# Measuring HRM and organisational performance: concepts, issues, and framework

Satwinder Singh, Tamer K. Darwish, Ana Cristina Costa and Neil Anderson

*Business School, Brunel University, Uxbridge, UK*

## Abstract

**Purpose** – The purpose of this paper is to contribute to the understanding of the HRM and organisational performance (OP) nexus by drawing attention to the complex interplay of internal and external factors affecting OP, and to further provide an integrated framework for the testing of this nexus.

**Design/methodology/approach** – Relevant literature is reviewed and assessed critically. A theoretical framework is provided with the objective to measure the HRM-OP nexus.

**Findings** – Whilst the majority of the extant literature on HRM has focused mainly on internal factors, the authors suggest that the domain of the internal factors considered thus far needs to be widened and external factors need to be acknowledged explicitly. They provide a schematic model portraying the intricate nature of internal and external factors. They subsequently provide an integrated framework of factors in order to measure HRM practices' effects on OP.

**Research limitations/implications** – The suggested framework is theoretical pending empirical testing. The framework can serve as a template for future research.

**Practical implications** – The framework can be put into a universally testable template for use by researchers.

**Originality/value** – The paper, for the first time, schematically brings together and discusses the elements affecting the HRM-OP nexus, and further provides a framework in the form of a set of exhaustive factors – which will facilitate this nexus being put to empirical test.

**Keywords** Human resource management, Organizational performance, Internal factors, External factors

**Paper type** Conceptual paper

## 1. Introduction

Over many decades, the field of human resource management (HRM) has attracted a great deal of attention across various disciplines owing to its contribution and impact on the bottom-line issues within organisations. One particular area which has received considerable attention is the link between HRM practices on organisational performance (OP). Scholars have consistently attempted to understand the impacts of HRM practices on OP, often taking one of two perspectives: the systems perspective or the strategic perspective. The former of the two perspectives has its roots in studying the effects between specific HRM practices, such as training (Bartel, 1994) and information-sharing (Morishima, 1991) on firm or employee performance. However, the debate has now shifted towards a more integrated management approach

The authors are grateful to two anonymous referees and to the Editor of this journal for very helpful comments that led to the revision of an earlier version of this paper. All shortcomings are the authors'.

Management Decision
Vol. 50 No. 4, 2012
pp. 651-667

0025-1747
DOI 10.1108/00251741211220282

of how the overall set of HRM practices may ultimately contribute to the competitive advantage of the organisation (Arthur, 1994; Huselid, 1995; Huselid and Becker, 1996; Delaney and Huselid, 1996; Delery and Doty, 1996). This transition reflects not only the importance of human capital in terms of gaining competitive advantage and achieving organisational performance, but also an evolving belief that, in order to survive and compete in the present-day knowledge-based global economy, organisations need to acquire and develop world-class human resource competencies.

Markedly, the strategic perspective has taken on different meanings in the literature. One particular approach has focused on the fit between various HRM practices and the competitive strategy of the organisation (e.g. Miles and Snow, 1984). Embedded in this view is the statement that organisations should align their HRM practices towards their strategic goal, and that such practices should develop employee skills, knowledge and motivation such that employees behave in ways considered supportive of a particular strategy (Kochan and Dyer, 1993; Dyer and Reeves, 1995; Delery and Doty, 1996; Noe *et al.*, 2006; Andersén, 2011) Another approach has adopted a more contingent view, assuming that the effectiveness of a HR system rests on the contextual factors, including the political system, industry, firm size, etc. (MacDuffie, 1995; Paauwe and Boselie, 2005). A related approach – the resource-based view (Wernerfelt, 1984; Prahalad and Hamel, 1990; Grant, 1991; Barney, 1995; Barney and Wright, 1998; Boxall and Purcell, 2000; Wright *et al.*, 2001; Beardwell *et al.*, 2004) – suggests that HRM contributes to OP by leveraging human capital, discretionary effort, and desired attitudes and behaviours (Lado and Wilson, 1994; Becker and Gerhart, 1996). The underlying assumption is that HRM practices are socially complex and intricately linked, thus making it an integral part of the organisation unique and non-substitutable, and very difficult to imitate (Barney, 1995; Kaplan and Norton, 1992; Arthur, 1994).

Both the systems and the strategic perspectives contribute to the understanding of how HRM practices and their influence on employees, attributes and behaviours can lead to the desirable performance outcomes at the organisational level. However, research evidence so far has only partially verified these effects (Pfeffer, 1994, 1998; Khandekar and Sharma, 2005). Some researchers (e.g. Boxall and Purcell, 2003; Beardwell *et al.*, 2004; Paauwe and Boselie, 2005; Wright *et al.*, 2005; Gerhart, 2005; Paauwe, 2009; Guest, 2011) demonstrate several inconsistencies, commenting that the nature of the HRM-OP link is ambiguous.

The aim of this paper is to contribute to this understanding by focusing on the interplay between internal and external factors of the organisation. Given data constraints, whilst most of the extant literature on HRM has focused mainly on the internal factors, we suggest that the domain of the internal factors considered thus far has been narrow, and therefore needs to be widened, and also that external factors – which are of equal importance – need to be explicitly acknowledged as well. We make this clear schematically in Figure 1, and suggest ways by which they can be incorporated within the HRM-OP link. Notably, section 2 provides a summary of research work on the nature of the link between HRM and OP. Section 3 highlights the pros and cons of direct and indirect approaches to HRM-OP. Section 4 reviews the literature on the nature of OP measures and the difficulty in measuring this in the context of the HRM-OP nexus, whilst Section 5 provides a framework for measuring OP. Sections 6 and 7, respectively, comment on the choice of dependent and independent variables. Section 8 contains suggestions on the inclusion of external

