Human Resource Practices, Absorptive Capacity and Human Costs in SMEs

A Theoretical Model about the Implementation of HRP, its Benefits and Costs

Master thesis in Business Administration
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Abstract

Introduction

Absorptive capacity is fundamental for small-middle enterprises to increase their innovativeness and competitiveness in the market place. Human resources, being the most important asset in SMEs, might help firms to obtain adequate levels of absorptive capacity through a planned set of human resource practices. The human costs of implementing such practices, however, cannot be neglected, and this paper studies the relationship between these different variables.

Purpose

The aim of this paper is to develop a framework to understand the effect that the implementation of human resource practices has on the level of absorptive capacity in a small-medium enterprise. Our study also explores the consequences on human costs after introducing these practices.

Method

In order to be able to test our hypotheses, we first conducted literature research on the different topics related to our study. Then, we gathered secondary data through electronic surveys sent to different firms that complied with our definition of a SME. Finally, all the data were statistically analyzed in SPSS; the variables were correlated and regressed to test their validity and reliability.

Conclusions

Our research study reveals that there is a strong and significant relation between absorptive capacity and human resource practices. Those firms that engage in implementing and introducing HR practices will obtain higher levels of absorptive capacity. On the other hand, the human costs implied with these practices are very low, almost non-existent.
Motivation

The journal that we chose for our article was the Journal of Small Business Management (JSBM). We believed this journal to be the most appropriate for our research study due to several reasons. The JSBM focuses in the fields of small business management and entrepreneurship, which was fundamental for our topic. Then, the journal is a leader in the field of small business research and is circulated in 60 countries. Due to the fact that our study has a strong international approach, this made the journal even more appropriate for our research paper. Finally, the journal has a very good reputation in the business and academic world. In 2006 it earned the distinction of having the highest percent increase in total citations from January 1995 to December 2005 in the fields of Business and Economics. JSBM is also ranked among the top journals in Business in the Financial Times.
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1. Introduction

The presence of human resource practices (HRPs) in small – medium enterprises (SMEs) has been a topic that has received a growing attention in recent studies. Among the first researchers, Chandler & McEnvoy (2000) and Katz et al. (2000) move toward the exploration of a general canvas about human resource management without pointing out every single practice. More recently, Baron (2003) argued about the need for academic scholars to analyze systematically the presence of HRPs in this kind of firm. Finally, Cardon & Stevens (2004) provided a description of the study advancements in each HRPs field such as staffing, compensation, training and development, performance appraisal, organizational change and labor relations.

However, in these papers, the impact of HRPs on the SMEs’ absorptive capacity (ACA) level has been overlooked. Minbaeva et al. (2003) described the effect of human resource practices on ACA in multinational companies’ subsidiaries. Additionally, during a research about SMEs, Gray (2006) discovered a positive outcome of high-educated personnel on ACA, although this was not the main focus of the research. The weaknesses of these studies are two. Firstly, the analysis of subsidiaries does not provide us with a strong proof about the effectivity of HRPs on the ACA, at least for SMEs, as the single units can access to the network’s knowledge flow, while the staffing of skilled workers can explain partially the increase in ACA. For these reasons, we noticed the opportunity to evaluate the interaction between HRPs and ACA.

On the other hand, the human costs (HCs) associated to HRPs in SMEs have been largely neglected by most of the researchers, who mainly focused on the positive effect on the firm’s organization. Among the few exceptions about general costs, Sels et al. (2006) looked into the SMEs’ financial costs tied to the productivity rise of high-performance work practices, whereas Huselid (1995) and Arthur (1994) investigated both financial and HCs as scrap rates and turnover rates but in large firms and not in SMEs. This gap allows us to extend our research paper by discussing the cost-related issue in SMEs’ human resource practices with a focus on the HCs, in order to provide a complete framework that includes benefits and costs from the point of view of ACA: we think that this paper structure will add more elements to the HR practices discussion on an academic and a practical level.

In order to develop these research areas, the paper will move on to the explanation of our theoretical framework with three different sections about HRPs, ACA and HCs. After this, we will describe the method, our theoretical model and the two related hypotheses. In the discussion we will explain the results obtained and their theoretical and practical implication. The final part will list the limitations regarding the method and the model, and it will provide possible future research patterns.
2. **Human Resource Practices**

HRPs, defined by Wright et al. (1994) as “the organizational activities directed at managing the pool of human capital and ensuring that the capital is employed towards the fulfillment of organizational goals”, have been discussed by several scholars like Cooke (1994), Delaney & Huselid (1996), Ahmad & Schroeder (2003) with an emphasis toward their systematic arrangement in large companies’ organizations. However, only Cardon & Stevens (2004) made available to the researchers a complete overview about HRPs presence in SMEs and they labeled both the advantages and the disadvantages in their formal enactment among this group of firms.

More than a mere list of HRPs, Cardon & Stevens (2004) enumerated possible challenges of HRPs implementation in SMEs by describing initially the lack of formal HR departments or professionals. In their opinion, this absence is due to financial costs. In their research, it emerged that SMEs do not rely on formalized training but on informal and hazardous management systems, and still they have to counter lack of legitimacy during the recruitment phase. Where formal HRPs’ implementation occurs, it is in most of the cases a reactive and informal resolution directed to the clarification of immediate work-related problems rather than the development of people (Hill and Stewart, 2000). Similarly, Lane (1994) showed evidences about the increased survival rate among SMEs that implement long-term strategies about HRPs.

Conversely, Cardon & Stevens (2004) revealed also that the absence of long-term planning has its own advantages: due to their flexible structures and the nonexistence of bureaucratic ties, SMEs can respond to changes easier than large firms. Their approach towards HRPs and, more in general, company management, attracts young skilled workforce that desire to depart from industry norms. This attitude does not mean that SMEs refuse to manage their employees, but they clearly implement human resource policies that are implicit and informal.

Despite this debate about whether or not implementing established HRPs, Cardon & Stevens (2004) demonstrated that companies that reach 100 employees look for professional figures in order to implement formal HRPs, although they are still considered SMEs by EU definition (see “method” section). A decisive contribution came from Cassell et al. (2002) as in their study, conducted on 100 respondent SMEs, they showed that there is a certain degree of formality even in smaller firms below 100 employees. The differences with other SMEs (above 100 employees) are represented by the absence of a formal HRPs’ manager and the use of few of them, especially the ones concerning the selection and the recruiting of new personnel.

