Abstract
This study was set out to design a conceptual framework of motivation practices for multicultural organizations with a hybrid R&D structure. We derive four separate motivational needs from specific cultural dimensions. These motivational needs give us the possibility to link certain motivational practices with the cultural settings. A case study was conducted in order to provide empirical support for the conceptual framework.

Introduction
Scholars have reached a general consensus about the argument that a firm’s innovative capacity can lead to competitive advantage and growth (Porter, 1990; Furman, Porter & Stern, 2002) and can therefore be regarded as an imported instrument to increase its success. According to Dosi (1982) the research and development (R&D) department is one of the main places where most innovative ideas get generated. Ángel and Sánchez (2009) add that the R&D department can give...
the firm an advantage “through the effective generation, deployment, transfer, and integration of knowledge” (p. 271).

The structure of an R&D department can be organized in different ways (Argyres & Silverman, 2004). Several researchers have mentioned that during the last several decades, key innovative organizations’ R&D have gone through several structural changes (e.g. Kuemmerle, 1997). For instance, the study done by the EIRMA working group in 2001 has shown the trend among the main business industries towards a change of the R&D structure (EIRMA, 2001). That is, organizations with centralized R&D structure tend to decentralize, while organizations with decentralized R&D structure aim at more centralized structure of the department. Several industries, according to EIRMA, also claim to have restructured their R&D departments several times in the last decades, trying to find the optimal balance between control and autonomy.

Oliver Gassmann and Maximilian von Zedtwitz have done a number of studies (1998, 1999, 2002) showing the new concepts and trends in international R&D organizations. What they have found is that most of the organizations are looking for “stronger orientation of R&D activities towards international markets and knowledge centers; establishment of tightly coordinated listening posts; increase autonomy and authority of foreign R&D sites; tighter integration of decentralized R&D units; and increased coordination and re-centralization of R&D activities at fewer know-how centers” (1999, p. 248). Basically, the authors of EIRMA work group (2001) and Gassmann and Maximilian conclude that this search of balance for coordination and control of R&D departments is reflected in a majority of companies trying to combine both decentralized and centralized R&D structure, or in other words, create a hybrid R&D structure.

A hybrid R&D structure has the privilege of combining advantages of both a centralized and a decentralized R&D structure. However, despite the potential benefits of a hybrid R&D structure, several problems can occur in terms of the allocation of resources, report, information sharing and human resource management (Von Zedtwitz, Gassmann & Boutellier, 2004). We would like to pay special attention to the human resource practices, since human resources are the major asset of an innovative company (Gupta & Singhal, 1993) and they “have the potential to fuel innovation and creativity in organizations” (Gupta & Singhal, 1993, p. 41). However, one of the challenges for human resource management is to motivate R&D employees so that the full potential of their innovative capability is utilized (Amabile, 1997; Gupta & Singhal, 1993; Katz, 2005; Manolopoulos, 2006; Mumford, 2000).

In opposition to a hybrid R&D structure, centralized and decentralized R&D managers are situated in one, and most likely their own, cultural setting where they do not need to consider cultural differences. Therefore, the motivation techniques implemented in their particular R&D unit do not need to be adjusted to various cultures. However, a manager of a central office in a hybrid R&D structure, who decides upon motivation techniques, needs to be aware of cultural differences and differences in culture’s motivations.
Javidan & House (2001) summarize this as following:

Managers who work in the international arena are steeped in their own culture. They have lived many years of their lives in their own countries, have been educated there, and have spent years working there. It is not easy for many of them to understand and accept practices and values that vary from their own personal experiences (p. 292). …

Although there is no shortage of suggestions that executives should be culturally sensitive, there is a big shortage of information to help managers do that (p. 292). …

To be successful in dealing with people from other cultures, managers need knowledge about cultural differences and similarities among countries. They also need to understand the implications of the differences and the skills required to act and decide appropriately and in a culturally sensitive way (p 292).

This challenge is emphasized by Manolopoulos (2006), who stresses that, although the importance of technology and knowledge has been recognized, not much focus has been put on the typical characteristics of R&D professional, from an international viewpoint. Also, leading technological companies as ABB and Daimler have indicated that the management of cross-border human resources and overcoming cultural differences has been a major challenge (Von Zedtwitz et al., 2004).

Despite the fact that there is substantial theoretical work done about motivation of R&D professionals and motivation across cultures, motivation of R&D professionals in a hybrid R&D organization has not been depicted explicitly before. Even though scholars have argued that standardized motivation practices do not work across borders (Hofstede, 1980b; Gannon, 2008; Javidan & House, 2001), still, no literature exists about specific motivational practices for R&D professionals customized to certain cultural settings.

Accordingly, this study is set out to gain more knowledge on the topic of motivation of employees in a organization with a hybrid R&D structure, where the central/main R&D department imposes certain sets and rules of HR practices to the local R&D units. Specifically, the aim of the study is to create a conceptual framework of motivation practices that can be applied to specific cultural settings in a multicultural hybrid R&D organization.

This study is structured as follows. The next section will go deeper into the topic of R&D structure, motivation and the cultural perspective on this. In order to fulfill the aim of this study, we develop a conceptual framework which considers the needs of specific cultures and, consequently, allows us to connect individual motivators to specific cultures. We will find
support for our framework with the results from a real case, which enables us to develop implications for the management of hybrid R&D organizations.

**R&D structure**

The structure of the R&D department of a firm can be organized in different ways. For deciding about these issues, management face a great variety of challenges (Von Zedtwitz et al., 2004). Traditional criteria, such as cheap labor have lost their importance and other factors are decisive in choosing a proper structure for R&D, such as “the hunt for talent” (Von Zedtwitz et al., 2004, p. 23; Kuemmerle, 1997) and R&D outsourcing (Von Zedtwitz et al., 2004). In other words, management has to make a decision on how to organize R&D in the most efficient way. Although R&D networks have been subject to a wide body of research, Argyres and Silverman (2004) have argued that the intrafrim organization of R&D activities has had less attention. Below we will elaborate on different ways the R&D in an organization can be organized.

**Centralized R&D**

Centralized structure of R&D has a number of advantages which can contribute to the success of a company. For instance, economies of scale, better control over basic results, shorter development time, and a common R&D culture are some of the advantages that can support a choice for a centralized R&D structure (Chiesa, 1999; Gassmann & Von Zedtwitz, 1998). A shared R&D culture helps to avoid misunderstandings and miscommunication between the employees of R&D departments, which in turn ensures the knowledge sharing process (Gassmann & Von Zedtwitz, 1998).

