<tr>
<td>Hypothesis</td>
<td>H2:</td>
<td>H2.1</td>
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<tr>
<td>Confirmed</td>
<td></td>
<td>X</td>
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<tr>
<td>Unconfirmed</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Source: own research

X- confirmed or unconfirmed hypothesis

As can be seen in Table 2 in organizations where the level of assurance of basic practices was less than 3, i.e. below the standard level, a very weak correlation relationship between the practices and performance of HRM was found and it was statistically insignificant in all cases. The same applies to the set of practices as a whole.

The Table 3 shows the results of examination of the link between human resources management practices individually and as a whole on one hand and efficiency on the other. The analysis was carried out on a set of 62
organizations in which the average level of assurance of basic management practices is 3 or more. It therefore concerns a standard and above-standard assurance of basic practices.

**Table 3.** The Kendall correlation coefficient values and the calculated value of the \( p \) coefficient for the dependence analysis between the HRM practices and economic performance, as well as between a set of HRM practices and performance found in a sample of 62 subjects. (Significance level 0.05).

<table>
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<th>Economic performance</th>
<th>The practices of human resource management</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A set of practices</td>
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<tr>
<td>Kendall's Tau</td>
<td>0.424</td>
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<tr>
<td>p</td>
<td>0.001</td>
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<tr>
<td>N</td>
<td>62</td>
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<tr>
<td>Hypothesis</td>
<td>H3</td>
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<tr>
<td>Confirmed</td>
<td>X</td>
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<tr>
<td>Unconfirmed</td>
<td>X</td>
</tr>
</tbody>
</table>

X- confirmed or unconfirmed hypothesis

Source: own research

As shown in Table 3, in the case of the practice of remuneration there was a moderate and statistically significant link established between HRM practices and economic performance. Other individual practices and correlation coefficients ranged in the context of a weak correlation, statistical significance was not confirmed.

The results of the analysis correspond to the findings of others authors as the correlations found were mostly weak and moderate and there were even some practices for which no correlation was found. In general it can be concluded that in the case of Slovak enterprises the link between the individual practices and economic performance proved to be irrelevant. The results presented, however, in comparison with other studied brings out the finding that the individual HRM practices without a corresponding level of basic management practices do not show a significant effect on performance. Further investigations should therefore be oriented towards research of the impact on performance practices in interactions with other practices. It is also necessary to study the HRM practices and their causal relationships.
5. Conclusion

As it is clear from the presented studies and the analysis of the HRM practices, that human resources and the practices implemented by them are the source of sustainable competitive advantage and significantly contribute to the firm's economic performance. Measurement and evaluation of the contribution of these practices is one of the main points of focus of the departments of human resources management. The issue should be studied in further detail by academia but also in practice.

In the academic research, we need to take the next step and search for mechanism of the influence of HRM practices on organizational performance. Most of the cited studies (but not all) indeed found a positive link between HRM practices and economic performance, but they do not present a causal link between the two. Thus in the future, research should focus on finding this causal relationship.

Despite considerable progress, a significant number of studies that have been conducted in this area we are in agreement with Hesket and Fleetwood (2006) that there remain many unanswered questions. These include:

- The empirical relationship between the HRM practices and economic performance is yet to be established.
- The absence of empirically confirmed link between HRM practices and economic performance does not mean that there is some form of causality. The nature of causality is much more sophisticated than can be captured by statistical methods.

In terms of practical implementation, it will be necessary to develop and then employ a manual for the assessment of the contribution of human resources on economic performance, which will be based on the theoretical results.

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