In order to provide a precise framework to branch HRPs, we decided to create a synthesis of Cardon & Stevens (2004) and Cassell et al. (2002) methodological sections to obtain a four sections scheme that integrates selection and recruiting, training, performance management and compensation.
2.1 Selection and recruiting

The selection and the retention of highly qualified employees is one of the primary concerns among SMEs as well as large companies. Mehta (1996) showed in his study that twenty-five percent of the firms interviewed considered the non-adequate amount of qualified workers a threat to their own survival. Despite this growing concern, selection and recruiting strategies tend to be completely disattended and substituted by ad-hoc actions just in case of necessity. This situation hinders the possibility to select high-qualified candidates who prefer more organized companies (Williamson, 2000), that can guarantee future perspectives and certain career tracks. The recruiting and retaining threat is caused by financial shortages (Williamson, 2000).

Although the situation is very clear, there is not a common insight about effective solutions. Williamson et al. (2002) suggested the possible legitimation gains from adopting the procedures and the norms of the main players on the market, which range from job fairs to simple advertisement. However, Barney (1991) stated that a sustainable competitive advantage for SMEs is the uniqueness they provide during the career development, like their small size of their workforce that can attract for the responsibilities and the informal relationship setup.

A third alternative has been given by Klaas et al. (2000) and it consists in the recruitment of professional employers or labor brokers (Cardon, 2003). The externalization of those passages should reduce the financial costs for the company, while increasing the correlation between company needs and new employees’ capacities. For these scholars, the result is the obtainment of an optimal long-term solution.

Although Barney (1991), Klaas et al. (2000) and Williamson et al. (2002) seem to diverge in their analyses, they also maintained a basic attitude toward selection and recruiting procedures, also regarding future researches: SMEs should always have a strategy that considers the multiple variables like age, instruction and long-term planning for potential candidates and new employees.

2.2 Training

Employees’ skills and knowledge have a positive impact on the firm’s productivity (Guzzo, Jette & Katzell, 1985). Nonetheless, SMEs should counter some difficulties while training a single or more employees. In fact, Banks et Al (1987) examined the affordability for a small organization to deprive itself of one member also if human resources are limited: this can hinder the productivity on the short term and destabilize the organization. Bishop (2003) argued that this consideration about training issues implies for the SME to consider the absence of the trained employee from the workplace, while in most of the cases it takes place on the workplace, among the other organizational members.

Moreover, formal training is just one of the possibilities for SMEs to enhance the personnel performance level, as important roles are covered also by organizational sociali-
zation (Chao, 1997) and multitasking (May, 1997). Ostroff & Kozlowski (1992) investigated organizational socialization previously, as they tried to estimate the sources of information for the newcomers inside a firm. In the conclusions of their theoretical analysis, they defined the socialization process as “the period of time when newcomers gather information about the company, they learn about the necessary tasks to perform the job well and, as last step, they clarify their role in the organization”. Rollag & Cardon (2003) noticed that the socialization process occurs faster in SMEs as newcomers are incorporated quickly, they are not isolated from the superior hierarchies and they participate more actively to social events inside the company and they obtain a mentor more frequently than their large companies ‘colleagues.

As the organizational socialization is directed to recently hired personnel, May (1997) developed the concept of multitasking, or role transition, as a practice inside SMEs that allows the employees to experience different positions and to perform diverse tasks. Although this practice can conflict with the role definition pursued by the organizational socialization, it is a powerful tool to widen the range of employees’ competences (Johnson & Bishop, 2003).

2.3 Performance Management

Performance management is a HRP concerned with getting the best performance from individuals and teams in an organization (Dransfield, 2000). Although there is a lack of literature about performance management in SMEs, Cardon & Stevens (2004) recognize the necessity to implement this kind of systems inside SMEs, but, on the other side, Dransfield (2000) stated that in most of the cases the company owner performs arbitrarily this task.

Performance management is a three-step process composed by objectives, appraisal and feedback. The first step is the setting of performance objectives that are quantifiable, easy to measure and simple to communicate throughout the organization (Dransfield, 2000). After that, the process of performance appraisal should take place. Dransfield (2000) intends this process as composed by performance evaluation first, and then feedback to the employee(s). The feedback should constitute the base for the rewarding/compensation, but this will be debated in the next section.

2.4 Compensation

Compensation is one of the most widely HRP used in SMEs (Cassell et al. 2002). Compensation, as stated by Patel & Cardon (2010), is vital for SMEs as it contributes to attract and to retain high skilled workers with superior salaries, and it encourages a desired stakeholders’ behavior regarding recognition and legitimacy. Additionally, Minbaeva et al. (2003) inferred that compensation would enhance motivation among personnel too.

Nonetheless, the paucity of resources and the shorter SMEs’ life cycle (Katz et al., 2000) suggests a different approach to the issue. Parus (1999) moves a focus towards a “total
rewards perspective” that can increase the employees’ retaining rate on the long-term. His consideration is valid especially for small entrepreneurial firms which can increase the effort by showing multiple benefits: potential innovation in the firm; higher responsibility and proactive mindset in the activity; environment unencumbered by bureaucracy.

Even though non-financial compensation can really work as a positive stimulus for the workers, providing monetary benefits is necessary to increase the productivity of the employees on the individual or group level (Gomez-Meja, 1992). Balkin and Swift (2006) suggest a more flexible approach toward the payment issue. They proposed to relate it to the life stage of the SME with a higher rate of non-monetary benefits during the first years of activity, and a re-equilibration whenever the company enters the mature stage. Non-monetary paybacks are represented by stock options, stocks or other form of equity sharing that enhance the participation and the motivation of employees, while spreading the risks over a larger number of people (Graham et al., 2002).

To conclude with, we will mention another compensation category. The aforementioned ownership sharing represents also a long-term planning for compensation, as Graham et al. (2002) stated, but also short-term rewards exist. These are represented by profit sharing policies aiming to encourage the employees toward group work, or to control the organizational outcomes (Heneman & Tansky, 2002).

3. Absorptive Capacity

The concept of ACA has been defined by scholars in several different ways since the beginning of the 90’s. As first, Cohen & Levinthal (1990) defined it as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends”. In further studies, Van den Bosch, Volberda, and de Boer (1999) elaborated the previous classification through a focus on the accumulated knowledge in the organization as a determinant of the current level of ACA. Moreover, Tsai (2001) underlined the aptitude of a firm to the absorption and the implementation of new knowledge from its environment.