**Decentralized R&D**

Despite the benefits of a centralized R&D structure and the reasons against internationalization of R&D, research shows that internationalization of R&D is becoming more and more popular among big companies (Chiesa, 1996; Von Zedtwitz et al., 2004). Although decentralization does not necessarily mean that a company moves across borders, internationalization is often the aim when a company expands their R&D units to other countries. According to Chiesa (1996), internationalization is “a critical dimension” to the objective of the R&D, which is “development of technical knowledge, skills and technologies that will go into forming the company’s own stock of knowledge, and exploitation of the available stock of knowledge and technologies, as well as the innovation process, in order to develop new products” (p. 20). Due to the fact that more and more sources of “potentially relevant knowledge emerge across the globe”, companies have to be as close to the location of foreign universities or competitors as possible, in order to absorb the new research results (Kuemmerle, 1997, p. 61). Moreover, besides being close to the sources of useful knowledge and research results, companies have to be as close to the market as possible, in order to deliver newly developed products even faster. Therefore, in order to fulfill all of the objectives of the R&D department in the most beneficial way for the company, it is
important to locate R&D facilities in different locations to have the access to specialized knowledge and commercialize new products in the foreign markets with competitive speed (Kuemmerle, 1997).

**Hybrid R&D**

Throughout time, organizations seem to have started to realize that only centralized or only decentralized R&D structure are too limited for contemporary markets. Gassmann and Von Zedtwitz (1999) point out the trends in organizing international R&D as the managers see the necessity to seek the balance between coordination and control. First of all, companies with originally centralized R&D have to adapt to their international environment to better meet the market needs (Chiesa, 1996). At first, the R&D units that are established in different locations of the world are tightly controlled by the central R&D, but later on are granted more autonomy due to the increased competencies and technological strengths. In order to avoid the duplication of R&D, centers of expertise are created to tightly monitor the technological process (Gassmann & Von Zedtwitz, 1999). To summarize, the companies tend to shift from highly centralized to very decentralized structure of R&D until the threat of duplication of research and development appears, in which case the companies switch to a hybrid type of R&D structure, where decentralized units stay rather autonomous, but report to the competence center in order to share knowledge and avoid duplication.

This type of hybrid R&D structure is reported to be noticed by a number of researchers in large quantities of companies, however as Argyres and Silverman (2004, p. 938) mention “very little systematic data have been collected on the R&D organization structures”. It is safe to conclude that the benefits of a hybrid R&D structure can contain a fruitful combination of both centralized and decentralized structure, i.e. both “breadth and magnitude” of the research, where companies can focus on both radical and incremental innovation (Argyres and Silverman, 2004, p. 938).

**Challenges of a hybrid R&D**

Nevertheless, despite a number of advantages of hybrid R&D structure, it is important to keep in mind the negative and potentially dangerous aspects of it. One of the aspects of hybrid R&D structure that could be potentially harmful for the organization, is the presence of different cultures in one organization (Von Zedtwitz et al., 2004). Management of different local R&D units, which are situated in different countries and employ human capital from various cultures, can be more than challenging for the management of an organization. In spite of the competence center that ensures the knowledge transfer between all of the R&D departments, there is more to the management of employees than knowledge transfer.

Human capital, which is the most important asset of the whole R&D (Gupta & Singhal, 1993), becomes increasingly difficult to manage when implementing a hybrid R&D structure, “due to side effects of cultural, linguistic and behavioral diversity, and project-internal communication
impediments” (Von Zedtwitz & Gassmann, 2002). Von Zedtwitz et al. (2004) add that, despite possibilities of ICT, face-to-face meeting between employees are a necessity for successful knowledge transfer. However, travel can be expensive and time-consuming and relocation of human resources can be difficult to realize, due to family, lifestyle and personal issues (ibid.). As Von Zedtwitz et al. (2004, p. 32) mention, “researchers typically have greater loyalty to their science than their current employer. While capital and goods may be relatively easy to transfer to new locations, people are not”. Furthermore, employees of different R&D departments in different parts of the world most likely do not share the same cultural values and are motivated by different needs (Hofstede, 1980b). Javidan and House (2001) argue that managers should be culturally sensitive when dealing with people from other cultures, but that it remains unclear how to do this in an appropriate way. In the next section we will first review what motivation techniques are available for R&D employees and, consequently, consider the cultural aspects of this.

Motivation for creativity

Motivation has been a central point for studies since early in the 20th century and many scholars have tried to identify what exactly drives people to do what they do. Before going into the question what motivates people from a more basic perspective, we will first consider the literature about what motivates creative people, which are likely to be found in a R&D department (Gupta & Singhal, 1993), and how management can influence this.

Since the focus of this research is the promotion of motivation of R&D employees, the central question here is what motivates their creative ability. After all, the creative and innovative ability of a firm, despite all available systems and processes, still resides from the skills and expertise from human resources (Mumford, 2000). After scholars spent a lot of time debating about the individual’s personal traits that may be conducive to creativity, focus has shift to intrinsic motivation and extrinsic motivation. As Amabile (1997), who was involved in a great amount of research in which she studied the effect of motivation on creativity, argues, a person can possess both the expertise and creative skills to be to capable to be creative, however, it is the person’s motivation that actually encourages one to act creatively.

Intrinsic motivation

Motivation can be distinguished in intrinsic motivation (“driven by deep interest and involvement in the work, by curiosity, enjoyment, or a personal sense of challenge”) and extrinsic motivation (“driven by some desire to attain some goal that is part from the work itself – such as achieving a promised reward or meeting a deadline or winning a competition”) (Amabile, 1997, p. 44). In the wide body of research that has studied the effect of intrinsic motivation on creativity, there is a general acceptance that especially intrinsic motivation leads to higher creative ability, rather than extrinsic motivators (e.g. Amabile, 1997; Katz, 2005;
Mudambi, Mudambi & Navarra, 2007), and is even referred to it as a critical prerequisite (Collins & Amabile, 1999).

According to the widely cited work of Deci and Ryan (1985), intrinsic motivation stems from the individual’s perception of self-determination and competence. They also argue that constraints on intrinsic motivators, such as a hamper on personal freedom, can reduce the intrinsic motivation.

Amabile (1997) found several stimuli for intrinsic motivation and creativity. These include organizational encouragement; supervisory encouragement; work group supports; sufficient resources; challenging work; freedom. Among creativity obstacles, she found: organizational impediments (e.g. harsh criticism of new ideas, high risk avoidance, and destructive internal competition) and high workload pressure (e.g. extreme deadlines and distractions from creative work).

Extrinsic motivation

While there is a general acceptance about the relevance of intrinsic motivation for creativity, scholars have yet failed to agree to the role of extrinsic motivators. Although there is a large variety of extrinsic motivators available, researchers have mainly focused on the function of financial rewards.

In the world of business, financial rewards, outside their ordinary salary, can be used to compensate someone according to their performance. This is especially seen a lot in sales, where people get paid according to the amount they have sold. Although this may work for sales and some other areas, the effect of financial rewards as an extrinsic motivator for creative people, as often found in R&D departments of an organization, is highly debated among researchers. There exist a large amount of studies which have proven the impeding effect of extrinsic motivators on creativity (Amabile, 1997; Ariely, Gneezy, Loewenstein & Mazar, 2005; Badawy, 1982 as quoted in Petroni & Colacino, 2008), something that is referred to as the undermining effect (Collins & Amabile, 1999), or the crowding effect (Frey & Jegen, 2001).