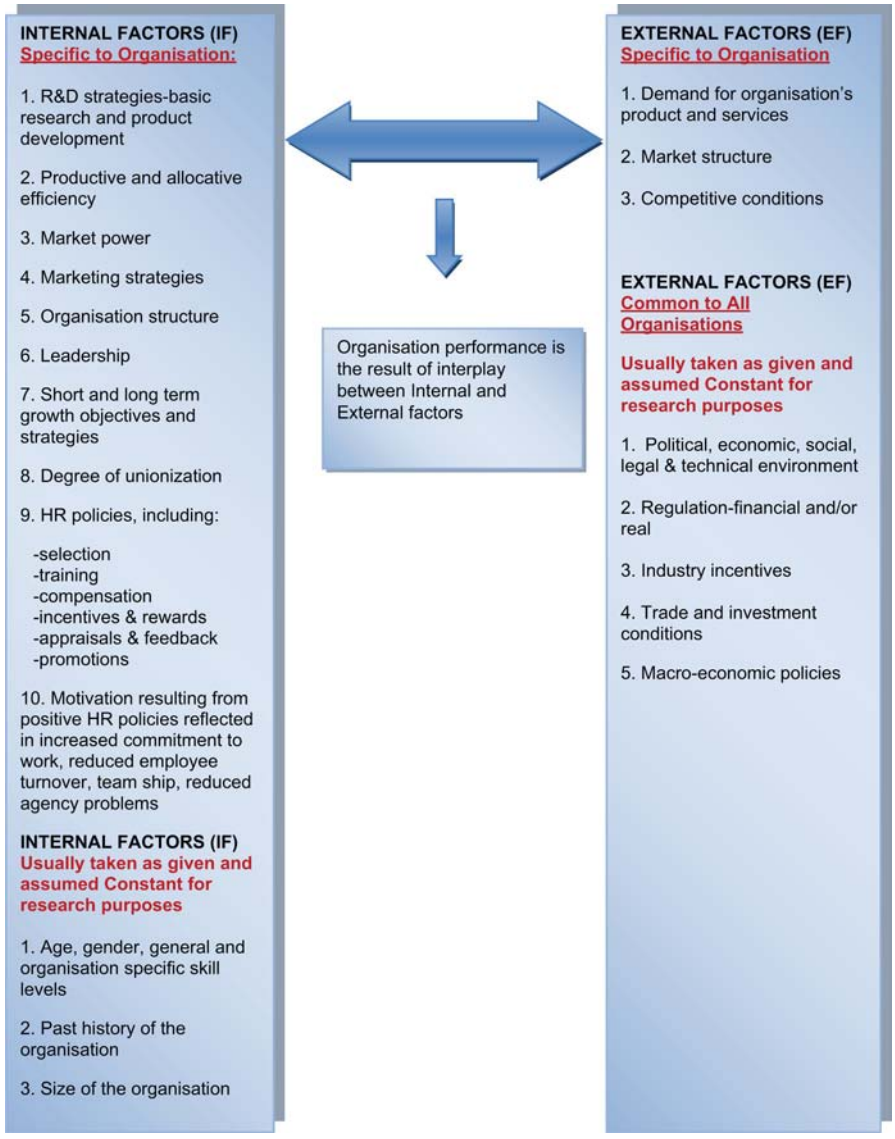


**Figure 1.**
A schematic interplay of variables impacting on OP

factors related independent variables in the measurement of HRM-OP. Section 9 comments on the data and measurement techniques, whilst Section 10 provides a discussion.

## 2. The nature of the link between HRM and OP

Two broad research streams have emerged during the course of the study concerning the relationship between HRM and OP. The first stream advocates that HRM practices

have a direct effect on organisational performance (e.g. Schuler and Jackson, 1999; Chand and Katou, 2007), whilst the second stream argues that HRM practices only can have an indirect effect on OP (e.g. Wright *et al.*, 2003).

*2.1 Direct effects*

Research evidencing the direct effects between HRM practices and OP has emphasised sixteen best practices, later consolidated into seven, as proposed by Pfeffer (1994, 1998). It is argued that the greater use of such practices emphasising employee participation and empowerment – including teamwork, employee training, and performance contingency-incentive compensation – are believed to improve the performance of organisations (Pfeffer, 1994). These specific HR practices have been termed as "best practices" (Pfeffer, 1994), "high performance work system (HPWS)" (Way, 2002; Beltran-Martin *et al.*, 2008; Guthrie *et al.*, 2009), "high-involvement practices" (Wood and de Menezes, 2008; Lawler, 1986) or "high commitment practices" (Wood, 1996). Research thus far has supported the notion that the HR system is one important component that helps organisations to become more effective and to achieve competitive advantage (Pfeffer, 1994; MacDuffie, 1995; Huselid, 1995; Delaney and Huselid, 1996; Guest, 1997; Ahmad and Schroeder, 2003; Moideenkutty *et al.*, 2011; Razouk, 2011). Researchers have also examined the impact of an individual HR practice, or a specific bundle of HR practices, in relation to performance on the presumption that they are the appropriate level of analysis for examining the impact of organisation-level performances (Delaney and Huselid, 1996). As stated previously, a system or a bundle of practices would ultimately generate greater effects as the whole is greater than the sum of its parts. For instance, to recruit and select good employees without training them, or to otherwise train and develop them without giving them the authority to make decisions, would produce few effects; whereas implementing the three practices together would produce greater effects (Wall and Wood, 2005). This is in contrast to individual HR practices which, in isolation, can produce only a limited amount of competitive advantage (Barney, 1995). However, HRM bundles of best practices have been very popular, and researchers have used different measures to assess these practices. As a result, there is again no agreement amongst researchers concerning what these practices should be, or even on the number of practices that can enhance OP (Dyer and Reeves, 1995; Becker and Gerhart, 1996; Guest, 1997; Wright *et al.*, 2003; Beltran-Martin *et al.*, 2008). Even when researchers adopt the same practices, the underlying meaning of these practices can be different from one organisation to the next (Dyer and Reeves, 1995; Becker and Gerhart, 1996; Guest, 1997). Accordingly, this has led to a plea by some authors for a specific theory on HRM (Paauwe and Boselie, 2005; Guest, 1997, 2011).