Later, Zahra & George (2002) specified that ACA comprises four different dimensions: acquisition, assimilation, transformation, and exploitation. The first two dimensions form the “potential ACA” and the last two the “realized ACA”. Furthermore, the firms with well-developed capabilities of acquisition and assimilation are likely to be more adapted at continually revamping their knowledge stock by spotting trends in their external environment and internalizing this knowledge (Zahra & George, 2002). More definitions can be found in the table 1 below included Cohen & Levinthal (1990), Tsai (2001) and Zahra & George (2002).

Nevertheless, we felt the necessity to edit these various points of view in a unique definition usable in the next sections of the paper. ACA can be described as “a unit’s or or-
ganization’s capability to discover relevant knowledge, to understand it, and to implement it for constructive ends, whether it’s commercial, financial, or structural”.

ACA is considered an inter-organizational phenomenon, if it takes place between two different firms, or an intra-organizational one, if it is between different units inside a firm (Minbaeva et al, 2003). Table 1 shows us the different definitions of ACA, according to different scholars.

**TABLE 1: Definitions of Absorptive Capacity according to various scholars.**

<table>
<thead>
<tr>
<th>SCHOLARS &amp; YEAR</th>
<th>DEFINITION OF ABSORPTIVE CAPACITY</th>
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<tbody>
<tr>
<td>Cohen, W.M. &amp; Levinthal, D.A. (1990)</td>
<td>Ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends</td>
</tr>
<tr>
<td>Wenpin Tsai (2001)</td>
<td>&quot;A unit's R&amp;D investment, which describes its capacity to learn&quot;; &quot;Ability to successfully replicate new knowledge&quot;</td>
</tr>
<tr>
<td>Minbaeva et al. (2003)</td>
<td>Absorptive capacity is composed by prior knowledge and intensity of effort: while the first one is given, the second is divided in employees’ abilities and motivation.</td>
</tr>
<tr>
<td>Zahra, A. &amp; George, G. (2002)</td>
<td>ACA is defined as a set of organizational routines and processes by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic organizational capability.</td>
</tr>
<tr>
<td>Gray, C. (2006)</td>
<td>Taken from Cohen and Levinthal(1990): &quot;The need for an organization to have prior related knowledge to assimilate and use new knowledge&quot;, but also: “ it includes a firm's overall capacity for learning, implementing new knowledge, disseminating new knowledge internally and making use of new resources, including new technologies&quot;.</td>
</tr>
<tr>
<td>Mowery &amp; Oxley (1995)</td>
<td>A broad array of skills, reflecting the need to deal with the tacit components of transferred technology, as well as the frequent need to modify a foreign-sourced technology for domestic applications.</td>
</tr>
</tbody>
</table>
Scholars differed also on what the best methods are to obtain ACA or how to adequately measure it. Jansen, Van den Bosch and Volberda (2005) discussed about organizational mechanisms referred as able “to synthetize and apply current and newly acquired external knowledge” (Eisenhardt & Martin, 2000). These mechanisms simplify the handling of the potential and realized ACA, and they are classified by Jansen et al. (2005) in three categories: coordination capabilities; system capabilities; socialization capabilities. Gray (2006), as mentioned in our introduction, included the educational level of the high skilled employees as a determinant of knowledge absorption keeping it as given and not adjustable by SMEs. Moving from this statement, Gray (2006) showed that there are significant differences in SMEs’ ACA.

The ACA-related theory we debated above by using different scholars’ perspectives will be also used later to develop our hypotheses and our methods.
4. Human costs in SMEs

The cost issue about SMEs has not been addressed properly for a long while. Many authors and academic books did not distinguish the peculiarities of small-medium enterprises, and they provided classical frameworks that included fixed and variable cost outcomes, or the presence of mandatory costs plus “good” or “bad” costs (Gronroos, 2007). One of the first attempts to provide an overview has been made by Nooteboom (1993) who specifically addressed the disadvantages embedded in small firms in the cost comparison to the larger firms. To do so, he created the four categories of scale, scope, experience and learning. Small firms usually produce less (scale) and also they present to the market a reduced number of items (scope). Moreover, they have not been participating for a long while to the economic environment so they have a lack of economies of experience, as well as reduced economies of learning.

However, the research did not show us possible negative outcomes of HRPs on psychological strains as anxiety, depression and frustration, as Beehr et al. (2000) theorized. The scholars mentioned how some activities located inside an organization can be intended as a job stressor that drives to the previously mentioned outcomes, and HRPs can be counted among them. A job stressor is defined as an “environmental factor at work that leads to individual strain - aversive and potentially harmful reactions of the individual” (Kahn & Byosere, 1992). In other words, a job stressor generates the human strains previously classified as anxiety, depression and frustration.

Furthermore, to understand completely the nature of a stressor, Beehr et al. (2000) categorized them toward the two directions of frequency (chronic or acute) and cause (job-specific or generic). Also if a chronic stressor is long-term lasting in the organization, acute stressor can have a deeper impact on the environment because of its unpredictability. Stressors that are more job-specific (whether chronic or acute) may have the greatest impact on individual strains and performance, because they are most salient to employees in a particular job. Beside Beehr et al. work, Spector & Jex (1998) categorize job stressors by referring to the subsequent strains, and two are listed below:

*Interpersonal conflict* ranges from minor disagreements between colleagues to physical assault to others, of both kinds of overt (direct attack) or covert (indirect attack). This situation will lead to anxiety, frustration.

*Workload* represents the sheer volume of work required of an employee, but it can be measured by number of working hours, level of production or the mental demands of the work during the performance. This type of strain is more connected to the task than the individuals or the group, so it can be more difficult to establish a clear relationship between stresses and work as, for example, many employees can find hard work pleasant. However, the limit situations can provoke anxiety and frustration.
Those are the stress factors from employees’ point of view, but they lead also to firms’ costs. On the short term, interpersonal conflicts and workload would affect job performance of the individuals. The main danger is the generation of a goal blocking behavior due to the rising uncertainty related to the workload (Spector & Jex, 1998), but the increase of anxiety and frustration would push toward a proportional escalation in the rate of absenteeism. After these early warnings, HCs in the firms would amplify and they would cause employees turnover and financial losses or poor performance. Regardless the considered period of time, the latent conflictuality constitutes a threat to the firm reputation and an additional difficulty in attracting and retaining key talent and skills (Cardon & Stevens, 2004).
H1: The implementation of human resource practices in SMEs will have a positive impact on the firm’s level of absorptive capacity.

H2: Human resource practices embody human costs that affect employees negatively.
5. Hypotheses

Based on our previous discussion, we created the model above (Figure 1) that shows the reader the hypothesized relations between HRPs and ACA and HRPs and HCs. In the following lines, we are going to explain the relationship between the different variables.