Theory suggests that intrinsic motivation and extrinsic motivation are not additive, but there exists a dynamic relationship between the two (Frey & Jegen, 2001; Osterloh, Frost & Frey, 2002). The crowding theory suggests that external intervention (e.g. financial rewards or commands) can have a negative impact on the intrinsic motivation of an employee, if the external motivation is perceived as controlling. Also, according to studies mentioned by Collins and Amabile (1999), when autonomy or freedom is reduced; there is an expected performance evaluation preceding the task; when being watched by others; or when competing for prizes, all contribute to an undermining of creativity. Perhaps the most dramatic effect of extrinsic motivation on creativity is the shift of focus of attention (Ariely et al., 2005; Collins & Amabile,
1999). This implies that when people think about the extrinsic motivator, less attention is put on the performance of the task.

Of course, there is also research available that contradict the findings that were mentioned above and proves that R&D professionals are motivated by financial rewards indeed (Manolopoulos, 2006; Prendergrast, 1999). According to Frey and Jegen’s (2001) motivation crowding theory, if extrinsic motivation is perceived as supportive, or informative (Amabile, 1996), rather than controlling, it can lead to a positive effect on intrinsic motivation, and thus on creativity. Researchers have found more proof that supports this thesis, especially when participants of the study were told in advance that novel performance would be rewarded rather than conventional performance (Eisenberger & Shanock, 2003).

Besides financial rewards, there are more extrinsic motivators. These include recognition, well-defined project goals, frequent feedback on the work (Amabile, 1997), career progression, internal project funding (Petroni & Colacino, 2008), and autonomy and empowerment (Katz, 2005).

Autonomy can be motivating for R&D staff, since they have the expertise to overcome an obstacle, and do not want to be bothered by certain bureaucratic constraints or hierarchal demands (Katz, 2005).

Feedback from a manager can be conducive for R&D staff, because it gives the opportunity to freely exchange information between the two which can lead to the generation of new ideas. Furthermore, it gives the opportunity for the manager to recognize the employee’s behavior, which consequently encourages the employee to continue its appreciated behavior (Katz, 2005).

Conclusively, managers looking for ways to motivate their creative employees have a number of extrinsic motivators to encourage their R&D staff. However, the use of extrinsic motivators, especially financial rewards, should be considered carefully, as this may be perceived as controlling rather than supportive. Controlling motivators are thought to be destructive for intrinsic motivation, of which is believed to be a prerequisite of creative behavior.

**Motivation across cultures**

Now that we have considered different instruments available for managers to motivate their employees, we will now go deeper in the question what actually does motivate employees in a specific cultural setting. As a starting point, we will depict briefly the classic motivation theories from Maslow (1954) and McClelland (1961). This will be followed by a review of cultural dimensions related to specific needs.
Need theory

Traditional motivation theories consider motivation from a certain need-perspective. Every individual has different needs, but what distinguishes them is the degree of a certain need. For example, Maslov’s (1954) theory suggests a hierarchical categorization of the needs of an individual. According to this theory, every person is motivated first by their psychological needs, such as food and shelter. Only when the first need has been met, there will be a need for the next one, which are accordingly: safety needs, social needs, esteem needs and, when all of these are met, finally, self-actualization. Other researchers, such as McClelland (1961), have developed this theory, slightly modifying the hierarchical needs. He has distinguished three different motivation needs: the need for achievement, affiliation and power. These basic theories are important to consider, to see what the basic motivations for people are and, possibly, if they vary among different cultures. Before going into this, first we will review the literature about what motivates employees and how can management influence this.

Cross-cultural motivation

Although traditional motivation theories like Maslov (1954) or McClelland (1961) are still widely referred to, they have received criticism as well, especially when the theory is extended to other cultures than the culture of its developer (Fey, 2005). According to Hofstede’s (1980a) article, in which he questioned the appropriateness of American managerial practices abroad, the need theory of Maslow is not applicable universally, due to the different cultural settings of countries, and bases this argument on his model (Hofstede, 1980b). This can be explained as follows.

Hofstede’s (1980a) study about national cultures showed that there are (initially) four different dimensions to which a culture can be measured - power distance, uncertainty avoidance, individualism vs. collectivism, and masculinity vs. femininity. He found that countries in which people scored low on uncertainty avoidance and high on masculinity, like the USA, were exactly the same countries that received a high score on achievement need in McClelland’s study (1961). Accordingly, Hofstede (1980a) argues, cultures with a high need for achievement, are characterized by a high masculinity and a weak uncertainty avoidance. Furthermore, Hofstede (1980a) argues that countries in which people are masculine and avoid risks, people are motivated by Maslov’s need for security; and countries in which people are feminine people are more motivated by social issues (Maslow’s social needs), like quality of life and relationships between people (Hofstede, 1980a). This view is shared by Gannon (2008), who argues that collectivism stresses the dominance of social needs and individualism stresses the importance of own-interest. Conclusively, Hofstede (1980a) argues that Maslow’s hierarchical need theory is not applicable universally, because different cultures have a different hierarchy of needs.

Although we acknowledge the criticism of Hofstede’s (1980b) model (e.g. the study was performed over 30 years ago; the validity of the concept “national culture”), we have chosen to
refer to this theory, because it has been widely applied in social science and it is considered to be a milestone in the characteristics of the cultures around the world. House, Hanges, Javidan, Dorfman and Gupta (2004) have also performed a study about national cultures, which is widely referred to as the GLOBE study. However, it would not be feasible to combine this study with Hofstede’s (1980a), because they have used different criteria to measure the cultural dimensions. Furthermore, rather than placing national cultures in certain corners, we only intend to demonstrate that it is likely to assume that people with different cultures (or who are working in different geographical locations) are motivated by different practices.

More research has been done on motivation across cultures. Fey (2005) compared motivators between Swedish and Russian middle-managers and found support for the need theory. While Russian managers were lower on the hierarchy and primarily motivated by salary, he found Swedish managers were higher on the need hierarchy and were primarily motivated by having a pleasant work environment and peer recognition (Fey, 2005).

Also, Markus and Kitayama (1991) distinguish between cultures, based on their focus on independence (focus the self) and on interdependence (focus on others and environment). Although a need for achievement is existing in both kinds, there are some differences which can be observed. They argue that the former has a more individualistic need for achievement, which “strives to achieve some internalized standards of excellence” (Markus & Kitayama, 1991, p. 241), while the latter has a more socially oriented achievement need, focused on fulfillment of expectations from their surroundings (ibid.).