*2.2 Indirect effects*

Another line of research has demonstrated that, whether separate or in a bundle, HRM practices do not impact upon OP directly (e.g. Katou and Budhwar, 2006). HR practices, at best, only impact some mediator variables which subsequently impact OP (Dyer and Reeves, 1995; Becker and Gerhart, 1996; Paauwe and Richardson, 1997; Guest, 1997; Wright *et al.*, 2003; Collins and Clark, 2003; Paauwe, 2009); this can be termed as the "black box" issue in HRM-performance research. With this in mind, some researchers have started looking and searching inside the "black box" in an attempt to understand

which HR practices could impact OP to the greatest extent (Huselid, 1995; Huselid *et al.*, 1997; Wright *et al.*, 1999; Fey *et al.*, 2000; Way, 2002; Ahmad and Schroeder, 2003; Wright *et al.*, 2003; Datta *et al.*, 2005; Katou and Budhwar, 2006; Kintana *et al.*, 2006; Beltran-Martin *et al.*, 2008; Wood and de Menezes, 2008). Different mediating variables have been used by researchers to establish an effective HRM-performance link mechanism, such as employee turnover, employee productivity, employees and customer satisfaction, knowledge management, technology, and organisational culture, which addresses the call of some researchers (Guest, 1997; Wright *et al.*, 2003) for the exploration of new theoretical frameworks with different mediating variables. Notably, researchers have been called upon to conduct studies on the "black box" to find an effective HRM-performance link mechanism which helps academics and professionals to clearly and precisely understand the relationship between HRM and OP; nevertheless, owing to the fact that there is no established method available to researchers to follow in an attempt to determine which HR practices could (indirectly) impact OP, little attention has thus far been paid to further explore these aspects of research (Wright *et al.*, 2003).

## 3. Pros and cons of direct and indirect approaches to HRM-OP

### *3.1 Direct HRM-performance relationship approach*

The direct-effects approach comprises an ideal group of best practices, which, it is claimed, will continuously generate superior OP – regardless of the circumstances and the industry within which the firm is operational. However, this approach has faced a great deal of criticism: for instance, researchers disagree on how to determine an HR system as an integrated and synergetic HR practice that blends better in producing higher business performance (Delery, 1998). Furthermore, there is the question posed: should only the successful and high-performing firms be considered in the best-practices approach because of their excellent results? In addition, doubts remain as to which measures of performance should be used. The performance measures are commonly focused on financial criteria, with few studies taking into consideration the broader issue of employee satisfaction, commitment, and well-being. Researchers also disagree on the issue of methodology (data collection, analysis, and presentation of the results) (Redman and Wilkinson, 2008). Another issue is the difficulty for practitioners and some academics in terms of understanding the highly complicated statistical techniques used in some studies (Gerhart *et al.*, 2006).

### *3.2 Indirect HRM-performance relationship approach*

This approach claims that the achievement of high-performance is contingent upon the achievement of fit between HRM practices and other aspects of the organisation. In other words, an organisation usually goes through different stages in its lifecycle, and HR practices should be contingent upon such stages. Importantly, this approach has been criticised in the literature on the measurement and methodological issues. Redman and Wilkinson (2008), for example, have argued that, if the environment is dynamic and complex with multiple contingencies that cannot be isolated, the HR practices could be changing continuously. Another problem is that organisations cannot treat employees consistently overtime; they treat them differently in response to varying external pressures. With this in mind, Wright *et al.* (2003) argue that there is no established method available to researchers to follow in order to determine which

HR practices (indirectly) impact OP; thus, little attention has been directed towards further exploring the aspect of research in this direction. Moreover, it is noteworthy to recognise that some authors strongly believe that HRM researchers should direct more efforts separately in terms of the theoretical aspect of HRM theory and performance theory before starting to conduct studies on different mediating variables (Paauwe, 2009; Guest, 2011). In other words, a group of HR practices should be identified and agreed upon in HRM literature, and important performance measures should also be accurate, identified, and approved; otherwise, we will continue to use different HR practices and different performance measures. As a result, these mediating variables that could have significantly mediated the relationship between HRM and OP might lose their mediation positive effects in other studies with totally different HR practices and performance measures.

## 4. Organisational performance measures

As is the case with HRM practices, there is no consensus amongst researchers on the measurement of OP. Accordingly, it remains an imprecise and loosely defined construct – not only in the field of HRM but also in other fields as well (Rogers and Wright, 1998). For instance, Scott (1977, p. 63), in his review on the measures of organisational effectiveness, concludes that, "after reviewing a good deal of the literature on organisational effectiveness and its determinants, I have reached the conclusion that this topic is one about which we know less and less". Conceptually, OP can be defined as the comparison of the value produced by a company with the value owners expected to receive from the company (Alchian and Demsetz, 1972). With this taken into consideration, OP can be defined in terms of HRM-related outcomes, such as turnover, absenteeism, job satisfaction, commitment, and others, or various organisational outcomes, such as productivity, quality, service, efficiencies, customer satisfaction (Dyer and Reeves, 1995). Furthermore, it can also be defined in terms of financial indicators, i.e. profits, sales, return on assets or investment, or capital market outcomes: market share, Tobin's *q*, stock price, and growth. In strategy literature, the focal point of attention on this construct has been almost completely directed towards financial measures of performance (Rowe *et al.*, 1995). The performance of an organisation can also be judged by individual and institutional investors by quarterly net profit results; this is now a fairly established practice that can be evidenced almost daily in business news section of the media.

### *4.1 Difficulties in analysing factors affecting OP*

Although a number of measures have been suggested for measuring OP, in actual practice, measuring as to what actually contributes to OP is fraught with difficulties. The most common measure of OP in the business world is net profits, which are arrived at after deducting operating expenses, interest payments, and corporate tax liabilities. As organisations endeavour to maximise sales and minimise costs, both internal and external factors impact on these endeavours. Figure 1 schematically describes the internal and external factors with the potential to directly and indirectly impact upon an organisation's performance. Internal variables include a host of factors, such as R&D, production, marketing, leadership, short- and long-term strategies, HR issues, and policies such as selection, training, compensation, incentives and rewards, appraisals and feedback system, and promotion policies. The positive outcomes of