We can expect HRPs to impact ACA for several reasons. HRP start even before an employee is hired, with the processes of selection and recruiting. These two practices are done in order for firms to be capable of choosing the right person for every particular job description and characteristic. It enables the firm to select and hire the proper candidates required for the company’s needs. When a SME is implementing these two practices, it can be confident that it is going to hire the most prepared candidates. These candidates are then chosen due to their previous work and academic experiences; they are the ones with the best qualifications. It is highly probable that these candidates, after undergoing through the filters of selection and recruiting, will be able to contribute better to the firm’s activities of learning and innovation, associated with ACA.

The second HRP that we discussed, training, will provide the employees with knowledge and preparation to further face the challenges that arise in the firm. Gray (2006) showed with his studies how the different levels of education and staff development in SMEs affect the firm’s level of ACA. When training is focused on the long-run rather than on solving immediate problems, the owner or manager will be able to count on a group of employees prepared to face these challenges and thus keep the company at a competitive level through innovations. Training of the employees seems to impact ACA as well.

The third HRP that we talked about, performance management, is also very important for the firm’s overall performance and degree of innovativeness. In their study, Chang and Chen (2002) showed that performance appraisal was significantly positively related to employee’s productivity. In their study, they used the number of patents granted to measure productivity; patents can indicate the level of a firm’s ACA according to some authors (Nicholls-Nixon, 1993). When employees are clearly communicated what is expected from them, and measureable goals are set, they tend to perform better.

Furthermore, if the employees are provided with compensation, either financial or non-financial, the outcomes can be even better. Parus (1999) showed that compensation can increase employee retention rate on the long-run, which can be a potential stimulator for innovation in an entrepreneurial firm. Compensation, as we discussed earlier, enhances the level of motivation inside a firm. In order to adequately contribute to the firm’s performance, employees need to be both motivated and prepared. Performance management, as well as motivation and compensation, also seem to impact ACA. For the reasons stated above, we propose the following hypothesis:

Hypothesis 1: The implementation of human resource practices in SMEs will have a positive impact on the firm’s level of absorptive capacity.
So far, we have only discussed about the positive aspects related to the implementation of HRPs. It is important, nevertheless, to talk about the negative consequences of implementing such practices in a SME. The first and most obvious thing to discuss is the financial costs. Establishing HRPs might involve hiring new personnel, paying for courses and training, appraisal systems, and setting up a reward scheme, which in turn represent costs.

Besides financial costs, there might be other costs derived after the implementation of HRPs. We consider these costs to be human costs. If the owner or manager is investing in HRPs, it is because he or she is expecting something in return from the employee. A better prepared employee should be capable of performing the same tasks in a shorter amount of time, or be capable of accomplishing more and more complex tasks. This, in many cases, leads to a higher workload. High levels of workload will result in some degree of goal blocking (Spector & Jex, 1998). The authors also argue that an employee might have so much to do that he or she may be forced to neglect certain aspects of the job or life, which would most likely be experienced as frustrating.

Another important human cost that may arise is an increase in interpersonal conflicts at work due to an uneven distribution of resources inside the firm. Due to their size and limited resources, SMEs have a more difficult time providing equal opportunities to their employees compared to their larger counterparts. Training in SMEs is both focused and targeted, according to perceived needs (Cassell et al., 2002), so therefore only a few individuals inside the firm will benefit from the implementation of HR practices. This generates discontent among employees, leading to higher levels of interpersonal conflict. In the short run, conflicts can lead to feelings of frustration; over time, the failure to get along with others is likely to make an individual apprehensive about coming to work and may very well induce feelings of depression (Spector & Jex, 1998). The HCs associated with the implementation of HRPs seem to be evident and significant. It appears that the HCs of implementing these practices might counterbalance the level of ACA. The HCs need to be considered by the owner or manager. The above discussion suggests the following hypothesis:

**Hypothesis 2:** Human resource practices embody human costs that affect employees negatively.
6. **Methods**

The first instance in the methods was the definition of an SME adjusted to match different geographical contexts, as we decided to contact firms located in different countries to extend the reliability of our research.

The definition of a SME varies from country to country. According to the European Commission, a micro-enterprise has 9 or less employees, while a small enterprise has between 10 and 49 employees. A medium enterprise, on the other hand, has between 50 and 249 employees. Also, in order for a firm to be recognized as a SME, its annual turnover can’t exceed 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro (The new SME definition, European Commission). All EU members comply with these parameters, including Sweden, Germany and Italy.

Mexican legislation defines an SME with almost the same parameters as the EC, with the exception that it only takes into account the number of employees. This number ranges from 0 to 250, with small distinctions regarding the firm’s sector, but it nevertheless defines a micro, small and medium enterprise in almost the same way as the EC. Since more than 2/3 of our study focused on the EU and Mexico, we found it convenient to define an SME according to the EC with some minor changes. The residual countries have similar definitions for SMEs’ size.

Therefore, in order to broaden the definition and make it inclusive for all the firms that we considered in our study, we established the following conditions to define an SME: the firm has no more than 250 employees, and/or a financial turnover that doesn’t exceed 50 million euro.

To test the hypotheses, data were collected through a survey that was sent via email. In first instance, we were provided a list of the university’s host companies. The list consisted of 370 Swedish firms that have collaborated and/or collaborate with the school in different kinds of projects. Due to the size of the firms, many had to be discarded automatically before being contacted; others had wrong contact information, so it was decided to move on to the next one in the list to speed up the process. These firms were chosen due to their close relationship they had with school and a greater willingness to participate; they were also chosen according to our definition of an SME and because they fell in one of our four main categories: services, manufacturing, retail, or professional services.

Besides this list that was provided to us by Jönköping International Business School, we felt that we needed to broaden the sample, so we contacted ex-students and current students from the university. These students provided us with a wide list of firms that included family-owned firms and firms for which they had worked or work for. Our sample was thus supplemented with firms from Germany, United States, Italy, Mexico, and several other countries. A total of 284 surveys were sent, including all Swedish and international firms. While all the firms in the sample complied with our definition of a
SME, the firms varied in the number of employees, stage of development, sector, and country of origin.

After that, the survey was sent to the contact person with the university, regarding the Swedish firms, and to the owner or middle manager for those firms outside Sweden. On a smaller extent, the survey was answered by the firms’ appointed responsible for the management of the employees. Of the 284 surveys that were sent, 70 completed responses were received, which gave us a response rate of 24.65%. Out of those 70 responses, however, 16 had to be discarded due to the amount of turnover or number of employees, but then 6 of them were admitted again as their financial turnover resulted inferior to the financial parameters in our definition of a SME. The financial turnover data for the readmission were obtained through a control on AMADEUS database and a phone call to the company.

