Strategy implementation and organizational levels: resourcing for innovation as a case

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Abstract

Purpose – The purpose of this paper is to further the understanding of the link between human capital and strategy across hierarchies.

Design/methodology/approach – Using data on personality traits as a proxy for strategy implementation success, empirical data included 1,738 Operational Personality Questionnaire personality traits assessments in one large multinational firm. Respondents spanned from top-management to white-collar employees. Besides personality traits, measures include employment level and employment status. In addition, a total of 43 interviews were performed on the employee-level, with middle managers, with senior managers, and with executive-level managers.

Findings – After a strategic shift, successful implementation of a human resource management (HRM) strategy decreased down through the hierachies. This has implications for a firm trying to realign its resources to a new strategy. If the strategic shift is large, this will pose a great problem as human capital further down in the hierarchy will not be aligned to the new strategy, but rather be aligned to the old strategy.

Research limitations/implications – The findings are discussed using the concept of the strategic centre of gravity. The authors elaborate on the concept in terms of the origin, mass, and inertia of the strategic centre of gravity.

Practical implications – A successful strategic shift in this sense will to a great extent depend on how successful the implementation is at lower levels of hierarchy, thus pointing to the importance to considering this when designing and pursuing strategic change.

Originality/value – The research contributes to the HRM literature by furthering the understanding of aligning human capital on different organizational levels to strategy and by developing the concept of the strategic centre of gravity.

Keywords Human capital, Innovation, Human resource management, Strategy implementation, HR strategy, Organizational levels, Strategic centre of gravity

Paper type Research paper

Introduction

To stay competitive, organizations are at times required to carry through major strategic change. The new strategy will have implications for how to manage people with regards to creating and sustaining value for the firm in relation to this new strategy.

The resource-based view on strategy proposes that a firm's competitive advantage is based on the internal, physical and intellectual, resources that it possesses (Wernerfelt, 1984; Barney, 1991; Boxall and Purcell, 2011). It offers researchers the possibility to argue that the human resources of a firm can contribute to organizational

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performance and influence strategy formulation and implementation (Hitt *et al.*, 2001). Management of human resources is in this way of strategic importance to the firm as it involves both the implementation of competitive strategies, but also the formulation of such strategies.

There have been many efforts to link human capital to strategy (see e.g. Allen and Wright, 2006). In the contingency perspective, human resource management (HRM) practices are deployed that together best promote a given corporate strategy resulting in increased organizational performance (Schuler and Jackson, 1987a).

A well-implemented strategy should encompass all employees on all hierarchical levels of the organization. However, most previous research has been focused on senior managers or talent and strategy (Lengnick-Hall and Lengnick-Hall, 1988) and not enough attention has been placed on the link between human capital and strategy across hierarchies. In a study of 20 organizations, Hambrick (1981) found a rather rapid and consistent decline in strategic awareness as one moves down in the organization. This is significant because without strategic awareness you cannot find coordinated action aligned with the strategic intent. In essence this is saying that as long as not all levels of the organization are addressed, we will not fully understand the link between human capital and strategy.

In this paper we examine a firm's attempt to implement a specific HRM strategy that aims to increase the firm's focus on innovation. Included in this HRM strategy is to recruit human resources on different hierarchical level of the firm that have behaviours favourable for innovation. Using data on personality traits as a proxy for strategy implementation success, we find that as one progresses down the organizational ladder the HRM strategy does not cascade as would be expected to obtain a successful strategy implementation. This has implications for a firm trying to realign its resources to a new strategy. If the strategic shift is large, this will pose a great problem as human capital further down in the hierarchy will not be aligned to the new strategy, but rather be aligned to the old strategy. A successful strategic shift in this sense will to a great extent depend on how successful the implementation is at lower levels of hierarchy, thus pointing to the importance to considering this when designing and pursuing strategic change. We discuss our findings further by expanding the concept of the strategic centre of gravity and elaborate the concept in terms of the origin, mass, and inertia of the strategic centre of gravity.

Our research contributes to the HRM literature by furthering our understanding of aligning human capital to strategy on different organizational levels and by developing the concept of the strategic centre of gravity.

Theoretical background

HRM and strategy implementation

Many efforts to establish relationships between strategic management and HRM have been undertaken during the last twenty years (see Allen and Wright, 2006 for a review). The relationships are, however, complex and the results are still inconclusive.

The management of human resources influences a firm's strategic resources in at least three ways (Wright *et al.*, 2001). Human resource practices (e.g. learning and development, performance management) can help build the knowledge and skill base of the firm as well as evoke relevant behaviour. Reward systems, culture, and other aspects of HRM influence the extent to which employees are willing to create, share, and apply knowledge internally.

Second, there is the flow of human capital through the firm. This reflects the deployment and movement of people (with their individual knowledge, skills and abilities) as well as knowledge itself.

Human resource practices are the primary levers through which the firm can change the pool of human capital, for example through recruitment of people with desired behaviours or talent, as well as attempts to change the employee behaviours that lead to organizational success. The dynamic processes through which organizations change and/or renew themselves constitute the third area illustrating the link between HRM and the resource-based view of the firm (Wright *et al.*, 2001).