these policies are displayed in the increased motivation, thus resulting in lower employee turnover, increased camaraderie in team works, and reduced agency problems. Additional internal factors that are usually taken as given or sometimes included in the studies are the age, gender and HR skill levels of the work force, past history, and the size of the organisation. External factors include two sets of variables – one which is specific to an organisation, including demand condition for its product, market structure, and competitive environment in which it operates, and the second comprising national and institutional factors, including political, economic, social, and technical environment, financial and real regulation, antitrust laws, industry incentives, trade and investment conditions, and macroeconomic policies. External variables not specific to an organisation are symmetrically distributed in the sense that they apply in equal measures to all the organisations, and can be taken as given in any study (under the *ceteris paribus* clause). Internal factors vary from one organisation to the next, and are not easily visible to outsiders. Importantly, a cluster of these variables form the contents of the black box and impact on the profitability of the organisation. It is these, not completely visible internal factors which cause persistent profit differentials that are the subject of much research in understanding the performance of competitively advantaged organisations; however, despite best efforts, as yet, approximately 40 per cent of the variation in profit differentials remains unexplained (Rumelt, 1991; McGahan and Porter, 1997). Owing to the difficulties in capturing the degree of its effect, researchers in Economics and Strategy fields did not include the internal factors in their studies on profit variations amongst organisations. This was a field left open for HR specialists to fill in, and who implicitly theorised that the imaginative application of HR practices can result in improved performance for the organisation, and that this can shed light on the unexplained variance in equations.

Our review of studies in the field above shows that HR specialists have only been partly successful in their endeavours. Given the complexity of the ever-changing internal and external environment – often the latter also impacting on the former – the partial success of HR specialists is not difficult to explain. The schematic difficulty in capturing the realities of HR's impact on OP is portrayed in Figure 1.

Figure 1 portrays the difficulty and uphill task HR scholars face in their attempts to find the effects of HR practices on OP, however measured (market value, share price, profitability, customer satisfaction, reduced employee turnover, increased sales, productive capacity, or some other measure). Figure 1 should make one issue very clear: in an ideal situation, in order to accurately measure the effect of HR practices on OP, the individual effect of all the internal and external factors, as listed in Figure 1, should be taken into account. In a multivariate equation approach, for example, the size and sign of coefficients would tell us the importance, or lack thereof, associated with each factor's effect on OP. However, given the number of practical difficulties, it is not possible to measure the effect of all internal and external factors on OP. The most important of these difficulties, clearly, is the availability of reliable data pertaining, particularly, to external factors. As a result, studies relating to the effects of HR practices on OP are conducted under the implicit assumption of the *ceteris paribus* clause. What this clause means is that, owing to external factors (such as the macroeconomic policies of a country, for example), all firms are impacted in a symmetric way, with their overall impact taken as constant for all firms. With the implicit declaration of this clause, researchers can focus on measuring the effects of only the internal HR practices on OP. In this regard, one could argue that, by

doing so, researchers implicitly subscribe to the notion that measuring the effect of HR practices on OP is an inexact science. However, because all firms are influenced in a similar manner by external factors, if the effect of all the internal factors on OP can be captured, which then provides a fairly good measure of the impacts of HRM practices on OP. However, upon closer examination, during the literature survey (and hypothesis-building stage for a wider study being undertaken by the authors), it was discovered that most studies conducted on the HRM-OP nexus have not been able to take into account all internal factors (i.e. those listed in Figure 1). Secondly, in order for the results to be accurate, all firms in a particular sector should be accounted for, which often is not the case. Thirdly, the literature review also reveals that only a limited number of controls (firm size, turnover, etc.) have been included in the studies. A final associated point concerns the time factor, with most studies having been carried out at one point in time, therefore resulting in static analysis. In order to make the results dynamic, data for multiple years – at least the performance data – should be accounted for – even if the data on HR practices is collected at only one point in time. The suggested framework in Section 5 below attempts to knit an integrated approach to measuring the HRM-OP nexus, and in the process accounts for the elements in the so-called "black box" of this nexus.

## 5. A framework for measuring organisational performance

A survey of literature, as described in section 2, reveals that, thus far, studies on the HRM-OP link have been conducted largely by taking into account an objective or subjective measure of a firm's performance, and subsequently regressing this on selected HR practices of the organisations. In this section, we propose a holistic approach to measuring the HRM-OP link, wherein we suggest the inclusion of all the three essential components, i.e. the set of control variables, set of independent internal variables, and a set of independent external variables. The rationale behind the suggested approach is that the size, sign, and significance levels of the coefficients should reveal their individual importance and contributions to OP. Accordingly, we begin by providing a discussion on the choice of OP measure, and follow it up with a discussion on the choice of control, and internal and external independent variables.

In literature, the focal point of attention on OP has been almost completely directed towards the financial measures of performance (Rowe *et al.*, 1995). The literature indicates that employing financial measures would be ideal for reflecting the performance of companies. For instance, return on asset has been used as a measure of efficiency and resource exploitation in organisations (Keats, 1988; Snell and Youndt, 1995). Furthermore, return on equity can reflect the eventual measure of the strength of any financial organisation (Earle and Mendelson, 1991; Richard and Johnson, 2001). Financial measures, in fact, have been used extensively to reflect the performance of the companies – not only in the field of HRM but also in other fields, such as strategic management and marketing (see, for example, Kaplan and Norton, 1992). Although, subjective measures of OP have also been used (Wright *et al.*, 1999), financial measures are considered to be objective measures that reduce the probability of common method variance (Wall and Wood, 2005) and ultimately help to avoid misleading normative and descriptive theory-building (Lumpkin and Dess, 1996). With this in mind, in our suggested approach, we also suggest that the researcher retains the financial measure to judge a firm's performance in selected years, and to then work/reason backwards in an attempt to relate these results with HR practices.

The following discussion is based on a hypothetical example of $n$ number of firms in the financial sector (insurance, banking, etc.)[1]. Data on the suggested variables in the framework are either available from published accounts or otherwise can be collected through surveys. For the sake of convenience, we also state in brackets the type of variable and the scale on which it is measured. Notably, the acronym LKS represents Likert Scale Variable collected via surveys; BV stands for Binary (dummy) Variable; and RV indicates Real Variable (e.g. sales, or employment). We begin by providing the description of choice of a performance measure. Some of the suggested variables are qualitative in nature, which can then be transformed into BV and with the help of $n$-1 rule for their use in model-building.