Martin J. Gannon (2008) compares cultures in terms of motivating factors, according to the cultural setting. He relies on Hofstede’s (1980a) cultural dimensions, like collectivism and individualism, to give examples of differences in motivation techniques across cultures. For instance, individualistic cultures have much higher expectations for the result, than the collectivistic cultures do (Gannon, 2008). The author gives an example of the United States where people believe in “equality of opportunity, but not equality of outcomes” (Stewart and Bennett, 1991, as quoted by Gannon, 2008, p.65), which results in American managers’ belief in compensation for any level of performance and their belief in motivation as a “dramatic” performance booster (ibid.). Moreover, individualistic cultures are known, according to Gannon (2008), for regularly and systematically ranking and rating employees. Collectivistic cultures, on the other hand, try to avoid ranking and rating in order to preserve the harmony in the team (ibid.). East-Asian cultures, for example, are categorized as a collectivistic culture (Hofstede, 1980a), in which “group harmony and cooperation is paramount” (Javidan & House, 2001, p. 297). Consequently, group satisfaction and cooperation is more motivating than individual distinctiveness, which in turn leads to group recognition as a motivator, not individual recognition (ibid.).
Conceptual framework

We argue that the theories mentioned above are important to consider, since it means that people with different cultural backgrounds will have different factors that motivate them and have different hierarchies of motivations. In this section, first, we will extend the ideas of Hofstede (1980b), Gannon (2008) and Markus and Kitayama (1991) and, based on Hofstede’s (1980a) dimensions (masculinity; individualism; power distance; and uncertainty avoidance), develop four different motivational needs: Need for Achievement; Need for Social Congruity; Need for Power/Security; and Need for Autonomy. Second, we will appoint the existing motivation practices to each of the four developed motivational needs. This will enable us to create sets of motivators that are adjusted to specific cultural settings.

Due to the fact that specific motivators cannot be linked directly to the dimensions of a culture, it is necessary to find a middle ground that links these two. Hence, we derive certain needs that are based on cultural dimensions and consequently correlate them with specific motivators.

In order to derive the motivational needs from cultural dimensions, we combined the dimensions that resembled the most similarities between each other’s characteristics. Based on previous literature, we concluded that certain dimensions point towards the same motivational needs. Hence, we have designed the following table.

<table>
<thead>
<tr>
<th>Cultural Dimension (Hofstede, 1980a)</th>
<th>Dimension-specific need</th>
<th>Author(s)</th>
<th>Motivational Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculinity</td>
<td>Need for achievement</td>
<td>Hofstede, 1980b</td>
<td>Need for Achievement</td>
</tr>
<tr>
<td>Individualism</td>
<td>Need for individual achievement</td>
<td>Markus and Kitayama, 1991; Gannon, 2008</td>
<td></td>
</tr>
<tr>
<td>Femininity</td>
<td>Need for social harmony</td>
<td>Hofstede, 1980b</td>
<td>Need for Social Congruity</td>
</tr>
<tr>
<td>Collectivism</td>
<td>Need for social achievement</td>
<td>Markus and Kitayama, 1991; Gannon, 2008</td>
<td></td>
</tr>
<tr>
<td>High Power Distance</td>
<td>Need for power</td>
<td>Self developed</td>
<td>Need for Power/Security</td>
</tr>
<tr>
<td>High Uncertainty Avoidance</td>
<td>Need for security</td>
<td>Hofstede, 1980b</td>
<td></td>
</tr>
<tr>
<td>Low Power Distance</td>
<td>Need for equality</td>
<td>Self developed</td>
<td>Need for Autonomy</td>
</tr>
<tr>
<td>Low Uncertainty Avoidance</td>
<td>Need for freedom</td>
<td>Self developed</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Relating Hofstede’s (1980a) cultural dimensions to motivational needs

According to the table above, several cultural dimensions share similar needs. Based on the similarities of these needs, the dimensions were paired in motivational needs. The explanation of how dimensions are related to each other and to the needs is provided below.
**Need for Achievement and Need for Social Congruity**

According to the previous theories of Hofstede (1980b), Gannon (2008) and Markus and Kitayama (1991), it can be argued that both individualistic and masculine cultures lead to a strong need for individual achievement and, vice versa, collective and feminine cultures lead to more social oriented needs. A relation between the two dimensions can also be discovered when analyzing its characteristics, which emphasize individual performance and success for the former. Thus, we define the Need for Achievement as the need for competition, successful performance and personal recognition. On the other hand, both feminine and collectivist characteristics emphasize personal relation, belonging to an organization or team, and quality of life (Hofstede, 1980a). Therefore, we define the Need for Social Congruity as the need for harmony, social acceptance and equality in society. We have visualized this conceptual idea in the figure below (figure 1). In this figure we have combined masculinity/femininity and individualism/collectivism dimensions. Based on the level of these dimensions, a culture has either a stronger need for achievement or for social congruity. Also, we have included the countries which are part of our study, according to the values given in Hofstede’s (1980a) study.

![Figure 1. Motivational needs for individualism and masculinity](image)

**Need for Power/Security and Need for Autonomy**

A similar concept could be designed for the other of Hofstede’s (1980a) dimensions; power distance and uncertainty avoidance. Although a relation between these dimensions and motivation has not been made so clear in the literature, as Hofstede (1980b), Markus and Kitayama (1991), and Gannon (2008) made between the previous dimensions and motivation, we can still connect them based on their characteristics, as given by Hofstede (1980a). Both cultures with either strong uncertainty avoidance or a high power distance, seem to have a high need for power and security. The characteristics mentioned by Hofstede (1980a) point into the direction of an inequality between people, a necessary power between authority and subordinates, and all
risks to change status quo should be avoided. Additionally, high need for power and strong uncertainty avoidance can be characterized as a need for written rules for those in power and ordinary citizens, where people are concerned about everyday life and mistrust the others, who they see as a threat to either their power position or security in life. Thus we define the Need for Power/Security as a need for rules, certainty, clear boundaries, and expression of authority. Conversely, cultures with low power distance and low uncertainty avoidance seem to be more motivated by a need for autonomy. Less rules are required, while authorities and ordinary citizens coexist in harmony and mutual trust, which leads to greater creative freedom, initiative and deviation from the safe path (ibid.; Katz, 2005). Hence, we define Need for Autonomy as a need for freedom, risk-taking, and equality between authorities and ordinary citizens. Accordingly, we have pictured these relations in figure 2, in which, based on the level of these dimensions, a culture has either a stronger need for power/security or for autonomy. Also in this figure, we have included the countries which are part in this study according to the values given by Hofstede (1980a).

Conclusively, we argue that every culture has a combination of two types of primary needs; one based on the combined level of masculinity/femininity and individuality/collectivism and one based on the combined level of uncertainty avoidance and power distance. Consequently, a culture will have either a need for achievement or a need for social congruity, and a need for power/security or need for autonomy. Although the new dimension of long term orientation has been added to Hofstede’s (1980a) dimensions (Franke, Hofstede & Bond, 1991), we have not included this in our framework. However, we do suspect that a high level of long term orientation, may lead to a higher need for security. It must be mentioned, that in our framework, one specific need does not necessarily exclude another. In other words, a culture that is placed in the area that is motivated by social congruity in figure 1, can also be motivated by practices.
typical for needs for achievement, but one set of practices is likely to be more efficient in a certain cultural setting than the other.