Several data was also considered in order to establish the representation of the sample. Besides the number of employees, we took into account the firm’s sector. Finally, the country of origin and year of foundation were taken into consideration. The biggest sector was manufacturing, with 40%, followed by service (23%), professional service (22%) and retail (15%). The mean for year of foundation was 1978, and the average number of employees was 81.

7. **Measures**

In order to collect data to test our hypotheses, we used different sources:

*Human Resource Practices. Cassell et al.’s (2002) table of “HR Practices checklist” was used to measure the extent to which HRP s were used in the firm; a scale from 1 to 5 was created (1 = strongly disagree vs. 5 = strongly agree). Respondents were asked to which extent each item applied to the firm’s practices, for a total of 8 items. Cassell et al.’s (2002) article was chosen due to their specialized research in HRPs in SMEs. The responses were all averaged, and the mean was used in the analysis. The HRPs scale was reliable (α = 0,70). The items for the HRP scale were: Your firm has recruitment and/or selection procedures (interviews, questionnaire etc.) for hiring new employees; your firm evaluates the performance of its employees periodically; your firm rewards the performance of its employees by giving financial bonuses; your firm rewards the performance of its employees by giving flexible timings, days off, or other non-financial bonuses; your firm is involved in employees’ job-related learning such as formative courses, training; your firm is involved in employees’ non-job related activities such as general learning, sports, hobbies etc.; your firm takes into consideration employees’ opinions while making strategic or operational decisions; your firm plans on the long term the previous listed actions. For the purpose of simplifying the association between the functions listed in the theoretical section titled “Human Resource Practices” and the single practices used in our survey, we propose below the table 2.*
TABLE 2: Association between human resource practices and their generic functions

<table>
<thead>
<tr>
<th>Generic Function</th>
<th>Practice</th>
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<tbody>
<tr>
<td>Selection and Recruiting</td>
<td>Recruitment / selection procedures</td>
</tr>
<tr>
<td>Training</td>
<td>Courses and training (job-related and non-job related)</td>
</tr>
<tr>
<td>Performance Management</td>
<td>Objectives and Evaluation</td>
</tr>
<tr>
<td>Compensation</td>
<td>Financial and non-Financial</td>
</tr>
<tr>
<td></td>
<td>Long-term vs. Short-term</td>
</tr>
</tbody>
</table>

Adapted from Cassell et Al. (2002) and Cardon & Stevens (2004)

Absorptive Capacity. A modified version of Jansen, Van Den Bosch and Volberda’s (2005) ACA measures was used to capture the firm’s level of ACA. A 5-point scale was used (1 = strongly disagree vs. 5 = strongly agree) so, for this scale, respondents were asked to what extent they agreed or disagreed with the set of items that was presented to them. Eighteen items were used, out of a total of 21 (see Appendix B) from the original scale. The three items excluded from the survey were: our unit has frequent interactions with corporate headquarters to acquire new knowledge; employees of our unit regularly visit other branches; other divisions of our company are hardly visited. A common characteristic among the previous questions was the reference to a large enterprise as main player in the interaction with the smaller unit, and that was not consistent with the purpose of our research. We also decided to modify the original scale from 7 points to 5 points to make the questionnaire uniform throughout the survey, to avoid confusion with the respondents, and thus keep the bias to a minimum. It was decided to use these measures due to the authors’ previous research on ACA. The ACA measures scale had a Cronbach α of 0.86, therefore it was reliable.

Human Costs. To assess human costs, we used two different measures; both of them were taken from Spector & Jex (1998). The first one was the Quantitative Workload Inventory Scale (QWI) and the second one the Interpersonal Conflict at Work Scale (ICAWS). We took the measures from these authors because they adequately estimate the perceived workload and pace, as well as the level of conflictuality among employees. We believe these to be the two highest human costs that might arise when implementing human resource management practices (Spector & Jex, 1998). A scale from 1 to 5 was used, where 1 = less than once per month or never and 5 = several times per day. For QWI, respondents were asked the following 5 questions: How often does your firm require its employees to work very fast? How often does your firm require its employees to work very hard? How often does your firm leave its employees with little time to get things done? How often is there a great deal for the employees to be done? How often do employees have to do more work than they can do well? For the ICAWS
scale, on the other hand, four questions were asked: How often do employees get into arguments with each other at work? How often do employees yell at each other at work? How often are employees rude to each other at work? How often do employees hinder each other at work? The *Human Costs* scale was reliable, with total $\alpha$ of 0.89.

**Control Variables.** The research took into account the presence of control variables. We identified three of them in our case.

a. **Company Size.** This variable was included as an important controller of the internal dynamics inside the company. The first reason for the implementation was the association between the dimensional aspect of the firm (number of employees) and the progressive introduction of HR strategies (Cardon & Stevens, 2004). The two authors aforementioned described the introduction process of a HRM expert inside companies that exceeded 100 employees. The second reason was stated by Minbaeva *et al.* (2003), and it referred to the positive correlation between the dimensional aspect in terms of employees and ACA. These two elements can produce an inflation of the ACA’s level not due to human resource practices. For the previous reason, we expect a positive effect of company size on the ACA variable. Size was measured by the number of full-time employees the companies communicated us. We assume also that a reduced number of employees increase the individual workload as more tasks should be accomplished.

b. **Company Age.** This variable was included because of the direct role proved by Zahra & George (2002) as an independent controller of the level of knowledge reached by the company. The aforementioned authors stated that there is a limit to ACA that a company can integrate during a certain period of time, no matter the actions taken or the number of employees present inside the organization. In our case, the distance between the founding year and our survey can give us an indication of the knowledge accumulation inside the company. This measure is estimated as the elapsed time between the foundation year and the current year of the questionnaire (2010).

c. **Past Performance.** This variable represents a 10 indicators synthesis concerning sales growth, revenue growth, growth in the number of employees, net profit margin, product/service innovation, process innovation, adoption of new technologies, product service quality, product service variety, customer satisfaction, and it has been measured through a 5-items Likert scale (Wiklund & Shepherd, 2003). Our data represents the comparison between the interviewed company and its direct competitors over the three years preceding the survey. This variable is included because of the impact of past-performance on the actual ACA through an increase of the investments in R&D and the further potential for acquisitions of other enterprises (Zahra & George, 2002).
8. **Analysis**

Table 3 provides the means and the standard deviations (S.D.) for the sample. Of the 70 respondents to our survey, 60 were used in this paper. Although four companies missed to reply to the questionnaire section “Human Costs” (see Appendix), we were able to add the data manually by phone calls to the companies’ respondents. The 60 companies averaged 32.30 years (SD = 23.68) in age and they reported having 81.33 employees (SD = 90.77). The inter-correlation matrix (Table 3) shows that multicollinearity is not present, as we did not notice any strong correlations between the independent variables company size, company age, past performance and HRPs. To test our two hypotheses, we decided to implement three linear regressions through SPSS. For hypothesis 1, the dependent variable “ACA” (absorptive capacity) was regressed on the control variables named “company size”, “company age”, “past performance” and the independent variable “HRPs” (Human Resource Practices), while for hypothesis 2, the dependent variables “QWI” (Quantitative Workload Inventory) and “ICAWS” (Interpersonal Conflict at Work Scale) were regressed on the three control variables previously mentioned and the independent variable “HRPs”. The results of our analysis are presented in the next section.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>sd</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. ACA</td>
<td>43,72</td>
<td>6,12</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>2. QWI</td>
<td>12,93</td>
<td>5,69</td>
<td>0,95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. ICAWS</td>
<td>6,15</td>
<td>3,42</td>
<td>-0,63</td>
<td>0,467**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Company Size</td>
<td>81,33</td>
<td>90,77</td>
<td>0,89</td>
<td>-0,133</td>
<td>-0,008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Company Age</td>
<td>32,30</td>
<td>23,68</td>
<td>0,099</td>
<td>-0,375**</td>
<td>-0,116</td>
<td>0,379**</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Past Performance</td>
<td>32,03</td>
<td>9,84</td>
<td>0,064</td>
<td>0,014</td>
<td>0,091</td>
<td>0,242</td>
<td>0,146</td>
<td></td>
<td></td>
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<tr>
<td>7. HRP</td>
<td>28,07</td>
<td>4,96</td>
<td>0,696**</td>
<td>0,256*</td>
<td>0,042</td>
<td>0,128</td>
<td>-0,129</td>
<td>0,000</td>
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** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level
TABLE 4: Regression results for ACA, QWI and ICAWS

<table>
<thead>
<tr>
<th>Variables</th>
<th>ACA Beta</th>
<th>ACA Sig</th>
<th>QWI Beta</th>
<th>QWI Sig</th>
<th>ICAWS Beta</th>
<th>ICAWS Sig</th>
</tr>
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<tr>
<td>company size</td>
<td>-.105</td>
<td>.316</td>
<td>-.051</td>
<td>.710</td>
<td>.014</td>
<td>.927</td>
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<tr>
<td>company age</td>
<td>.226</td>
<td>.031</td>
<td>-.338</td>
<td>.014</td>
<td>-.134</td>
<td>.366</td>
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<tr>
<td>past performance</td>
<td>.056</td>
<td>.559</td>
<td>.076</td>
<td>.549</td>
<td>.107</td>
<td>.441</td>
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<td>HRP</td>
<td>.738</td>
<td>.000</td>
<td>.219</td>
<td>.084</td>
<td>.023</td>
<td>.865</td>
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<table>
<thead>
<tr>
<th>Model</th>
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<th></th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>R Square</td>
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<td></td>
<td>.191</td>
<td></td>
<td>.026</td>
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<tr>
<td>Adjusted R Square</td>
<td>.496</td>
<td></td>
<td>.132</td>
<td></td>
<td>-0.045</td>
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<tr>
<td>F-Value</td>
<td>15.541</td>
<td></td>
<td>3.241</td>
<td></td>
<td>.368</td>
<td></td>
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<tr>
<td>Sig.</td>
<td>.000</td>
<td></td>
<td>.019</td>
<td></td>
<td>.830</td>
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</tbody>
</table>
9. Results

Human resource practices and absorptive capacity (H1)

Tables 3 and 4 represent the correlation and the regression for the demonstration of the two hypotheses. The correlation was measured using Pearson product-moment coefficient. Table 3 shows a strong positive correlation of 0.70 (p<0.01) between HRPs and ACA. Looking at Table 4, we notice that the adjusted R-square value is about 0.50 (p<0.001), which means that the model explains roughly 50% of the variance in absorptive capacity. The coefficient of HRPs is positive and significant (0.4, p<0.0001). Thus, we find support for hypothesis 1, which expected a positive relationship between human resource practices and the level of ACA. If we look to the single variables, we can notice that HRPs contribute at 0.74 (p<0.0001) of the variance, making it the strongest contribution to our model.

Human resource practices and human costs (H2)

For the evaluation of the second hypothesis, we decided to keep QWI and ICAWS separated in order to evaluate the impact of HRPs on workload and conflicts individually. The correlation is 0.26 (p<0.05) for QWI and 0.04 for ICAWS, both with HRPs, so in the first case we have a weak correlation, while in the second case it does not exist. Table 4 shows that HRPs are marginally significant for the explanation of QWI with a positive beta coefficient of 0.22 (p<0.1), so HRPs explain 22% of the variance of the dependent variable. The adjusted R-square for the model is low, at 0.13 (p<0.05). On the other side HRPs are not statistically significant to explain ICAWS inside the interviewed companies. We find only a weak and negligible support for hypothesis 2 as there is a weak contribute of HRPs’ implementation to the perceived workload and pace, while it is totally absent for ICAWS.

10. Discussion and Implications

This study examined the impact of human resource practices on absorptive capacity and human costs. It explored the effect of the different HRPs on a firm’s level of ACA, as well as the HCs associated with them. The results helped us clarify the relationship between these practices (both overall and individually) to the level of ACA, as well as their HCs, as discussed in the following paragraphs.

The results support H1, showing a strong positive relationship between HRPs and ACA. Those firms engaging in HRPs can obtain important levels of ACA due to their increased ability in the acquisition, assimilation, transformation, and exploitation of new knowledge from the internal and the external environment. This finding also supports previous results by Jansen, Van Den Bosch and Volberda (2005).
The results showed that HRPs’ benefits are not only on an organizational level (Zahra & George, 2002) but they also affect employees’ ability and motivation, thus enhancing firm’s level of absorptive capacity. However, our findings suggest that in order for ACA to be fully heightened, all HRPs need to be implemented.

The set of HRPs that we discussed in this study show a strong link with the firm’s level of ACA for a SME. The “generic” functions of human resource practices as described by Cassell et al. (2002), which include, among others, formal training, informal and experiential learning activities, are significant contributors to the SME’s development of ACA.