## 6. Choosing the performance measure (the dependent variable)

As described above, we suggest that a financial measure is an objective measure of performance and an ideal candidate for representing a firm's performance to serve as a dependent variable in the multivariate analysis of data. There are a number of financial measures: net profits, share prices, return on assets, return on sales, and so on. Although in the context of the final analysis net profits is considered to be a good standalone measure of financial success, with proper checks and balances, other financial measures can also be adopted. For the purpose of illustration, however, we will take net profits.

Financial data for the latest three to four years could be adopted[2]. Given the double-entry nature of the accounts keeping, it can be hypothesised that a matrix based on most financial measures would be correlated (Hillier *et al.*, 2010; Horngren *et al.*, 2009; Financial Times-Prentice Hall, 2008). This can be conveniently cross-checked once the financial data has been collected; thus, any one financial measure could be a good representative. After completing some descriptive statistics and leaving aside extreme values, the mean for the series can be calculated. A mean close to the median would reflect that data is normally distributed. If the standard deviation is not high as well, the sample can then be divided into two groups: one performing higher than the mean, and one lower than the mean; this should permit adequate statistical variation.

## 7. Deciding on independent variables

Having selected the dependent variable, the next step is to decide on the independent variables which are likely to impact upon OP. As has been illustrated in Figure 1, there is a host of internal and external variables which impact upon the performance of an organisation. In the section below, we first explain the inclusion of control variables, followed by the structure- and strategy-related independent variables, HR-related independent variables, and finally, external factor-related independent variables.

### *7.1 Control variables*

Control variables are independent variables, the impact of which a researcher wishes to control in their research in order to derive meaningful results from the study. The age and size of the organisation (RV), measured by its sales revenues or number of employees, are considered to be good control variables, the impact of which should be taken into consideration. Logs of actual values would yield a normalised series.

*7.2 Structure- and strategy-related independent variables*

Structure- and strategy-related independent variables are good candidates for inclusion:

- structure of the organisation (by functional area, product, geographic, or matrix – BV);
- objectives pursued (growth of sales, market share, profitability, share price, maintain or improve company's reputation – BV);
- primary business strategies pursued (continuous innovation of new and improved services and/or traditional products, sophisticated advertising and promotion, selling standardised products at highly competitive prices, use of joint ventures and cooperative arrangements – BV);
- core capability upon which the competitive advantage is based (this can be converted into BV when qualitative data is classified into groups);
- number of CEOs who have served the organisation over the last 10 years (RV); and
- voluntary separation rate (RV).

*7.3 HR-related independent variables*

*7.3.1 HR director's role*. The HR Director's role could be captured with the help of following variables:

(1) *Static role of the HR director*. Activities of the HR director which are of greatest significance to the company. This could include issues such as headhunting, industrial relations/wage bargaining, counselling, organising training programs, planning career paths, job evaluation, monitoring and assessing employee performance, and advising on organisational design (LKS).

(2) *Dynamic role of HR director*. How has the role of HR director changed over the last five to ten years? This could include the following scenarios: the HR director may have become more influential in strategic decision-making; the human relations perspective may have become more influential throughout management; negotiations with trade unions may have assumed importance; and frequent job rotation may have become more common for middle managers (BV).

(3) *HR director and board meetings*. Does the HR director attend all board meetings or attend by invitation when HR matters are to be discussed (BV)? The HR director may not attend but supply reports for discussion by the board; or may otherwise implement policies determined by the board, but does not participate in policy-making (BV).

*7.3.2 Recruitment, training and retention*. What emphasis does the company give to formal and informal qualifications and personal characteristics in appointing someone to a middle-grade general management (LKS)? How does the company train its employees – by formal/informal instructions in-house, or by sub-contracting it to others (BV)? What information (quantitative/qualitative) is normally available when deciding on a case for internal promotion (BV)? What main criteria of individual or group performance are used in assessing cases for promotion (BV)? What efforts do the

company dispense in its attempts to retain key staff (once the answers have been grouped they can be converted into BV)? On average, how many years of service are required before someone reaches board level (RV)? And finally, what are the company views on external vs internal appointments (BV)?

*7.3.3 Appraisals, incentives and rewards*. How frequently, and by what methods, appraisals are conducted (RV and BV)? How feedback is dispensed (BV)? How salary differentials are explained to employees (BV)? How important are the basic pay, bonuses, perks and annual increments in retaining key staff (BV)? What does the company consider to be the most important social and psychological benefits to a manager working for the company (BV)? Are there core employees who are paid above the market rate to retain them (BV)? Does the company operate employee of the month/year schemes (BV)? Does the company encourage competition amongst its employees (BV)? What is company policy on employees holding company stock (BV)?

*7.3.4 Corporate culture-related independent variables*. When explaining the company ethos to a new employee, what values does the company emphasise most, i.e. work ethics (LKS), ambition (LKS), socialisation (LKS), respectability (LKS), loyalty, and such (LKS). How is the contract of employment interpreted in the company (BV)? What are the preferred ways of solving problems in the company (BV)?

## 8. External factors related independent variables

We have earlier highlighted the role of external factors, specific or common to all organisations (see section 4 and Figure 1 for details), and how these can influence the performance of organisations. We also highlighted that, important though these factors are, given their complexities, accounting for them in a model of the HRM-OP link is a formidable task. Hence, it does not come as a surprise that studies on the HRM-OP link implicitly assume their impact to be symmetrically distributed amongst firms and account for them under the *ceteris paribus* clause. In this section, we make proposals for their inclusion in the HRM-OP model. In Figure 1, we list three external factors specific to an organisation: demand for organisation's product or services, market structure, and competitive conditions faced for its products. Clearly, the firms themselves will have the best knowledge of these "firm-specific conditions", and are well-placed to answer these questions in the survey. In the questionnaire instrument, questions based on the Likert scale could be posed to firms in order to numerically capture their impact in the model. For instance, firms might believe that the demand for their products or services is high, medium, or low (LKS); the market structure they are in is monopolistic, oligopolistic (tightly knit or otherwise) (LKS), or competitive; competitive threats faced by the firms can be high, medium, or low (LKS). With this in mind, Figure 1 lists five external factors that could be common to all organisations: political, economic, social, legal, and technical environment; regulatory policies – financial or real; industry incentives; trade and investment conditions; and macro-economic policies. In a survey, firms could be asked to rate these factors on a Likert scale as well, ranging from, for example, 1-5. In the final analysis, if the data has been collected for $n$ number of firms, an average index for all the external factors – specific or otherwise – could be created and used as a continuous variable in the model. In our specific example, based on the listing of these variables in Figure 1, a researcher could create eight additional (three specific to the firm and five common to all firms) variables to account for external conditions. Notably, we have not come across any

study in the literature that accounts for external factors in the HRM-OP nexus. Whilst the suggested approach is not exhaustive, building an index of these factors, with input from the surveyed firms, the researcher can arrive at a fairly accurate state of affairs of external factors.