Recruitment of people is an important method to renew the pool of human capital of the firm. The strategic aspect of recruitment is to fit the strategic goals of the firm and the recruitment of people with the right knowledge, skills, abilities and behaviours to support the realization of strategic goals (Schuler and Jackson, 2007). In order to positively influence performance, managers should deploy resources in ways that match the strategies being implemented by the firm (Sirmon and Hitt, 2009).

There are also, as indicated above, other human resource practices available to support the implementation of a firm's strategic goals, but this paper will restrict the analysis to the recruitment and deployment of human resources. Unfortunately we did not have data on personality traits for blue-collar personnel, which are therefore not considered. The recruitment of all categories of white-collar employees is considered.

As mentioned, to be truly effective strategic human resources management should be tightly aligned to the strategies of a firm. A newly published paper points out corporate strategy as the natural starting point for thinking about strategic human resources management (Stahl *et al.*, 2012). Referring to the CEO of General Electric they conclude that implementing the initiatives stated in the corporate strategy may have less to do with strategic planning than with attracting, recruiting, developing, and deploying the right people to drive the effort (Stahl *et al.*, 2012). Recruiting the "right" people is then of great importance.

Strategies may have different origins and play different roles in the development of a firm. Some strategies are intended, deliberate strategies, while other strategies emerge through the actions of firms (see e.g. Mintzberg, 1978). A firm concentrating on growth through acquisition of other firms develops an acquisition strategy. The strategy may have been intended but it may also be a strategy developed through a pattern in a stream of decisions (Mintzberg, 1978). Another firm may have a strategic intent to focus on organic growth and in-house innovation.

A strategy emerged during many years of decision making is not easy to change. If, for example the centre of strategic gravity of a firm is on growth through acquisition, the inertia to move in a new strategic direction, for example to a strategy focusing on innovation and organic growth, is considerable (Hitt *et al.*, 1990). It may for take considerable efforts and a long time to implement the new strategy. The concepts of strategic centre of gravity and its origin, mass, and inertia are further developed in the discussion section of the paper.

The role of different hierarchical levels during the formulation and implementation of a strategy

It is possible to distinguish between different hierarchical levels within a large firm. One way to depict these levels is to define a level of general managers in the top of organization hierarchy, middle-managers on the next level, followed by supervisors, first-line managers and, white and blue collar workers at the bottom of the hierarchy.

Top management, senior managers and executives, consists of the very few people who have power to make decisions of strategic importance to the firm, including, for example related to acquisitions and which markets the firm is to be engaged in. In a large industrial group, only a few directors are part of top management; they are in charge of all the group's activities and factories from firm headquarters (Poirot, 1979). In a top-down strategy view, top management has a direct leading role in strategy formulation and an indirect supporting role in the implementation of the strategy.

The middle management staff is made up of all persons, whether functional or operational, who, because of their qualifications or seniority, have been able to rise to a certain status (level and conditions of remuneration, employment security, retirement) that has advantages compared to the supervisory or worker levels. In a large industrial group, this includes the factory managers' engineering or administrative assistants, and functional specialists from headquarters (Poirot, 1979).

Supervisors and team-leaders are regarded as a separate group. They comprise the hierarchical level of direct management on the shop floor (Poirot, 1979).

Employees are persons engaged in the direct operations of the firm, often on the shop floor level. They have no supervisory responsibility. Supervisors and employees are sometimes involved in formulation and implementation of strategy, for example through participation in teams which are engaged in strategy issues.

Hypotheses

Earlier research (Wooldridge and Floyd, 1990; Beer and Eisenstat, 2000), have pointed out challenges related to transforming strategic intentions into organizational performance. Given these challenges, we have looked at how a specific strategic intent; in our case, the intent to increase the firm's focus on innovation, has been manifested through the organization's human resources recruitment process.

There are many ways the innovative performance of a firm can be improved. One way is to attain innovations or increase innovative performance by strategic alliances with, or acquisitions of, other firms (Ahuja and Katila, 2001; Hagedoorn and Duysters, 2002). Another way is to exploit the firm's available resources to make the firm more innovative, for example by using systems, or "bundles", of HRM practices (Laursen and Foss, 2003) or through a learning and development programme (Roffe, 1999). A third way is to recruit innovative people to the firm (Patterson *et al.*, 2009; Shavinina, 2011). Our case firm has a strong intention to change from an acquisition strategy to a strategy more focused on internal growth and innovation.

If a firm in its corporate strategy stresses the need of further focus on innovation, then the recruitment of human resources should be done in alignment with the strategic goal. Recruiting people with a special interest in innovation should then be an important task for the management of a firm which, among its strategic goals, to increase focus on innovation (McEntire and Greene-Shortridge, 2011). This is also in line with previous research that has argued the importance of HRM for increasing innovative performance (Schuler, 1986; Miles and Snow, 1984).