**Finalizing the framework**

In this section we will appoint existing motivators to the four motivational needs designed above. The categorization of the motivators to the motivational needs (i.e. Need for Achievement, Social Congruity, Power/Security and Autonomy) will classify existing practices in four main areas, which are applicable only in a specific cultural setting. To put it differently, if a culture is categorized as one with, for example, Need for Social Congruity and Power/Security, employees will be motivated by a specific set of motivators. Whereas employees in a culture with a Need for Achievement and Autonomy, for example, will be motivated by completely different motivators.

**Need for Achievement**

We suspect that cultures which are highly motivated by individual achievement can be motivated by extrinsic motivators which are based on individual performance, such as personal financial rewards or personal recognition. Professionals motivated by achievement are driven by project success and outcome, rather than project process. Promotion possibilities could be interesting for these professionals, because it can be a status for success and personal achievement.

**Need for Social Congruity**

In opposition, we argue that cultures which are primarily motivated by social needs are motivated by instruments that are based on team-performance and atmosphere, peer-recognition and teambuilding. Project process is more motivating than the results, as the work and quality time with team members is valued more than the final result.

**Need for Power/ Security**

Professionals motivated by a need for power could be motivated by promotion possibilities, because they will have a drive to move up as far as possible in the hierarchy. Personal success and results could contribute to the execution of power over others. Similarly, people who urge for security can be motivated by financial rewards, which provide them with more sanctuary and stability, and training, to be more secured about their task completion. Also, clear project boundaries and project goals and regular feedback from a manager could contribute to their perception of security.

**Need for Autonomy**

We expect that professionals motivated by a high need for autonomy, value the freedom that they can experience in the completion of their task. Boundaries should be flexible and regular interference by managers is not welcomed. Feedback should go two-ways between manager and subordinates, where both can share their opinion openly and freely. Two way feedback meetings
are most likely to lead to trust (Hofstede, 1980b) and consequently to autonomy. Also, jobrotation implies a more flexible approach to work duties.

**Scores for dimensions**

This particular study categorizes motivation policies according to the cultural settings of USA, Sweden and France in a hybrid R&D organization. Based on the framework above, and the cultural values that were given to the mentioned countries by Hofstede (1980a), we can now predict what motivates employees in these countries. To give a clearer view of these countries, we have inserted them in figure 1 and figure 2. Although Hofstede’s (1980a) model has some limitations, which were mentioned above, it still gives a basic insight in how these cultures differ from each other and may be helpful to clarify empirical findings later in this study.

<table>
<thead>
<tr>
<th>Country</th>
<th>PDI</th>
<th>UA</th>
<th>Individualism</th>
<th>Masculinity</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>40</td>
<td>46</td>
<td>91</td>
<td>62</td>
</tr>
<tr>
<td>Sweden</td>
<td>31</td>
<td>29</td>
<td>71</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>68</td>
<td>86</td>
<td>71</td>
<td>43</td>
</tr>
</tbody>
</table>

*Table 2. Hofstede’s scores for 4 dimensions for the USA, Sweden, and France (1980a).*

When we compare the scores that were given to the USA, Sweden, and France, we can see that the main differences are that USA is more individualistic than Sweden and France (in fact, USA was the most individualistic country measured in Hofstede’s (1980a) study). Furthermore, the USA is far more masculine than Sweden is. Power distance (PDI) and uncertainty avoidance (UA) indices are rather higher in France than in the USA and Sweden.

This results in the concept that the USA is primarily motivated by need for achievement and need for autonomy; Sweden by social need and a need for autonomy; and France by a need for achievement and need for power/security.

To summarize the theory and our conceptual framework, what we try to demonstrate is that if national cultures have different values, as Hofstede (1980b), House et al. (2004), Markus and Kitayama (1991) argue, it may result in a different hierarchy of needs. When managing a hybrid R&D organization, with departments in different geographical areas, it should be considered that employees in these different R&D departments are motivated by different needs and consequently need different HR practices that motivate them. Our framework suggests that according to the values for Hofstede’s (1980a) dimensions, cultures can have four primarily needs. According to a real case scenario, we have predicted that the R&D departments of an American company, located in the United States, Sweden, and France, are motivated by different needs. Yet, they receive the same motivational techniques imposed by the central office in America. In the following sections we will discuss the methods of our study and see if the findings comply with our predictions.
Methods

Sample
This study has been conducted at Albany International, a company that represents a typical example of a hybrid structured R&D in a multicultural setting. The company is active in the industry of paper machine clothing (PMC). The innovations developed at Albany International are not limited to the PMC industry only, but have allowed them to diversify to various other industries, such as aerospace, door systems, and fiber cement industries. Albany International has offices in a wide variety of countries throughout the world and employs over 4,700 people.

The company values their innovative capabilities, as evidenced by the role of the R&D department within the organization and the acquisition of innovative research centers. As mentioned on their website, “Albany Research & Development Center is an integral part of Albany International’s mission to develop and supply innovative products to its customers” (www.albint.com). The R&D structure at Albany International is a hybrid one, with locations spread out over the globe to serve its customers most effectively.

Specifically, the organization has R&D units in the USA, Sweden, and France. The headquarters of the R&D is located in New York and from here the central R&D executive manages the R&D activities worldwide. This also includes HR practices which are employed to the other R&D units.

The innovative character of the organization and industry, plus the fact that the company has a typical hybrid R&D structure, makes Albany International an excellent choice for this particular study.

Data collection
The explorative nature of the study allowed us to implement qualitative techniques of research, such as personal semi-structured interviews and qualitative questionnaires. The data for this study was acquired in two steps: first, through personal semi structured interviews and later on through questionnaires at the Swedish, French, and American R&D departments. The reason to conduct a double research method, is that interviews allowed us to get deeper data about the case in a smaller sample and questionnaires allowed us to get data on a wider scope (Yin, 1989). In other words, by using a questionnaire in addition to the interviews, we can see if the phenomenon exists within the whole organization.

Semi-structured interviews gave us a possibility to get a broad scope of information on the topic of motivation of the employees at Albany international. The R&D manager was interviewed to retrieve the firm’s HR practices to motivate the R&D employees. After all, it is the R&D manager who is responsible for the implementation of the HR practices (Ángel & Sánchez, 2009). The reviewed literature about motivation instruments was used as an input for interview
questions. Accordingly, the R&D employees were asked about their experience and opinion about these HR practices implemented in the organization. Convenience sampling was employed, since the R&D manager had selected other persons for us to interview (Bryman, 2004).