## 9. Data and measurement techniques

The conceptual model, as outlined above, in the form of a framework would require the collection of both primary and secondary data/information which, when collected, should be cross-checked for accuracy with the help of statistical measures. In the past, HRM researchers have conducted studies under the cross-sectional design (e.g. Arthur, 1994; MacDuffie, 1995; Delaney and Huselid, 1996; Wright *et al.*, 1999; Way, 2002; Datta *et al.*, 2005). Our proposed model is based on the suggestion of using cross-section data as well. There are several advantages to using this approach. Adopting a cross-section approach largely eliminates the issue of randomness, zero mean, constant variance and normality of the noise variable $u$. This is the reason that the majority of the studies which have been conducted so far in the HRM-performance link have been conducted as cross-sectional post-predictive studies (Wright *et al.*, 2005). With the advances in computing power, several excellent software packages have become available to crunch a large cross-section (or time-series for that matter) data sets and test hypotheses in single or multiple equation-modelling scenarios. The multivariate techniques, such as multiple regression analysis – including binary regressions, conjoint, cluster analysis, and structural equation modelling – can be put to good use to arrive at HRM's link with OP. To be robust, these results can be supplemented with the help of face-to-face discussions with managers who have provided the data/information in the first place in the survey, and who can also help researchers explain if statistical analysis throws up any odd results.

## 10. Discussion

The field of human resource management has traversed a long path from its humble beginning as personnel management where the job of personnel manager was recruitment and keeping track of payrolls, promotions, retirement and other routine issues. Gradually, over the years the personnel manager has assumed an increasingly important role – not only within the HR section of the organisation, but also within overall decision-making process of the organisation. HR heads have assumed added importance in the wake of increased competition prompted, *inter alia*, by revolution in the ICT, which has made information available with speed to consumers and rivals organisations alike. Organisations can no longer afford to take their competitively advantaged position for granted, and are accordingly forced to be constantly on the vigil. It is argued in the literature that HR resources can effectively contribute to organisation's profitability by maintaining and/or enhancing its competitive advantage. This claim seems very plausible since it is the human resources who make the physical investment worthwhile and productive; however, this claim is more difficult to measure since profitability and other performance measure are a function of a complex number of internal and external factors. We provided a schematic view of these factors and argue that it still is possible to arrive at conclusions about HRM practices and their impacts on OP provided a sufficient number of internal and external variables are captured comprehensively.

With the aforementioned in mind, we have provided a framework in the form of a conceptual model of these variables. The model includes advice on the choice of performance measure, control variables, and variables related to objectives and strategies of the organisation, the role of HR Director, issues related to recruitment, training and retention, appraisals, incentives, rewards, corporate culture, and external factors. It is the endeavour of the authors to measure this link in applied research in the near future. Importantly, we are not aware of any study of this nature, and so we hope to make a contribution to the field by combining and analysing the survey, financial and real data in an attempt to measure HRM's link with OP.

## Notes

1. A study on these lines for financial sector in Jordan is presently underway by the authors who will be happy to share notes with the interested reader.
2. The reason for suggesting three to four years is that an average for this period is more likely to be correlated with the present or recent past HR practices in the company. If a survey is conducted on the HR practices, the practices are more likely to have impacted on the financial performance of the recent past than the distant past. This logic is borrowed from the theory of geometrically declining lags. In the declining lag-scheme model, e.g. it is assumed that the weights are declining, i.e. more recent values of X have a greater influence on Y than more remote values. For example, assume $s = 4$. Then: $W1t = w0Xt + w1Xt - 1 + w2Xt - 2 + w3Xt - 3 + w4Xt - 4$; where $w0 > w1 > w2 > w3 > w4$. Given that the chosen time period is small (say, four years) we can keep the computations simpler by taking an average for the time period chosen. The alternative is to deal with complicated lag structures.

## References

Ahmad, S. and Schroeder, R. (2003), "The impact of human resource management practices on operational performance: recognizing country and industry differences", *Journal of Operations Management*, Vol. 21, pp. 19-43.

Alchian, A. and Demsetz, H. (1972), "Production, information costs and economic organization", *American Economic Review*, Vol. 62, pp. 777-95.

Andersén, J. (2011), "Strategic resources and firm performance", *Management Decision*, Vol. 49 No. 1, pp. 87-98.

Arthur, J. (1994), "Effects of human resource systems on manufacturing performance and turnover", *Academy of Management Journal*, Vol. 37 No. 3, pp. 670-87.

Barney, J. (1995), "Looking inside for competitive advantage", *Academy of Management Executive*, Vol. 9, pp. 49-61.

Barney, J. and Wright, P.M. (1998), "On becoming a strategic partner: the role of human resources in gaining competitive advantage", *Human Resource Management*, Vol. 37 No. 1, pp. 31-46.

Bartel, A. (1994), "Productivity gains from the implementation of employee training programs", *Industrial Relations*, Vol. 33, pp. 411-25.

Beardwell, I., Holden, L. and Claydon, T. (2004), *Human Resource Management: A Contemporary Approach*, FT Prentice Hall, Harlow.

Becker, B. and Gerhart, B. (1996), "The impact of human resource management on organizational performance: progress and prospects", *Academy of Management Journal*, Vol. 39, pp. 779-801.