To increase the innovative performance of the firm, it can be argued that managers should recruit employees with personality traits beneficial for innovation (Schuler and Jackson, 1987a). If managers with a low preference for innovation are selected, the firm's innovative performance will most likely be negatively affected, i.e. the firm will not be able to realize its strategic intent. If the strategy is to increase the focus on innovation, we thus posit that we should find that employees that are recruited to the

firm should have stronger personality traits for innovative behaviour, than those that are not recruited to the firm. Therefore we formulate our hypothesis as follows:

H1. The mean of INNOV6 is higher for those employees that are recruited to the firm, compared to those that are not recruited.

We measure a person's personality traits for innovation using an index based on six of the factors of the Operational Personality Questionnaire (OPQ), developed by SHL[1]. The index, called Innov6, is described in the section called "Dependent and independent variables" below. The index is constructed to measure an individual's personality traits supportive to innovative behaviour.

As many researchers have concluded, it is much more difficult to implement a strategy than to formulate the strategy. There are many obstacles to implementation, for example resistance to change among employees (Guth and Macmillan, 1986), problems to find effective channels to communicate the aims, goals, and intents of the strategy (Beer and Eisenstat, 2000) and problems related to middle-management issues (Aaltonen and Ikävalko, 2002; Wooldridge and Floyd, 1990).

Further, we propose that there is a difference between employees on different hierarchical organization levels when it comes to strategy involvement (cf. Hambrick, 1981; Wooldridge and Floyd, 1990). Individuals on higher levels are more involved in the formulation and implementation of strategic issues. They are the spokesmen for the strategic intent. Employees on lower levels are less involved in the development of strategic issues, but may be involved in the implementation of the strategies. It is not certain that they will have the same strategic awareness or perhaps fully support the strategic intent. Such a strategic intent, which might be to increase the firm's focus on innovation through recruiting individuals with personality traits beneficial to innovation, might therefore not be cascaded down the hierarchies of the organization. This is also in line with Schuler and Jackson's (1987b) study of 304 business units, found that strategically aligned HRM practices are more common at higher levels of the organizations and diminish through the lower management levels.

Middle managers have often been pointed out as obstructive and resistant to change, even if that view has been challenged. Middle managers may fulfil a role as intermediaries during an implementation process, through interpreting the intent of a strategy in a firm (Holden and Roberts, 2000; Balogun, 2003). They can help others through the change process, and keep the business going during the transition.

Research has often focused on the possible conflict of interest between top and middle managers in implementing strategic intent. For an extensive review, see Wooldridge *et al.* (2008). According to one study the operationalization and implementation of a strategic intent failed because centralized support staff and operational management operationalized the strategic intent in contradictory ways (Meyer, 2006). Another study reports evidence that middle managers who believe that their self-interest is being compromised can not only redirect a strategy, delay its implementation or reduce the quality of its implementation, but can also even totally sabotage the strategy (Guth and Macmillan, 1986).

A major strategic shift will result in more or less difficulties managing this change. The change will be easier to manage at the top of the organization and increasingly difficult to manage down in the organization. This is specifically true if the previous strategy is well implemented and fortified in current structures and management. In this case the mass of the strategic centre of gravity is large and a major shift will result in vast inertia. Thus we in this case expect to find poor execution of strategy in

the depths of the hierarchy. We therefore hypothesize that we will find lower scores on personality traits beneficial for innovative behaviour further down the hierarchical levels. To test this, we have setup hypotheses *H2-H5* comparing our different hierarchical levels:

H2. The mean of INNOV6 is higher for senior managers compared to middle managers.

H3. The mean of INNOV6 is higher for senior managers compared to employees.

H4. The mean of INNOV6 is higher for middle managers compared to employees.

H5. The mean of INNOV6 is higher for executives compared to senior managers.

Only test results from those who are employed by the firm are used when we test the above hypotheses (*H2-H5*). For a representation of the relationships between all tested hypotheses see Figure 1.

Research method

Research design

The research design is based on a study of the implementation of a strategy to increase the focus on innovation of an international firm in the medical technology industry. The firm as a whole is the unit of analysis. Our primary aim is not to provide insight into the studied firm per se, but we examine the case to increase the knowledge of strategy implementation, and the roles of different hierarchical levels in that process. In that sense we can call it an instrumental case study (Stake, 1994).

The choice of case is not based on theoretical considerations, but on pragmatic reasons. We had the opportunity to collect information about HRM issues due to the generosity of the firm to share this information with the research group.

Presentation of the firm (Alpha)

The case firm is a multinational corporation within the medical technology industry, a highly competitive marketplace (the firm name has been anonymised to protect identity). The firm has a strong history of growth by means of acquisitions and has officially stated the importance of shifting more towards organic growth. The firm is

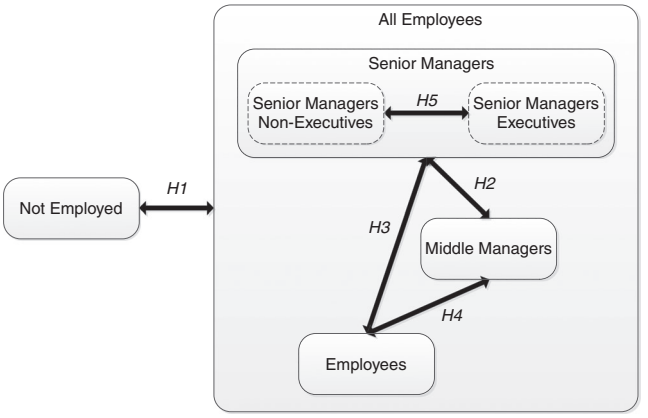

Figure 1.
The relationships between hypotheses

organized into three diversified business areas. The organization is strongly decentralized and recruiting decisions are to a large extent made at the local level.