The personal interviews’ data was used in order to create an appropriate qualitative questionnaire with multiple choice and open-ended questions, which were designed in accordance with the HR practices implemented at the organization. This way, respondents were able to answer in their own terms, which resulted in more detailed responses and in-depth data about the topic (Bryman, 2004). The employees of the departments were asked questions regarding the motivation practices, whether they find them appropriate in their cultural setting and whether these practices are actually motivating for a better performance. They also were asked to rank the existing motivation techniques as more and less motivating. The open questions could be linked back to the closed questions and a ranking scale to ensure the internal validity and reliability. Respondents were also asked to describe the motivation techniques not mentioned in the questionnaire (if any were implemented) that they found as remarkably motivating, demotivating or inappropriate in their cultural setting. This type of a request at the end of questionnaire provided a deeper knowledge about the motivation techniques implemented at a local R&D department and the perception of these by the employees.

The questionnaires were spread out to the employees of the Swedish, American, and French R&D departments through the managers of these departments, which can be described as snowball sampling (Bryman, 2004).

All of the data was transcribed. A copy of the questionnaire can be found at the appendix of this article.

Data analyses

The process of analysis is described step by step as it was done, with explanation for the choices made by the researchers, as according to Sandelowski (1993) the research process should be made visible to the reader in order to make it as trustworthy as possible.

The number of participants in this study consists of four questionnaire respondents from the United States, five questionnaire respondents from France, three questionnaire and three in-depth interview respondents from Sweden. All of the interviews were recorded and transcribed.

As mentioned above, the interviews were semi structured, as there was a specific topic that we as researchers wanted to investigate. The data was analyzed in accordance with the theories that we used for our research. The data was categorized in several topics: motivation practices, reward system, recognition system, central R&D office management, management of employees, international R&D departments, feedback meetings, promotion possibilities, deadlines, job
rotation, etc. (Mintzberg & McHugh, 1985, as referred to in Eisenhardt, 1989). Pattern coding is a way of grouping the summaries of data into smaller topics, which keep the fieldwork more focused and creates a certain guideline for the analysis of the data (Miles & Huberman, 1994). The patterns from one response were matched with the patterns from the others and this made the evidence of existing practices at Albany International more grounded (Bourgeois & Eisenhardt, 1988; Eisenhardt & Bourgeois, 1988). The patterns allowed us to design a questionnaire that is relevant to the motivation practices implemented at Albany International, which makes the questionnaire design more reliable (Miles & Huberman, 1994).

The questionnaire responses were categorized according to the topics of the questions and according to the country of location of the respondent. Categorization of answers according to the location of the respondents enabled the analysis of the data on the cultural level. The different kinds of questions, such as multiple choice and open-ended questions and the scale question provided more internal validity to the data acquired (Merriam & Simpson, 1995).

**Results and discussion**

Semi-structured in-depth interviews of the Swedish R&D manager and Swedish R&D employees had gained us a clear view of the motivation practices implemented in the organization and the opinions of the Swedish workers about it. Accordingly, we were able to develop qualitative questionnaires which were sent to R&D professionals in other R&D units. This has resulted in the following findings.

**Motivation practices**

The interview results show that the motivation techniques consist of the following instruments. *Promotion possibilities* are used as techniques to motivate employees to perform more innovatively in the USA and in Sweden. In France career progression in terms of promotion is not possible. *Employee feedback* is used in all R&D units to support employees’ behavior and tasks. *Recognition and financial rewards* is also used to motivate employees’ creative behavior. The company has designed a special system for this, where team members or management can nominate an employee for a “bronze”, “silver”, or “gold” nomination, depending on the value of the idea/innovation. This nomination first leads to an entry in a list of most innovative employees, which is accessible by everyone (recognition), and (s)he also can choose a gift from a catalogue (materialistic reward). *Training* is given by all R&D units to increase the employees’ capabilities and to support them in their task completion.

The respondents were asked to specify whether they feel motivated by the motivation practices which they experienced. As already mentioned in methodology section, the questions were structured as multiple choice, open-ended and ranking type, so that the respondents had an opportunity to explain their answer. The answers of the respondents were categorized according
to the location of the R&D department, and analyzed according to the conceptual framework presented earlier in this article.

<table>
<thead>
<tr>
<th>Common motivators</th>
<th>USA</th>
<th>Sweden</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal success; Financial rewards; Feedback; Promotion</td>
<td>Individual recognition; Managerial recognition</td>
<td>Team recognition; Job rotation; Project process Team atmosphere</td>
<td>More interesting rewards; Project result</td>
</tr>
</tbody>
</table>

**Table 3. Empirical findings**

**Common motivators**

Table 3 summarizes the results from the interviews and the questionnaires that were filled out by the respondents. The findings show that no matter what country the respondents are from, financial rewards, regular feedback, promotion possibilities, and constant personal success were seen as motivating factors. That is, not only did the respondents indicate that these practices are motivating for them, these practices were also among the highest ranked, in terms of most motivating practices.

The fact that most of the respondents found that financial rewards is an important motivator for them in their work, contributes to the, already highly divided, field of research about financial incentives and performance. Thus, our results support the findings of Manolopoulos (2006) and Prendergrast (1999), and show that financial incentives are perceived as a motivator by R&D professionals indeed.

**Country specific motivators**

More interestingly, however, is how the employees from the different R&D units differ in how they are motivated in their work. The respondents were asked whether they are more motivated by the result of a project or by the process of the project. The majority of the Swedish respondents indicated that the process was more important than the result, but for the French respondents the result was of higher importance than the process.

Swedish respondent: “It is more important for me to have a good work process, it is much more motivating that the result. Group work, time spent on a project – these are the motivating factors”

French respondent: “Results are what we work for, so seeing a good result of my work is highly motivating for me.”
Furthermore, we have noticed a strong aversion towards the current recognition/reward system at Albany International, which was explained above. Although nearly all respondents have claimed that the current system is not effective, we can notice differences in the respondents’ perception of this practice. For instance, respondents from the USA raised the issue of (unhealthy) competition it creates. Moreover, they would rather see a recognition system based on the individual (“a plaque with my name” was mentioned) and coming from their manager.

American respondent: “This nomination technique is just ridiculous! It creates unhealthy competition among the employees and eliminates all those who work hard, leaving only a few workers recognized. Not everybody is so competitive, but everybody works hard. I can’t stand this competition!”

American respondent: “If they want to recognize good work, why not give me something that recognizes my work, a plaque with my name on it. This nomination gives and shows me nothing motivating.”

However, French respondents suggested that this practice would be more effective when the rewards are actually interesting and perhaps more adjusted to the local cultural setting of the employees.

French respondent: “I would feel much more motivate by a reward or recognition like tickets to the theatre for me and my family, or invitation to a restaurant for me and my wife. This ‘gold’, ‘silver’ and ‘bronze’ nomination with a chance to get a mixer at the end of the quarter mean nothing to me.”

The Swedish respondents, on the other hand, perceived the recognition system not motivating enough, due to the fact that it recognizes only one team member, rather than the whole team and due to the impersonal way of recognizing

Swedish respondent: “I want my whole team to be on the list of innovative employees, because we all worked on the project, I’m not the only one who has contributed. And what is this e-card? It is the same for everybody, I’d rather have a face-to-face ‘Thank you’ than this e-card”

Another way management used to recognize innovative employees was by a symbolic gift, in this case a plastic carrot, which employees could put on their desk as sign of innovative behavior and achievement.