Beltran-Martin, I., Roca-Puig, V., Escrig-Tena, A. and Carlos, J. (2008), "Human resource flexibility as a mediating variable between high performance work systems and performance", *Journal of Management*, Vol. 34, pp. 1009-45.

Boxall, P. and Purcell, J. (2000), "Strategic human resource management: where have we come from and where should we be going?", *International Journal of Management Reviews*, Vol. 2 No. 2, pp. 183-203.

Boxall, P. and Purcell, J. (2003), *Strategy and Human Resource Management*, Palgrave Macmillan, New York, NY.

Chand, M. and Katou, A. (2007), "The impact of HRM practices on organisational performance in the Indian hotel industry", *Employee Relations*, Vol. 29, pp. 576-94.

Collins, C. and Clark, K. (2003), "Strategic human resource practices, top management team social networks, and firm performance: the role of human resource practices in creating organizational competitive advantage", *Academy of Management Journal*, Vol. 46, pp. 740-51.

Datta, D.K., Guthrie, J.P. and Wright, P.M. (2005), "Human resource management and labour productivity; does industry matter?", *Academy of Management Journal*, Vol. 48, pp. 135-45.

Delaney, J.T. and Huselid, M.A. (1996), "The impact of human resource management practices on perceptions of organizational performance", *Academy of Management Journal*, Vol. 39, pp. 949-69.

Delery, J. (1998), "Issue in fit in strategic human resource management: implications for research", *Human Resource Management Review*, Vol. 8, pp. 289-309.

Delery, J.E. and Doty, D.H. (1996), "Modes of theorizing in strategic human resource management: tests of universalistic, contingency, and configurational performance predictions", *Academy of Management Journal*, Vol. 39 No. 4, pp. 802-35.

Dyer, L. and Reeves, T. (1995), "Human resource strategies and firm performance: what do we know and where do we need to go?", *International Journal of Human Resource Management*, Vol. 6, pp. 656-70.

Earle, D.M. and Mendelson, M. (1991), "The critical mesh in strategic planning", *The Bankers Magazine*, Vol. 174, pp. 48-53.

Fey, C.F., Bjorkman, I. and Pavlovskaya, A. (2000), "The effect of human resource management practices on firm performance in Russia", *International Journal of Human Resource Management*, Vol. 11, pp. 1-18.

Financial Times-Prentice Hall (2008), *Key Management Ratios*, FT Prentice Hall, Harlow.

Gerhart, B. (2005), "Human resources and business performance: findings, unanswered questions, and an alternative approach", *Management Review*, Vol. 16, pp. 174-85.

Gerhart, B., Wright, P., McMahan, G. and Snell, S. (2006), "Measurement error in research on human resources and firm performance: how much error is there and how does it influence effect size estimates?", *Personnel Psychology*, Vol. 53 No. 4, pp. 803-34.

Grant, R.M. (1991), "The resource-based theory of competitive advantage: implications for strategy formulation", *California Management Review*, Vol. 33, pp. 114-35.

Guest, D.E. (1997), "Human resource management and performance: a review and research agenda", *International Journal of Human Resource Management*, Vol. 8, pp. 263-76.

Guest, D.E. (2011), "Human resource management and performance: still searching for some answers", *Human Resource Management Journal*, Vol. 22 No. 1, pp. 3-13.

Guthrie, J., Flood, P., Liu, W. and MacCurtain, S. (2009), "High performance work system in Ireland: human resource and organisational outcomes", *The International Journal of Human Resource Management*, Vol. 20, pp. 112-25.

Hillier, D., Ross, S.A., Westerfield, R.W., Jaffe, J. and Jordan, B.D. (2010), *Corporate Finance*, McGraw-Hill, New York, NY.

Horngren, C.T., Harrison, W.T. and Oliver, M.Z. (2009), *Accounting*, Pearson Educational International, Upper Saddle River, NJ.

Huselid, M.A. (1995), "The impact of human resource management practices on turnover, productivity, and corporate financial performance", *Academy of Management Journal*, Vol. 38, pp. 635-70.

Huselid, M. and Becker, B. (1996), "Methodological issues in cross-sectional and panel estimates of the human resource-firm performance link", *Industrial Relations*, Vol. 35, pp. 400-22.

Huselid, M.A., Jackson, S.E. and Schuler, R.S. (1997), "Technical and strategic human resource management effectiveness as a determinant of firm performance", *Academy of Management Journal*, Vol. 40 No. 1, pp. 171-88.

Kaplan, R.S. and Norton, D. (1992), "The Balanced Scorecard: measures that drive performance", *Harvard Business Review*, Vol. 70, pp. 71-9.

Katou, A.A. and Budhwar, P.S. (2006), "Human resource management systems and organizational performance: a test of a mediating model in the Greek manufacturing context", *The International Journal of Human Resource Management*, Vol. 17, pp. 1223-53.

Keats, B.W. (1988), "The vertical construct validity of business economic performance measures", *Journal of Applied Behavioural Science*, Vol. 24 No. 2, pp. 151-60.

Khandekar, A. and Sharma, A. (2005), "Organizational learning in Indian organizations: a strategic HRM perspective", *Journal of Small Business and Enterprise Development*, Vol. 12, pp. 211-26.

Kintana, M.L., Alonso, A.U. and Olaverri, C.G. (2006), "High performance work systems and firms' operational performance: the moderating role of technology", *International Journal of Human Resource Management*, Vol. 17 No. 1, pp. 70-85.

Kochan, T.A. and Dyer, L. (1993), "Managing transformational change: the role of human resource professionals", *International Journal of Human Resource Management*, Vol. 4, pp. 569-90.

Lado, A. and Wilson, M. (1994), "Human resource systems and sustained competitive advantage: a competency-based perspective", *Academy of Management Review*, Vol. 19, pp. 699-727.

Lawler, E.E. (1986), *High Involvement Management*, Jossey-Bass, San Francisco, CA.

Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review*, Vol. 21, pp. 135-72.

McGahan, A.M. and Porter, M.E. (1997), "How much does industry matter really?", *Strategic Management Journal*, Vol. 18, pp. 15-30.

MacDuffie, J.P. (1995), "Human resource bundles on manufacturing performance: organizational logic and flexible production systems in the world auto industry", *Industrial and Labour Relations Review*, Vol. 48, pp. 197-221.

Miles, R.E. and Snow, C.C. (1984), "Designing strategic human resources systems", *Organizational Dynamics*, Vol. 13 No. 1, pp. 36-52.

Moideenkutty, U., Al-Lamki, A. and Murthy, Y. (2011), "HRM practices and organisational performance in Oman", *Personnel Review*, Vol. 40 No. 2, pp. 239-51.

Morishima, M. (1991), "Information sharing and firm performance in Japan", *Industrial Relations*, Vol. 30 No. 1, pp. 37-61.

Noe, R.A., Hollenbeck, J.R., Gerhart, B. and Wright, P.M. (2006), *Human Resources Management: Gaining A Competitive Advantage*, McGraw-Hill, New York, NY.

Paauwe, J. (2009), "HRM and performance: achievements, methodological, issues and prospects", *Journal of Management Studies*, Vol. 46, pp. 129-42.

Paauwe, J. and Boselie, P. (2005), "HRM and performance: what next?", *Human Resource Management Journal*, Vol. 15, pp. 68-83.

Paauwe, J. and Richardson, R. (1997), "Introduction special issue on HRM and performance", *International Journal of Human Resource Management*, Vol. 8 No. 3, pp. 257-62.

Pfeffer, J. (1994), *Competitive Advantage through People*, Harvard Business School Press, Boston, MA.

Pfeffer, J. (1998), "Seven practices of successful organizations", *California Management Review*, Vol. 40, pp. 96-124.

Prahalad, C.K. and Hamel, G. (1990), "The core competence of the organisation", *Harvard Business Review*, Vol. 68 No. 3, pp. 79-91.

Razouk, A. (2011), "High performance work systems and performance of French small- and medium-sized enterprises: examining causal order", *The International Journal of Human Resource Management*, Vol. 22 No. 2, pp. 311-30.

Redman, T. and Wilkinson, A. (2008), *Contemporary Human Resource Management*, Prentice Hall, Upper Saddle River, NJ.

Richard, O.C. and Johnson, N.B. (2001), "Strategic human resource management effectiveness and firm performance", *International Journal of Human Resource Management*, Vol. 12, pp. 299-310.

Rogers, E. and Wright, P. (1998), "Measuring organisational performance in strategic human resource management: problems, prospects, and performance information markets", *Human Resource Management Review*, Vol. 8, pp. 311-31.

Rowe, W.G., Morrow, J.L.J. and Finch, J.F. (1995), "Accounting, market, and subjective measures of firm performance: three sides of the same coin?", paper presented at the Academy of Management Annual Conference, Vancouver.

Rumelt, R.P. (1991), "How much does industry matter?", *Strategic Management Journal*, Vol. 12, pp. 167-85.

Schuler, R.S. and Jackson, S.E. (1999), *Strategic Human Resource Management*, Blackwell, London.

Scott, W.R. (1977), *Effectiveness of Organizational Effectiveness Studies: New Perspectives on Organizational Effectiveness*, Jossey-Bass Publishers, San Francisco, CA.

Snell, S. and Youndt, M. (1995), "Human resource management and firm performance: testing a contingency model of executive controls", *Journal of Management*, Vol. 21 No. 4, pp. 711-37.

Wall, T.D. and Wood, S. (2005), "The romance of human resource management and business performance, and the case for big science", *Human Relations*, Vol. 58, pp. 429-62.

Way, S. (2002), "High performance work systems and intermediate indicators of firm performance within the US small business sector", *Journal of Management*, Vol. 28, pp. 765-85.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, pp. 171-80.

Wood, S. (1996), "High commitment management and payment systems", *Journal of Management Studies*, Vol. 33, pp. 53-77.

Wood, S. and de Menezes, L. (2008), "Comparing perspectives on high involvement management and organizational performance across the British economy", *The International Journal of Human Resource Management*, Vol. 19, pp. 639-83.

Wright, P., Dunford, B.B. and Scott, S. (2001), "Human resources and the resource based view of the firm", *Journal of Management*, Vol. 27, pp. 701-21.

Wright, P., Snell, S. and Dyer, L. (2005), "New models of strategic HRM in a global context", *International Journal of Human Resource Management*, Vol. 16, pp. 875-81.

Wright, P.M., Gardner, T.M. and Moynihan, L.M. (2003), "The impact of HR practices on the performance of business units", *Human Resource Management Journal*, Vol. 13 No. 3, pp. 21-36.

Wright, P.M., McCormick, B., Sherman, W.S. and McMahan, G.C. (1999), "The role of human resource practices in petro-chemical refinery performance", *International Journal of Human Resource Management*, Vol. 10, pp. 551-71.

**About the authors**

Dr Satwinder Singh, Lecturer in International Business (IB), holds an MA and PhD in Economics, and teaches IB- and strategy-related modules at postgraduate level. He is affiliated with Centre for Research into Entrepreneurship, International Business and Innovation in Emerging Markets (CEIBIEM) in the Brunel Business School. His research interests lie in issues relating to IB, strategy, and human resource management. Satwinder Singh is the corresponding author and can be contacted at: satwinder.singh@brunel.ac.uk

Tamer K. Darwish holds a BA degree in Business Management and an MBA degree from the University of Jordan. He has work experience in the banking sector, in HR issues as a senior consultant, and as lecturer to management students in the University of Jordan, in the areas of HRM, TQM, and organizational behaviour. Presently he is a Doctoral Fellow at Brunel Business School.

Ana Cristina Costa is Senior Lecturer Human Resource Management and Organizational Behaviour at Brunel University Business School in the UK. Her research interests are the study of trust within and between organisations, social capital, innovation, and knowledge transfer. She has published in *Group and Organization Management*, *European Journal of Work and Organizational Psychology*, and *Personnel Review*.

Neil Anderson is a Chartered Occupational Psychologist specialising in HRM, employee selection, and innovation in the workplace. His research has appeared in several scholarly journals, and he has served on the editorial boards of several journals, including *Journal of Management*, *Journal of Applied Psychology*, and the *Journal of Occupational and Organizational Psychology*.