The corporation conducts business worldwide and has 28 production sites in nine countries. In 2012 Alpha employed approximately 15,000 people in 40 countries.

The firm's recruiting process can be divided into three different steps.

Identification of need. The firm uses competency profiles to describe the competencies that are of greatest importance for a given role. The firm is careful to underline that there may be different competency profiles for sales persons in different regions of the world. One area may focus on, for example relationship building while a different region may be more focused on financial acumen. While the job description may be the same for both roles, the firm profile may be very different for the ideal candidate.

Identification of competence. Once the competence need has been clarified the hiring manager needs to tap into the internal pool of competence. Important and highlighted in the process is that hiring managers are to generating candidates with diversity background via resources such as job fairs, web sites, and publications, all which focus on gender, racial and ethnic fairness. Key is to align the sourcing activities with the position requirements and to recognize the importance of not treating all open or future job requests equally.

Selection of competent people. Once the hiring manager accepts the candidate pool, the interviewing process begins. The selection process also has a multitude of components from screening of competence, conducting formal assessments and interviewing for skills, knowledge, behaviours, and organizational fit. Four components are part of the selection step:

(1) Filtering: this is a pre-screening process focused on assessing credentials for job match.

(2) Interviewing: the recruiter assess competencies, explore key job-related behaviours in past work situations. It is not uncommonly that an interviewing team consisting of multiple interviewers help remove biases into the recruiting/hiring process.

(3) Assessing: this is a formal assessment using a validated instrument (SHL-OPQ32r) to gain further insights and discoveries about a candidate.

(4) Selecting: the final step is to identify the ideal candidate based on a careful review and evaluation of all candidates. This usually occurs through a debriefing by the interviewing team. Once the selection has been done a validation of the credentials take place.

Available data

In 2008, Alpha started using OPQ32r (Brown and Bartram, 2009) from SHL on a global basis as part of the recruitment and selection process and as a tool to perform assessments of employees.

For the purpose of this study, Alpha received data of all performed OPQ32r tests from SHL in the form of a raw data file. The data was extracted in June 2013. All personal identifiers were removed from the data by Alpha before it was handed to the researchers. The raw data ($n = 1{,}738$) is divided between the years 2009-2013 as depicted in Table I.

The data included all tests performed on behalf of Alpha, i.e. both employees (assessments), and candidates later employed or not. If a person is assessed more than once during 2009-2013, only the results of the latest test are used.

To be able to distinguish employees from those who were not employed after doing the test, another data set was created. This second data set was based on employment lists from 2008 to 2012. It includes employees from the seven countries where Alpha has the most employees[2]. Data was as follows in Table II.

Comparing the two data sets we were able to distinguish between people employed by Alpha and people not employed. Of the 1,738 tested people (data set 1) we identified 1,010 as employees, while 728 persons were not included in any employment list (data set 2) and were regarded as not employees.

To preserve anonymity but also because there was no common reliable identifier[3] to automate data merging, the help of an Alpha employee who had access to the original raw data file containing the names of the evaluated was used. Using the directory of employees, this person together with one of the researchers went through every test and attributed, where applicable, employment years, position, and function.

To further understand the strategic intent related to innovation, strategy formulation, and implementation processes, as well as HRM strategies and practices, interviews were conducted with employees in various functions on different hierarchical levels. A total of 43 interviews were performed between 2011 and 2013 of which 14 interviews on the employee-level, 12 interviews with middle managers, 14 interviews with senior managers, and three interviews with executive managers including two members of the top-management team, the CEO and the executive vice president of HR.

Dependent and independent variables

Our dependent variable is constructed to measure innovation personality traits on an individual level. It is based on a combination of personality traits as measured by the OPQ32r instrument. The OPQ is designed to provide businesses with information on

Table I.
Number of tested people (data set 1)

Year	*n*	%
2009	3	0.2
2010	388	22.3
2011	631	36.3
2012	468	26.9
2013	248	14.3
Total	1,738	100

Table II.
Alpha employees in seven countries (data set 2)

Year	*n*	Total[a]
2008	7,221	11,604
2009	8,561	12,135
2010	8,888	12,208
2011	9,234	13,111
2012	11,078	14,919

Note: [a]According to annual report

the aspects of an individual's behavioural style that will impact on their performance of competencies at work (SHL, 2005, 2006). The result of a tested person is based on a large number of questions, presented in the form of raw scores and sten-scores (Cattell *et al.*, 1970) on 32 factors derived by factor analysis. We use sten-scores to depict a person's results on the test.

Previous research has identified facilitators and inhibitors of innovation at different levels of analysis including the individual, group, and firm level. At the individual level, these studies have looked at personality, motivation, cognitive ability, and job characteristics as factors affecting individual innovation (Anderson *et al.*, 2004). A summary of the results of a number of reports focusing on personality traits and innovation Anderson *et al.* (2004) concludes that personality traits positively linked to innovation include: tolerance of ambiguity, self-confidence, openness to experience, unconventionality, originality, independence, and proactivity, while the following personality traits were found to be negatively linked to innovation: conscientiousness, rule-governed, and authoritarianism.

Personality traits can be described in many ways, using different vocabulary. The test results we use are based on the OPQ32r, and we follow SHL's terminology. Among the 32 factors, or dimensions in OPQ32r, we use only six factors, selected after discussions with experts within HR and experts on innovation and innovation management.

Three personality traits are judged to be positively linked to innovation: Forward thinking, Creative, and Conceptual. Personality traits judged to be negatively linked to innovation are: Detail conscious, Rule following and Conventional.

In this way we get a combination of traits contributing to innovation and factors with a negative impact on innovation. The combination is used as an index of innovation. We call the index INNOV6, as it focuses on innovation and is based on a combination of six OPQ32r-factors.

The three factors contributing in a positive way to INNOV6 should be internally correlated. The same should be true for the three factors judged to have a negative contribution to INNOV6.

The index was checked with confirmatory factor analysis (CFA) to see if the postulated relationship between observed variables and their underlying latent constructs are tenable. The index should provide a good fit to the data (Floyd and Widaman, 1995).

We used the software SYSTAT 13 to perform the analysis. The model consists of six manifest variables and two inter-correlated latent variables; one indicates positive effects on innovation, while the other indicates negative effects. According to the model the three variables Creative, Conceptual and Forward thinking are associated with the positive latent factor, and the three factors Conventional, Rule following and Detail conscious are associated with the negative latent factor.

Table III depicts the correlations between the six manifest variables.

The pattern of correlations is as expected. Variables expected to be associated with the positive latent innovation factor are so, and the same goes for the variables expected to be associated with the negative latent factor. The correlations between variables belonging to each group are negative.

The result of the CFA depicts that the model fits data, even if some of the fit indexes do not meet all acceptance levels (Schreiber *et al.*, 2006). The general fit index is 0.904, the root mean square residual (RMR) is 0.166, and the normed fit index (NFI) is 0.519.

Table IV summarizes the result of the CFA.

According to Schreiber *et al.* (2006) GFI should be at least 0.95, RMR small and NFI at least 0.95 for acceptance (Schreiber *et al.*, 2006). These acceptance levels are, however, dependent on many issues, as sample size and number of observation per estimated parameter, handling of missing data, and estimation methods (Schreiber *et al.*, 2006). CFA is used in many situations, and the proposed acceptance levels and the used indices for estimating fit should, in our opinion, be regarded as approximate guidelines and not as strictly defined levels. In our case we use it for estimating if our proposed theoretical model of an innovation index provides a reasonably good fit to the data. We conclude that the fit is good enough.

The independent variable is the job-level of the persons taking the test. The job-level is measured according to a person's position in the organizational hierarchy of the organization. On top of the hierarchy we find senior manager, some of those having executive authority, followed by middle managers and employees. We only consider those persons who have been taking the OPQ32r-test. They are all considered important to the firm, otherwise they are not tested.

To establish a person's position we have used information from different firm sources, as the person's position according to the firm's organization charts, if the person has subordinates reporting to him or her and the person's job title.

Analysis and results

The hypotheses state that there should be a difference in strategy implementation between the different organizational levels. We test the hypothesis using a two-sample *t*-test of means. The observations are split into groups of senior managers, middle managers and employees. The group of senior managers is also split into the sub-groups of executives and non-executive senior managers. We test the difference of mean of the innovation index (Innov6) for each pair of groups.

For hypothesis (*H1*), we test the mean of the innovation index (Innov6) for the group of recruited persons against the group of persons that were not recruited to the firm.

The tested hypotheses and the results of the tests are depicted in Table V.

The result of the *t*-test does not support the *H1*. The mean on Innov6 does not differ between employees and those not employed.

Table III.
Pearson correlation matrix

Observed variables	1	2	3	4	5	6
1. CREATIVE	1.000					
2. FORWTHINKING	0.360	1.000				
3. CONCEPTUAL	0.434	0.254	1.000			
4. CONVENTIONAL	−0.463	−0.277	−0.396	1.000		
5. DETAILCONSCI	−0.073	0.101	−0.125	0.293	1.000	
6. RULEFOLLOWIN	−0.212	−0.135	−0.188	0.467	0.442	1.000

Note: $n = 1{,}010$

Table IV.
Fit indices. The complete results of the CFA are reported in the Appendix

Index	Value
Goodness-of-fit index (GFI)	0.904
Root mean square residual (RMR)	0.166
Normed fit index (NFI)	0.519