Swedish respondent: “Are you kidding me? This carrot is the most ridiculous attempt to motivate employees! What am I supposed to do with this carrot? It’s almost humiliating to have this plastic thing on my desk! Highly de-motivating!”
Swedish interviewees mentioned that they were also motivated by job-rotation, i.e. the exchange of professionals between R&D units. This used to be possible in the company and, according to them, facilitated knowledge transfer and innovation.

Swedish respondent: “We used to rotate our jobs, travel to the other R&D departments in France or US, and it’s very motivating. We exchange the knowledge and get new ideas. It was a very good practice.”

Training is seen as motivating by French and Swedish employees, however in comparison with other motivation practices of the company it has least effect. Whereas, American respondents claimed the nomination system as not only least motivating out of all practices, but instead as de-motivating. The unhealthy competition caused by this current recognition system intimidates the employees who would be much better motivated by financial rewards and personal recognition.

Our empirical findings show that R&D professionals are motivated by different needs and, therefore, motivation techniques need to be adjusted according to a specific cultural setting in order to reach maximum efficiency. This is in accordance with Hofstede (1980a) and House et al. (2004), who speculated upon the inapplicability of standardized motivation techniques across cultures. This, in turn, supports our argument that HR managers of hybrid R&D structured organizations need to adjust the motivation techniques according to a cultural setting.

**Discussion**

In order to motivate R&D employees from specific cultural settings most effectively, we have developed a conceptual framework which combines sets of motivational practices with employees’ cultural settings. The findings of the case of Albany International will illustrate if, and if so which specific aspects, our framework is applicable. We will demonstrate for each of the four motivational needs (Need for Achievement; Need for Social Congruity; Need for Power/Security; Need for Autonomy) if the assigned motivation practices found support by the empirics.

Need for Achievement is typical for the culture where high masculinity index (Hofstede, 1980b) meets high individuality index (Markus & Kitayama, 1991). The American culture is ranked as a culture with high masculinity index and remarkably high individuality index, characterized as the one in need for competition, successful performance and personal recognition. Empirical findings show that most of the American respondents are motivated by the possibility to get promoted, which can be classified as a result of successful performance; and a personal type of recognition, e.g. plaque with their name on it. However, need for competition, which we speculate is typical for Need for Achievement, is mentioned by the American respondents from a negative perspective and as de-motivating. The negative affiliation for competition can have several causes: a) R&D professionals perceive competition as a *controlling* extrinsic motivator,
which crowds out the intrinsic motivation (Frey & Jegen, 2001); b) the specific corporate culture could interfere with personal motivation needs; c) the sample was too small to test the validity of the framework.

Need for Social Congruity is typical for the culture where high femininity index meets high collectivism index. This need is characterized by such motivation factors like harmony, social acceptance and equality in society. Swedish culture scores high on femininity index and is more collectivistic than the United States (Hofstede, 1980b). Consequently, the results of the study show that teamwork, social recognition and acknowledgement of the entire team is motivating for the Swedish employees and therefore complies with our estimations.

Need for Power/Security represents a combination of high uncertainty avoidance index and high power distance index (Hofstede, 1980b). Needs for rules, clear boundaries, certainty and expression of authority are suspected to be typical in this motivational need category. France, as a country that scores high in power distance and uncertainty avoidance indices (Hofstede, 1980a; House et al., 2004), showed to be mainly motivated by promotion, financial reward and the result of a project, rather than the process. Hence, this is in accordance with our estimation developed in the conceptual framework.

Need for Autonomy, characterized by low power distance and low uncertainty avoidance scores, contain needs for freedom, risk-taking ability, and equality between authority and ordinary citizens. Sweden, as an example of a country with low power distance and low uncertainty avoidance (Hofstede, 1980a) shows to be motivated by two-way meetings between the subordinates and managers, due to the possible exchange of ideas and brainstorm; open schedule of work, i.e. no overwhelming pressure of deadlines, and possibility of job rotation within the company. Thus, Swedish R&D professionals do have a need for autonomy and fits in to our framework. However, as empirical findings show, Swedish employees claim also to be motivated by financial rewards and promotion, which points into the direction of Need for Power/Security, rather than Need for Autonomy. This could partially be explained by House et al.’s (2004) findings in their GLOBE study. In this particular study, Sweden was found to be very societal collectivistic and uncertainty avoidant, which would resemble a Need for Power/Security.

In order to summarize examples of cultural settings and specific motivational needs provided above, it is essential to say: the conceptual framework developed in this particular study, shows that specific cultures do have specific motivational needs. We have found support for our framework through empirical findings. Of course, these findings cannot be generalized and this study has a number of limitations that will be discussed later.
Conclusions

*The aim of the study was to create a conceptual framework of motivation practices that can be applied to specific cultural settings in a multicultural hybrid R&D organization.* A case study of a multicultural organization with hybrid R&D structure was taken as an example. Careful investigation of motivation, cultural dimension and hybrid organization theories lead to a conceptual framework. This framework was designed in order to link specific motivators with specific cultural settings. With an exception of a few aspects, we found support for the fact that specific sets of motivators are applicable in a specific cultural setting. In other words, not only standardized motivational practices do not work universally (Hofstede, 1980b), but also motivators need to be adjusted to motivational needs of a specific culture. Hence, the contribution of this study is that we have operationalized specific motivators to four different cultural settings.

Companies that have hybrid R&D structure in a multicultural setting have to consider the pitfalls of standardized motivation practices. Of course, all of the employees need to be motivated through reward, recognition, and success. However, the way reward, for example, is handled by the management, can make a significant difference in the way the employees (R&D employees in this case) perceive it. Americans have a preference towards individual/personalized rewards. Whereas, Swedish employees have a preference towards a team-based reward.

Carrot management is a vivid example of a motivation practice that was designed by management in a specific culture (United States) and was implemented across cultures. Not only was this motivation practice seen as not motivating, but it was referred to as the “most remarkably de-motivating” practice implemented in the organization.

**Managerial Implications**

Based on our conceptual framework and the data that we retrieved through our study, we would like to suggest some implications for the managers of organizations where cultural dimensions are not limited to only one specific culture. As already mentioned, specific cultures have specific motivational needs and standardized motivation practices cannot satisfy these needs. Thus, the table below will provide an outline of motivational needs and specific motivation practices appropriate for each of the need. Some of the motivational needs overlap, but so do the cultural dimensions, where it is impossible to draw a distinct line.