The benefits of HRPs are supposed to influence ACA on the long-term, as Van den Bosch et al. (1999) suggested. By interpreting their theory in a future perspective, present and short-term growths of ACA will form a base to forthcoming developments of ACA itself.

The results of H2 show a very weak to non-existent relationship between the introduction of HRPs and the HCs associated with them. The perceived amount of work and work pace has a weak link to the introduction and implementation of HRPs. The ICAWS scale, that measures the level of interpersonal conflict at work, showed an in-existent relationship with the implementation of the HRPs. Thus our findings do not support H2. The implementation of HRPs does not contribute to psychological strains such as anxiety, depression, or frustration.

After an employee has received formal training, the owner or manager of the SME is more likely to expect more from him or her. The implementation of HRPs is done by the owner or manager because they expect to get the payoff in the middle or long term, therefore employees are expected to work more efficiently and be more productive. This might explain the employees’ perception of work load and work pace after the implementation of HRPs.

The other HC that we analyzed, the ICAWS scale, was unaffected by the implementation of HRPs. The level of interpersonal conflict at work is not influenced at all by the introduction and implementation of HRPs’ strategies. This might be due to the fact that an SME is smaller by nature compared to its larger counterparts, and thus it is easier for the owner or manager to have direct communication with the employees. Therefore, the direct contact with all the employees is an asset for the owner or manager in a SME (Arthur, 1995). A good communication between employees is fundamental for them to know what is expected from them, and also to be able to solve problems as they arise. Moreover, performance evaluation (or appraisal), as described by Dransfeld (2000), is in many cases informal in the SMEs, which allows for an easier flow of dialogue between the employees and the manager or owner, as well as more time to “chat” and discuss issues. These might be the reasons of why there is no relationship between HRPs and interpersonal conflicts at work.
To summarize our study, HRPs impact on the SME’s level of ACA. Our findings show how these practices impact positively on the firm’s level of ACA and how the related HCs are not significant.

This paper has also relevant theoretical and managerial implications as it is among the first that endorses a strong positive correlation between HRPs and ACA. We are going to integrate the existing researches that appeared in recent years, which linked ACA and SMEs’ responsiveness (Liao, Welsch and Stoica, 2003) or accumulated knowledge, SMEs’ network collaboration and ACA (Muscio, 2007). Additionally, our research hypothesis about HRPs and related HCs aims to complement the papers about financial costs of these practices (Sels et al., 2006).

From the managerial point of view, the present paper confirms the significance of increasing SMEs’ efforts in developing HRPs in order to enhance the present level of ACA in the organization. For those firms that are competing in dynamic markets, it is very important to maintain their innovativeness in order to be able to compete against their rivals. By having high levels of ACA, SMEs will be able to constantly obtain, acquire and exploit new forms of knowledge and thus become key players in their markets.

On the other side, QWI and ICAWS have not found any relevant evidence about significant HCs in these practices. For this reason, SMEs owners and/or managers can obtain a relevant estimation of the financial costs associated to this strategy. If we take a look on the HCs, we can see that they are very weak, almost non-existent. The perceived work load had a very weak relationship with the implementation of HRPs, and the interpersonal conflict at work was not affected at all. Our findings show that implementing a HRPs’ strategy will benefit the SME due to an increase in the employees’ abilities, knowledge, training and motivation. The overall level of absorptive capacity in the firm will finally increase. The HCs of implementing such a strategy are minimal, to the extent that they can be omitted.

As in all the research articles, we found methodological limitations that should be used for a deeper comprehension of the subject. First of all, common method bias is related to the answer provided by a single respondent per company, and not to the method as we used more measures to assess HRPs, ACA and HCs. Even though the questions that were posed were developed from previous papers, surveys and statistical analysis, we cannot exclude key-informant bias from our survey. This issue seems to be related to the nature of the survey and of the firm. It is usual to find just one responsible for HRPs in a SME when it is not entirely delegated to the entrepreneur/owner (Cardon & Stevens, 2004). On the other end, the high grade of guaranteed confidentiality to the respondents increased the reliability of the data.

Secondly, country – related controller is a variable that could be implemented to estimate the countries’ differences as cultural idiosyncrasy, governmental regulations/policies, competitive priorities and the adoption of managerial practices (Ahmad
Although the importance of a cross-country analysis is well recognized by the authors, we think that the complexity of the task requires further research beside the present paper, as our main concern was to analyze the relationships between HRP, HCs and ACA.

Thirdly, time costs are a topic that we wanted to test in our paper, but the absence of the related answers in many surveys received forced us to exclude it from our assessment because of the scarce representativity of the sample. As stated by Dillman and Bowler (2001), we incurred in the nonresponse error, defined as “the result of nonresponse from people in the sample, who, if they had responded, would have provided different answers to the survey questions than those who did respond to the survey”. In our case, responses have been heavily influenced by the interest in the topic and by the suitability of the choices we provided to the respondents.

To conclude, there is a risk of cross–sectional bias, which is related to the measurement of the independent and the dependent variables at the same moment.

This paper leads also to new potential areas of study within the SMEs environment, HRP’s costs and outcomes. A future contribution can be the analysis of the evolution of HRP and company size, to overcome the cross–sectional bias through a longitudinal study. This part can be related to the suggestions by Kotey and Folker (2007), who stressed the importance of a study about the use of formal training procedures in increasing size firms. All this research can be done by implementing as starting point the segmentation of SMEs in four sub-categories. That example was based on the Australian definition for a SME, whose range is included between 0 and 199 employees, and the segments were defined between 0-20, 20-49, 50-99 and 100-199: a re-arrangement of those categories would allow researchers to analyze the gradual introduction of formal strategies also in the European economy.

Moving further on the research path, time costs can be stated at a financial and at a cost/opportunity level. In SMEs, as we mentioned before, the employees and the management should take a multirole tasks approach to their job as they should face resource constricts that not allow the creation of a clear hierarchical structure: for example, Longenecker, Moore and Petty (1994) stated that HRP are often a responsibility of general management, which should neglect their main role about firm policies creation and implementation. In other words, a new research should account not only the manager’s cost for each hour dedicated to those atypical tasks, but also the missed gains and postponed operations related to that. To conclude, we think that future research patterns should move along those three directions, but we do not exclude different possibilities to develop even further the study about SMEs and ACA.

Supplementary possibilities for the next studies are the regression of each single HRP on ACA to understand which are the most effective in explaining the correlation we established, and also the performance outcomes of a synthesis between the benefits of ACA and the costs including human, financial and time-related ones.
References


References


Appendix

**Appendix 1**

**ONLINE SURVEY SENT TO THE 284 COMPANIES**

1. What is the name of your company?
2. What is the size (number of employees) of your company?
4. Where is your company based?
5. Which year was your company founded?

*Human Practices Measures:* (1 refers to “strongly disagree”, 2 refers to “disagree”, 3 refers to “neither agree nor disagree”, 4 refers to “agree” and 5 refers to “strongly agree”) *Adapted from: (Cassell et al, 2002)*

6. Your firm has recruitment and/or selection procedures (interviews, questionnaire etc.) for hiring new employees;
7. Your firm evaluates the performance of its employees periodically;
8. Your firm rewards the performance of its employees by giving financial bonuses;
9. Your firm rewards the performance of its employees by giving flexible timings, days off, or other non-financial bonuses;
10. Your firm is involved in employees’ job-related learning such as formative courses, training;
11. Your firm is involved in employees’ non-job related activities such as general learning, sports, hobbies etc.;
12. Your firm takes into consideration employees’ opinions while making strategic or operational decisions;
13. Your firm plans on the long term the previous listed actions.

*Financial Costs*

*To what extent does your firm invest in the following? (1 refers to “very little”, 2 refers to “little”, 3 refers to “neither little nor a lot”, 4 refers to “significant” and 5 refers to “a lot”)*

14. Recruitment and/or selection procedures (interviews, questionnaire etc.) for hiring new employees
15. Employee performance schemes
16. Employee rewards (financial bonuses)
17. Employee rewards (non-financial bonuses, e.g. flexible timings, days off, etc)
18. Job-related learning (formative courses, training, etc)
19. Non-job related learning (general learning, sports, hobbies, etc)
Appendix

To what extent are the following activities taken into consideration when giving a salary increase to an employee? (1 refers to “very little”, 2 refers to “little”, 3 refers to “neither little nor a lot”, 4 refers to “significant” and 5 refers to “a lot”)

20. Employee performance
21. Job-related training such as formative courses, training, etc
22. Non job-related activities such as general learning, sports, hobbies, etc

Absorptive Capacity Measures: (1 refers to “strongly disagree”, 2 refers to “disagree”, 3 refers to “neither agree nor disagree”, 4 refers to “agree” and 5 refers to “strongly agree”) *Adapted from (Jansen, Van Den Bosch and Volberda, 2005)

23. We collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners).
24. Our unit periodically organizes special meetings with customers or third parties to acquire new knowledge.
25. Employees regularly approach third parties such as accountants, consultants or tax consultants.
26. We easily recognize shifts in our market (e.g. competition, regulation, demography).
27. New opportunities to serve our clients are quickly understood.
28. We quickly analyze and interpret changing market demands.
29. Our firm regularly considers the consequences of changing market demands in terms of new products and services.
30. Employees record and store newly acquired knowledge for future reference.
31. Our firm quickly recognizes the usefulness of new external knowledge to existing knowledge.
32. Employees regularly share practical experiences;
33. We grasp the opportunities for our firm from new external knowledge;
34. Our firm’s managers and employees periodically meet to discuss consequences of market trends and new product development.
35. It is clearly known how activities within our firm should be performed;
36. Client complaints are taken into consideration in our firm;
37. Our firm has a clear division of roles and responsibilities;
38. We constantly consider how to better exploit knowledge;
39. Our unit can implement new products and services easily;
40. Employees have a common language regarding our products and services.
Appendix

Human costs

Quantitative Workload Inventory Scale (QWI scale) * Taken from (Spector and Jex, 1998);

1 = Less than once per month or never  4 = Once or twice per day
2 = Once or twice per month              5 = Several times per day
3 = Once or twice per week

41. How often does your firm require its employees to work very fast?
42. How often does your firm require its employees to work very hard?
43. How often does your firm leave its employees with little time to get things done?
44. How often is there a great deal for the employees to be done?
45. How often do employees have to do more work than they can do well?

Interpersonal Conflict at Work Scale (ICAWS scale) * Taken from: (Spector and Jex, 1998);

1 = Less than once per month or never  4 = Once or twice per day
2 = Once or twice per month              5 = Several times per day
3 = Once or twice per week

46. How often do employees get into arguments with each other at work?
47. How often do employees yell at each other at work?
48. How often are employees rude to each other at work?
49. How often do employees hinder each other at work?

Performance Measures *Taken from (Wiklund and Shepherd, 2003): compare the development of your firm over the last 3 years relative to your two most important competitors, where 1 is “much lower”, 2 is “lower”, 3 is “the same”, 4 is “higher” and 5 is “much higher”:

1. Sales growth
2. Revenue growth
3. Growth in the number of employees
4. Net profit margin
5. Product/service innovation
6. Process innovation
7. Adoption of new technology
8. Product/service quality
9. Product/service variety
10. Customer satisfaction
Appendix 2

SCALES AND ITEMS OF POTENTIAL AND REALIZED ABSORPTIVE CAPACITY, TAKEN FROM JANSEN, VAN DEN BOSCH and VOLBERDA.

Potential Absorptive Capacity

Acquisition

- Our unit has frequent interactions with corporate headquarters to acquire new knowledge;
- Employees of our unit regularly visit other branches;
- We collect industry information through informal means (e.g. lunch with industry friends, talks with trade partners);
- Other divisions of our company are hardly visited (reverse-coded);
- Our unit periodically organizes special meetings with customers or third parties to acquire new knowledge;
- Employees regularly approach third parties such as accountants, consultants, or tax consultants.

Assimilation

- We are slow to recognize shifts in our market (e.g. competition, regulation, demography). (reverse-coded);
- New opportunities to serve our clients are quickly understood;
- We quickly analyze and interpret changing market demands.

Realized Absorptive Capacity

Transformation

- Our unit regularly considers the consequences of changing market demands in terms of new products and services;
- Employees record and store newly acquired knowledge for future reference;
- Our unit quickly recognizes the usefulness of new external knowledge to existing knowledge;
Appendix

- Employees hardly share practical experiences. (reverse-coded);
- We laboriously grasp the opportunities for our unit from new external knowledge. (reverse-coded);
- Our unit periodically meets to discuss consequences of market trends and new product development.

Exploitation

- It is clearly known how activities within our unit should be performed;
- Client complaints fall on deaf ears in our unit. (reverse-coded);
- Our unit has a clear division of roles and responsibilities;
- We constantly consider how to better exploit knowledge;
- Our unit has difficulty implementing new products and services. (reverse-coded);
- Employees have a common language regarding our products and services.