Hypotheses	Group	Mean	SD	*p*-value	*n*
H1: the mean of INNOV6 is higher for employees (regardless hierarchical level) that have been recruited during the studied period (2008-2013), compared to those that were not recruited	Recruited	5.701	1.284	0.737	1,010
	Not recruited	5.682	1.151		728
H2: the mean of INNOV6 is higher for senior managers compared to middle managers	Senior	6.221	1.225	0.000	221
	Middle	5.834	1.257		338
H3: the mean of INNOV6 is higher for senior managers compared to employees	Senior	6.222	1.257	0.000	221
	employees	5.234	1.200		339
H4: the mean of INNOV6 is higher for middle managers compared to employees	Middle	5.834	1.225	0.000	338
	employees	5.234	1.200		339
H5: the mean of INNOV6 is higher for executive senior managers compared to not-executive senior managers	Executive	6.575	1.363	0.031	42
	Not executive	6.139	1.220		179

Table V.
T-test of means on the innovation index (Innov6) for the different groups

H2-H5 are all supported. The support of *H2-H5* indicates that there is a difference between groups of persons on different organizational levels, as we have proposed. Both the CEO and the executive vice president of HR stress the importance of all employees being engaged in implementing the strategic intent to increase the innovation focus of the firm:

> Sometimes I think that when we communicate these issues within the Group we tend to do that in the same way as we do to the senior managers. It is difficult to engage the ordinary employees for these issues. They do not get excited about it (Translated) (CEO, 2013).

> The CEO always has innovation on the agenda, so he talks about innovation all the time and he tries to communicate the importance of innovation when he communicates in both oral and written form. […] If you say organizational top-level, it is there you find concrete examples of innovation initiatives, which is not surprising. More importantly, however, you need to find innovation initiatives lower down in the organization, where much of the actual innovation takes place (Translated) (Executive vice president HR, 2013).

In this case we can clearly see that strategy implementation starts at the top and diminishes in success as we move down the organizational levels. The summarized results indicate how difficult implementing a strategy is. The strategy to recruit innovative individuals is an important issue for the firm's top management, but it is not acted upon on all levels of the organization, even if this has been the intent of the top leadership of the firm:

> Despite the intention of top-management, our talent acquisition process, and support tools put in place, we were not able to recruit staff with the personality traits we wanted for increased innovation. Instead managers seemed to recruit the same types of people that they had always done (Translated) (Executive vice president HR, 2013).

Discussion and conclusions

In this paper we study strategy implementation in a large multinational firm. The results show several important findings.

Our study is rooted in the case firm's strategic intent to increase its focus on innovation. One way in which it has attempted to do so is by recruiting individuals that score high on personality traits that are conductive to innovation. An important

task for management of a firm, which among its strategic goals has the intent to increase the focus on innovation, should be to recruit individuals with special abilities in innovation (McEntire and Greene-Shortridge, 2011). This is in line with previous research which also has pointed to the importance of HRM for increasing innovative performance (Schuler, 1986; Miles and Snow, 1984).

Our first hypothesis (*H1*) is not supported. There is no difference in innovation conductive personality traits between recruited and non-recruited persons. This is surprising considering the long time the firm has worked to implement the strategic intent of increased innovative performance. Managers seem to continue to hire the same people they always have, regardless of strategy. One alternative explanation relates to the recruitment process of the firm. The candidate is evaluated using the OPQ32r test late during the evaluation process, where there has already been an interview selecting the candidates who are close to the evaluation criteria of the firm. One such criterion is related to being an innovative person, and those who have shown a lack of innovativeness during the previous phases of the recruiting process are already dismissed and will not be evaluated using the OPQ32r-test.

Previous studies/prior research has examined the difficulties of strategy implementation at different hierarchical levels. Obstacles, problems, and barriers to successful strategy implementation have been identified (Guth and Macmillan, 1986; Beer and Eisenstat, 2000). Issues related to middle-management have also been addressed (Aaltonen and Ikävalko, 2002; Wooldridge and Floyd, 1990).

H2-H5 are supported indicating that the higher up in the hierarchy, the more likely it is that you will find employees with personality traits associated with innovation. So, despite a structured process, specifically designed to select employees with traits more likely to be beneficial for innovation, the study shows that as you cascade down the hierarchy the lower the likelihood is that you will find individuals with these personality traits. Despite the efforts to implement the strategy, within a specific delimited field, the firm fails to achieve the wanted result of increasing the firm's recruitment of innovative individuals. This clearly show the difficulties associated with implementing a strategy at all levels of an organization. A possible interpretation relates to the lack of understanding or action on top management's strategic intent from middle management. This also corroborates the findings of Wooldridge and Floyd (1990), namely the importance of middle management involvement in strategy for firm performance. One implication that can be drawn is that if a firm that wants to implement a specific strategic intent they need to have clear and precise directives that are mandatory to follow down to its lowest organizational level. Having specifically designed processes, senior management communication and commitment and well developed talent acquisition processes will not be enough. Usage of the tools and processes put in place to implement strategy needs to be measured and evaluated in detail.

Strategic centre of gravity

Further, our case firm has in annual reviews and in our interviews stated the intention of the firm to shift from growth by acquisitions to organic growth. Part of this growth should be by means of new offerings implying the need for increased focus on innovation (CEO, 2013). Our findings clearly show the difficulty of moving managerial commitment to innovation when the firm has a strong history of acquisitions and cost focus, this is in line with the theory as proposed by Hitt *et al.* (1990).

Galbraith (1983) wrote about a firm's "centre of gravity" and how it arises from stage of the value chain of the firm's initial success in the industry. An integrated organization (structure, processes, rewards, and people) is created that relates to the centre of gravity. The most difficult strategic change a firm can pursue is that of changing its centre of gravity. These ideas have been operationalized and empirically confirmed by previous research (Ilinitch and Zeithaml, 1995).

Expanding on von Clausevitz's (1832/1984) military theory of the centre of gravity and Galbraith's (1983) concept of the centre of gravity related to the firm's position in the value chain, we introduce and elaborate the concept of the strategic centre of gravity. The strategic centre of gravity is related to the competitive advantage of the firm. A firm's strategic centre of gravity can help explain difficulties (vulnerabilities) to achieving strategic change. We further consider and term three aspects of the strategic centre of gravity that are beneficial for theorizing using the concept; namely origin, mass, and inertia. First, the origin of the centre of gravity is its focal point, which could be one person, e.g. the CEO or the founder, or perhaps a group of people such as a management team. It could also be a product or position in the value chain that has shaped the firm (cf. Galbraith, 1983).

In our case firm, strategy implementation is very much top-down. The origin of the centre of gravity is the CEO and top-management team along with the strong history of growth by acquisition and focus on costs. Strategically changing focus towards more organic growth by means of innovation and thus shifting the focal point will be challenging. This is also in line with Hitt *et al.*'s (1990) claim that a firm with a strong history of mergers and acquisitions will have a hard time shifting managerial commitment to innovation. The same theory also implies that a firm with an acquisition strategy will have a hard time to shift its managers' commitment towards developing or recruiting human resources for reasons of increasing innovative performance.

Second, the mass of the centre of gravity denotes the relative importance of the centre of gravity for the competitive advantage of the firm. The more mass, the more difficult strategic change will be. In our case firm, the mass is relatively large as the M&A and cost focus history has dominated the company during the last 25 years.

Third, the inertia of the centre of gravity which has to do with the speed and agility of the firm for strategic change is related to both the origin and mass. The further you depart from the origin and the more mass of the centre of gravity, the more the inertia increases. Together, the origin, mass, and inertia of the centre of gravity predict the ability of the firm to strategically change. The success of the firm during the last 25 years has nurtured and reinforced a large, stable strategic centre of gravity with great inertia. Due to the magnitude of the inertia, shifting this strategic centre of gravity is difficult for our case company. This is also supported by our findings that indicate that the recruiting behaviour of managers further down in the hierarchy, during our period of study, does not align with the intentions of the strategy. The strategic shift towards increased focus on innovation and organic growth will require a multitude of tactics and great commitment at different organizational levels to be successful at our case firm.

Limitations and directions for future research

The results of our study are limited by the design inherent to our research method. First, we use only one firm to collect our data. Even if the firm is large and can be said to consist of many business units, we are still only looking at on specific strategy implementation in one specific industry.

Second, we only look at one way in which the firm attempts to implement its strategy of increasing focus on innovation. We only consider the human resourcing aspect of implementing the strategy. Future studies could consider several more initiatives that the firm performs, including mergers and acquisitions and other HRM practices. Previous work has shown the benefits of applying HRM practices in "bundles" for increased success (Laursen and Foss, 2003).

Third, our study does not consider differences between functions. We treat each hierarchical level as a collective unit of analysis. Further research should consider sub-dividing each level, in particular the employee level, to also address difference in functions. The reasoning behind this is that the personality traits that could be expected to be found in different functions, e.g. product development vs accounting, differ. A study considering these functional differences might uncover additional insights.

Recently scholars have extended the resource-based view and pointed to the important role of managers in orchestrating the firm's resources and capabilities to achieve a competitive advantage (Sirmon *et al.*, 2011). It's is not only an issue of what resources you have or acquire, but also how and where they are deployed. This implies that not only the hierarchical levels of the resource but also different functions should be considered when deploying resources.

Further research could consider to study the implementation tactic chosen, as it will affect the resulting implementation success at different hierarchical levels of the organization (Nutt, 1998).

Further leaning on von Clausevitz's (1832/1984) theory of the centre of gravity could lead to the expansion of our concept of the strategic centre of gravity. This would imply also conceptualizing the tactical and operational centres of gravity.

Practical implications

To stay competitive in today's increasingly dynamic business environment, firms attempt to increase their innovative performance as a source of competitive advantage. The successful implementation of strategies that addresses this issue is therefore of great importance. Our results can help practitioners to understand the importance of addressing all hierarchical levels within the organization when implementing strategy. In particular, top managers need to understand the importance of having middle managers fully committed to strategy and realizing the importance their action or inaction has in facilitating, or hindering, strategy implementation.

Notes

1. www.shl.com/
2. Unfortunately Alpha at the time of this study did not have a single system for collection of all employee data, therefore it was decided to ask each site of operation in the seven countries with the most employees to put together lists of employees.
3. Names were spelled differently and sometime names were abbreviated.

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Appendix

Number of observations	1,010
Number of manifest variables	6
Number of latent variables	8
Number of parameters	12
Matrix analyzed	Correlation
Max. no. of iterations	100

Table AI. Confirmatory factor analysis (CFA)

Iteration	Discr. function	Max. *R*. cos.
1	0.800	–
2	0.658	0.329
3	0.628	0.127
4	0.580	0.035
5	0.578	0.000
6	0.578	0.000
7	0.578	0.000
8	0.578	0.000

Table AII. Iteration history

	CREATIVITY	FORWTHINKING	CONCEPTUAL	CONVENTIONAL	DETAILCONSCI	RULEFOLLOWIN
CREATIVITY	1.000					
FORWTHINKING	0.360	1.000				
CONCEPTUAL	0.434	0.254	1.000			
CONVENTIONAL	−0.463	−0.277	−0.396	1.000		
DETAILCONSCI	−0.073	0.101	−0.125	0.293	1.000	
RULEFOLLOWIN	−0.212	−0.135	−0.188	0.467	0.442	1.000

Table AIII. Sample correlation matrix

Table AIV. Reproduced correlation matrix

	CREATIVITY	FORWTHINKING	CONCEPTUAL	CONVENTIONAL	DETAILCONSCI	RULEFOLLOWIN
CREATIVITY	1.000					
FORWTHINKING	0.360	1.000				
CONCEPTUAL	0.434	0.254	1.000			
CONVENTIONAL	0.000	0.000	0.000	1.000		
DETAILCONSCI	0.000	0.000	0.000	0.293	1.000	
RULEFOLLOWIN	0.000	0.000	0.000	0.467	0.442	1.000

Table AV. Residual matrix

	CREATIVITY	FORWTHINKING	CONCEPTUAL	CONVENTIONAL	DETAILCONSCI	RULEFOLLOWIN
CREATIVITY	0.000					
FORWTHINKING	0.000	0.000				
CONCEPTUAL	0.000	0.000	0.000			
CONVENTIONAL	−0.463	−0.277	−0.396	0.000		
DETAILCONSCI	−0.073	0.101	−0.125	0.000	0.000	
RULEFOLLOWIN	−0.212	−0.135	−0.188	0.000	0.000	0.000

Table AVI. GLS estimation of free parameters in λ matrix

					90.00% CI	
Parameter no.	Parameter	Point estimate	SE	*t*	Lower	Upper
1	L1	1.082	0.168	6.448	0.806	1.358
2	L2	0.633	0.075	8.481	0.510	0.755
3	L4	0.763	0.000	–	–	–
4	L5	0.632	0.065	9.712	0.525	0.740
5	L6	0.599	0.000	–	–	–
6	L7	0.954	0.125	7.654	0.749	1.159

Table AVII. Fixed parameter in dependent relationships

Latent variable	Manifest variable	Value
E1	CREATIVITY	1.000
E2	FORWTHINKING	1.000
E4	CONCEPTUAL	1.000
E5	CONVENTIONAL	1.000
E6	DETAILCONSCI	1.000
E7	RULEFOLLOWIN	1.000

Parameter no.	Parameter	Point estimate	SE	t	90.00% CI Lower	Upper
1	Viplus	0.526	0.092	5.745	0.395	0.700
2	Viminus	0.774	0.118	6.576	0.602	0.993
3	(For path 1)	0.384	0.107	3.583	0.243	0.608
4	(For path 1)	0.790	0.037	21.565	0.732	0.852
5	(For path 1)	0.694	0.053	13.042	0.612	0.788
6	(For path 1)	0.691	0.047	14.674	0.617	0.772
7	(For path 1)	0.722	0.042	17.102	0.656	0.795
8	(For path 1)	0.295	0.107	2.758	0.163	0.536

Table AVIII. GLS estimation of free parameters in φ and ψ matrix

Statistic	Value	df
χ^2	583.673	9.000
Independence model χ^2	1,213.471	15.000

Table AIX. χ^2 test

Index	Value
Discrepancy function	0.578
Goodness-of-fit index (GFI)	0.904
GFI adjusted for degrees of freedom (AGFI)	0.777
Root mean square residual (RMR)	0.166
Parsimonious GFI	0.543
Comparative fit index (CFI)	0.520
RMSEA estimate	0.252
RMSEA 90.00% lower confidence limit	0.234
RMSEA 90.00% upper confidence limit	0.269
Exceedance probabilities	
H0: perfect fit (RMSEA = 0.0)	0.000
H0: close fit (RMSEA ≤ 0.05)	0.000
ECVI estimate	0.602
ECVI 90.00% lower confidence limit	0.527
ECVI 90.00% upper confidence limit	0.684
McDonald's centrality	0.752
Bentler and Bonett's non-normed index	0.201
Normed fit index (NFI)	0.519
Parsimonious NFI	0.311
Normed index $\rho 1$	0.198
Non-normed index $\delta 2$	0.523
Hoelter's critical N	30.000

Table AX. Fit indices

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