<table>
<thead>
<tr>
<th>Need for Achievement</th>
<th>Promotion; individual recognition; personalized rewards; financial reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Power/Security</td>
<td>Promotion; financial reward; emphasizing result, rather than process</td>
</tr>
<tr>
<td>Need for Social Congruity</td>
<td>Recognition of the entire work-group; friendly teamwork atmosphere; emphasizing work process</td>
</tr>
<tr>
<td>Need for Autonomy</td>
<td>Freedom of choice of projects; open schedule; two-way meetings between management and employees; job rotation; flexible boundaries; limited number of deadlines</td>
</tr>
</tbody>
</table>
Some of the motivators were mentioned by all of the respondents, however, they were ranked as more appropriate and more motivating in one culture than the other. For instance, financial reward was motivating for all of the respondents, however, the respondents from masculine and individualistic cultures ranked it as one of the most motivating practices.

The motivators appointed to the motivational needs can be considered as a guideline for how to motivate R&D professionals most effectively. These sets of motivators should be considered as aspects that could be emphasized by the management, rather than chosen as a single set of motivators, also to avoid imbalances between employees from different units.

**Limitations**
There are several limitations in this study, which are important to mention. Due to the fact that this is a case study, we cannot generalize the results and we cannot use the results of the study to prove the validity of the conceptual framework developed in this article. The sample size is also not large enough to make any sort of generalization and much a bigger sample is needed to prove the validity of the framework.

As many other multicultural studies, we refer to Hofstede’s (1980a) study, which is seen as a milestone in the whole intercultural area. However, Hofstede’s (1980a) study has been criticized by some researchers and his dimensions are rather outdated. Moreover, we refer to the GLOBE study (House et al., 2004) in our analysis. That study was conducted later than Hofstede’s (1980a) study and there are some differences in the dimensions scores between the cultures. These scores might be different due to the different measurement styles, but also due to the time gap between them. Due to the fact that the GLOBE scores and Hofstede’s scores for Swedish culture differ, our conceptual framework needs more empirical testing. However, we would like to emphasize that we our conceptual framework makes use of the cultural dimensions, rather than the scores that were given to specific nations. The scores for the countries in this study were only used to find support for our framework.

Moreover, when measuring values in one firm, the danger lurks of measuring aspects of the corporate culture, rather than the national culture of the respondents. This could have caused a bias in our empirical data. Neither have we controlled for other demographic variables of the respondents, such as age, gender, or social background.

**Future Research**
This study contributes to the existing literature on motivation across cultures, motivation of R&D professionals in hybrid R&D structure and specifically contributes to the linkage between motivation practices and cultural settings. However, in order to prove the validity of the
framework, it is essential to conduct a quantitative generalizable study of multicultural organizations with a hybrid R&D structure. Also, several cultures need to participate in the study in order to find more proof to the existing differences in motivational needs across cultures.

Future research should also take into account other variables, such as mentioned above, as they can bias the results. Although this study was specifically done about R&D professionals in a hybrid R&D structure, we suspect that our framework may be applicable to a wider group of professionals working in a multicultural organization.

Acknowledgements
For valuable advice we thank Jonas Rundquist, our supervisor at Halmstad University. We would like to thank Albany International for sharing valuable information with us. Especially, we would like to express our gratitude to everybody who has been willing to cooperate with this study, by either filling out a questionnaire or by participating in an interview.

References


**Appendix:** Questionnaire.

1. Do you perceive the reward system of “bronze”, “silver” and “gold” nominations as motivating you for the further innovations?
   a. Yes, I feel motivated.
   b. No, I do not feel motivated.
   c. Other:
2. When/if your name appears on the list of innovative employees do you feel recognized by:
   a. Your peers/colleagues.
   b. Your manager.
   c. Both peers/colleagues and manager.
   d. Do not feel recognized.
3. If one of your project team members got nominated for “gold”/”silver”/”bronze” nomination on the list of achievements, do you think you and your colleagues are
recognized equally if the name of only one employee is on the list of the innovative employees?
   a. Yes, one person’s name can represent the whole team and I feel motivated.
   b. No, my name also should be on the list.
   c. No, all of the team members should be on the list.
   d. Other:
4. Do you find good team work relationship motivating?
   a. Yes, good team work relationship is motivating.
   b. No, team relationship does not motivate me.
5. Do you find personal success motivating?
   a. Yes, I need to succeed regularly to feel motivated.
   b. No, I do not need to succeed regularly to feel motivated.
6. Do you feel motivated when you receive training within the company?
   a. Yes, training motivates me to perform better.
   b. No, training does not motivate me to perform better.
7. Do you feel you have all the opportunities you need to get necessary training within the company?
   a. Yes, I can get the training that I need at the company.
   b. No, I do not feel I get all the training I need.
   c. Other:
8. Do you have any process/production feedback meetings with your manager/employees?
   a. Yes, we meet regularly.
   b. No, we do not have feedback meetings.
9. If your answer to question 8 was “no”, please ignore this question and proceed to question number 10. If you answered “yes”, are the feedback meetings with your manager/subordinates two ways? (both sides exchange their opinion)
   a. Yes, both my manager/subordinates exchange our opinion.
   b. No, only one of the sides expresses their opinion.
10. Do you feel motivated by the way the feedback meetings are structured?
    a. Yes, I feel motivated when both the manager and subordinates can exchange opinion. Please shortly specify why…………
    b. No, I do not feel motivated when both the manager and subordinates can exchange opinion. Please shortly specify why…………
    c. Yes, I feel motivated when only manager or subordinates share their opinion (one way feedback).
    d. No, I do not feel motivated when only manager or subordinates share their opinion (one way feedback).
11. If you receive any financial reward for your performance, besides your normal salary, do you find it motivating?
   a. Yes, I am motivated by financial rewards.
   b. No, I do not feel motivated by financial rewards.
   c. Please, specify why or why not:

12. Do you feel that you have an opportunity to get promoted within the company because of good ideas/performance?
   a. Yes, I feel an opportunity to be promoted if I perform well in the company.
   b. No, I do not feel an opportunity to be promoted if I perform well in the company.

13. Would a possibility to be promoted be motivating for you?
   a. Yes, I am motivated to perform better if I have a possibility for promotion.
   b. No, I am not motivated to perform better if I have a possibility for promotion.

14. Successful outcome of a project is more motivating than the process of work on the project.
   a. I find the result more motivating for better performance than the process.
   b. I find the process of work more motivating for better performance than the outcome.

15. Which of the following factors do you find most motivating for you to perform better? (1 being the most motivating and 9 being the least motivating factor)
   b. Recognition of all the team members.
   c. Manager’s recognition.
   d. Financial reward.
   e. Nomination reward (“bronze”, “silver”, “gold” nomination on the list of innovative employees)
   f. Possibility to get promoted within the department/company.
   g. Ability to get necessary training.
   h. Feedback meetings with management/subordinates.
   i. Good performance/result.
   j. Good work process.

16. Are there any practices that your management implements that you find remarkably motivating? Please, shortly describe the practice and why it is motivating:

17. Are there any practices that your management implements that you find unsuitable/de-motivating?
   Please, shortly describe the practice and why it is unsuitable/de-motivating:

18. Are there any practices that your management implements that you find unsuitable in your cultural setting?
Please, shortly describe the practice and why you find it unsuitable for your culture: