

Acknowledgements

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Introduction

One of the central challenges facing organizations, no matter their category and end goal, has always been to successfully coordinate the various divisions and individuals comprising them into a cohesive and functioning entity, able to efficiently execute the primary objective. As they grow, organizations tend to adopt an internal structure with clearly divided departments, units and teams, each with their own explicit tasks and duties. However, this process, which renders the organization's everyday functioning possible, can create an efficiency-reducing by-product; the silo effect. This occurrence relates to the tendency of employees to favour their own department over the organization as a whole and to enter into conflict with members of other units, thus hampering internal collaboration. Silos, as they are also known, have been present ever since organizations started existing, yet have only been studied for the past twenty years. The silo effect is usually associated with for-profit corporations, but can occur in all types of organizations.

Conversely, with the aim of gaining competitive advantage, corporations adapt their business strategies to extract the maximum value from their resources, human and other, and stay ahead of their rivals. One of these solutions, known as Entrepreneurial Orientation, refers to the strategy of encouraging employees to come up with innovative products or services, either through the internal creation or external identification thereof. The pursuit of Entrepreneurial Orientation (EO in short) necessitates the implementation of various companywide practices, aimed at providing employees with the best possible environment for devising innovative solutions.

This dissertation examines the causal relationship between the silo effect and the pursuit of EO within large organizations. More precisely, whether the latter can attenuate the former and thus render inter-departmental cooperation more productive. The hypothesis guiding this study is that the various entrepreneurial practices corporations employ with the aim of strengthening EO, such as the active promotion of teamwork, communication, and personal growth, can have a remedial influence on the silo effect.

Before analysing the exact nature of the correlation, it is necessary to ascertain whether it exists in the first place. This first question this dissertation attempts to answer is whether firms employing certain aspects of EO are less affected by silos. Subsequently, this

study looks at how exactly do entrepreneurial processes exert this influence; which methods affect silos and to what extent. Finally, recommendations are given for future research on the basis of the findings.

The theoretical framework for this dissertation emanates from the relevant scientific literature on the topics of the silo effect and practices related to EO. The analysis of the two concepts provides theoretical interpretations of the proposed correlation and its unfolding. With the aim of verifying the hypothesised effects of each practice on silos, a qualitative study is carried out among members of large organisations. The results of the questionnaire are then compared against the proposed relations, showing more precisely the ways in which entrepreneurial practices weaken silos. The questionnaire can also serve as a framework for future research.

In light of the significant damage silos cause both to businesses and to individuals, various strategies have been developed over the years in order to curtail them. However, Entrepreneurial Orientation as a potential remedy has not been sufficiently explored, with no more than several of its aspects being mentioned as detrimental to corporate silos. This paper therefore addresses a gap in the literature, and analyses in detail several mediums of enacting EO. The conclusions presented herein are first and foremost meant to incite and guide further, more extensive research. However, they can also offer practical solutions to managers combatting the silo effect.

1) Context

This dissertation explores the existence of a link between the implementation of entrepreneurial practices in corporate entities, and the mitigation of the silo effect. That is to say, whether strategies such as Entrepreneurial Orientation can lead to a significant reduction of organizational silos. In order to understand the way in which this may be achieved, it is first necessary to introduce, define and analyse these concepts.

1.1) The large enterprise

The exact definition of large enterprises varies from region to region, both in terms of criteria used and their value. While all definitions include the number of employees and yearly turnover, the limit differs. The minimum threshold for the former ranges between 250, 500 and 1000, in some cases even going up to 5000 employees. In the case of the latter, the threshold is usually around 1 billion euros or dollars. Other criteria used to define large enterprises include the balance sheet total, yearly value of investments and the presence of full time IT staff, among other elements.

The silo effect is most commonly associated with large organizations. This is chiefly due to the fact that there needs to be several distinct entities within an organization, each with a different set of tasks and which function independently of the others, in order for silos to exist. For efficiency purposes, as an organization grows, so do the distinctions between its departments' roles and responsibilities.

Furthermore, while Entrepreneurial Orientation is applicable in all types of businesses, it has mostly been associated with large for-profit corporations. An environment with an increased number of people and tasks offers a wide array of information and resources, crucial for innovation. Therefore, a study examining the effect of EO on the silo effect has to be conducted within large organizations in order to provide credible results. For this reason, it is necessary to define and understand the environment in which this study takes place.

1.2) The silo effect

The majority of the problems associated with inefficient communication and collaboration in large organizations can be traced to one root cause, known as the silo effect. Focusing only on one's immediate duties and tasks while ignoring the rest of the organization helps build up invisible barriers between the various functions, hampering efficiency and setting them against each other in the long run. The term „silo effect“ stems from the analogy that the divided departments act as grain silos; giant isolated structures with no feedback loop between them. Serrat (2017) defines the silo effect as „a figure of speech for organizational entities (...) that lack the desire or motivation to coordinate (...) with other entities in the same organization“. Such an atmosphere goes hand-in-hand with a certain way of thinking and acting, known as silo mentality, which further deepens the divide and strengthens the silos.

Whatever the root cause of silos, such as for example an accumulation of conflicts, the dissatisfaction with colleagues from other departments or group favouritism, they hinder the flow of information and resources, and hamper the execution of multi-departmental projects. This can cause significant damage to the organization in the long run. While this phenomenon is mostly seen as a corporate issue, silos are no less present in health care (Hajek 2013), higher education (Tight 2014) and the public sector (Bannister 2008), among other domains.

The existence of silos is one of the main obstacles which businesses face, and it is prevalent in almost all enterprises. In fact, one study has shown that „silos, or corporate turfs, (...) exist in 83% of the companies that responded“, who consider them as the biggest obstacle to success and growth (Stone 2004). Overcoming this issue has become one of the main priorities in the business world, with a significant number of scientific papers being written on the subject in the past two decades. Moreover, companies are turning to outside sources, such as consultants, for help with dismantling silos (Lencioni 2006).

The consequences of the silo effect can be countless and vary from one organization to another. Depending on the proportions of the issue as well as the nature of the organization, silos can leave a wide range of marks.

First of all, silos lead to a skewed selection of priorities. Favouring the success of a particular unit over that of the organization is a clear indicator of the presence of silo mentality (Serrat 2017). When employees choose to identify with their function, they place its success as the top priority, thus failing to identify with the organization and to fight for its

wellbeing. Instead, one fights for one's department and views the others not as colleagues but as competitors. This leads to, in the worst-case scenario, departments which are pitted in fierce battles over power and resources (Lencioni 2006). Other consequences listed by Serrat (2017) include the dilution of roles and responsibilities, calling authority into question, resource misallocation and defensiveness in the face of criticism.

Willcock (2014) stresses that silo mentality brings about conflict and stress. Constant infighting and the deterioration of interpersonal relationships at work create a very stressful environment. Working in such conditions for months and even years takes a toll on both the physical and mental health of employees. Many studies have linked productivity and general happiness. In fact, satisfied employees can be up to 12% more productive than unhappy ones (Oswald et al 2009). Furthermore, organizations with a bad reputation have a high employee turnover rate and trouble attracting personnel (Lencioni 2006). Not only does this hamper the every-day life of organizations, with a stream of new arrivals having to adapt to their new jobs, the bad reputation caused by a high rate of turnover can scare potential clients away.

In the end, the silo effect leads to a loss of profit (Willcock 2014, Schutz and Bloch 2006). Internally, the inability to attract and hold on to competent personnel affects productivity, as does the unhappiness of the remaining employees. Also, constant conflict weakens all divisions and diverts focus from the main goal, the prosperity of the organization (Lencioni 2006). Externally, regular customers start sensing that there is a problem within the company and begin to lose confidence. They take their business elsewhere, leading the company to lose ground to its competitors. With its standing lowered, it encounters increased difficulties in attracting new customers and investors. A vicious circle ensues, which cannot be broken until the silo effect is eliminated.

And while the ability to attract and keep personnel and clients, not to mention registering profit, is crucial to the success of any organization, it should not take priority over the well-being of the employees. However, this is jeopardized by silo mentality, as the constant, every-day conflicts between colleagues „bleed over into their personal lives, affecting family and friends in profound ways“ (Lencioni 2006). This is, perhaps, the most far-reaching and tragic consequence of the silo effect.

1.3) Entrepreneurial Orientation

In the rapidly evolving business world, organizations have been employing various methods in order to stay ahead of competitors. One of these methods is to encourage employees to act entrepreneurially within the framework of the organization. The stated goal of corporations which strategically encourage entrepreneurial behaviour is to gain advantage over competitors by obtaining innovative solutions from their own ranks.

Entrepreneurial Orientation (EO) is a term used to describe a company's strategy as being oriented towards creating innovative solutions. Employees are encouraged to come up with new products and services, or to improve existing ones. Miller (1983) defines an entrepreneurial firm as „one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with „proactive“ innovations, beating competitors to the punch“. This definition, one of the first to emerge, has been cited by numerous subsequent scientific articles. Instead of behaving conservatively in the market, entrepreneurial firms aim to create advantage through innovation.

A company-wide strategy, EO is adopted, implemented and supervised by the top executives. A wide array of decisions and practices, conducive to entrepreneurial behaviour, have to be implemented in order for EO to function. These initiatives, such as promoting networking, adapting the corporate culture and hiring entrepreneurially minded individuals, can profoundly influence numerous aspects of an organization's life. One of these may be the attenuation of the silo effect.

1.4) The hypothesis

The question which this dissertation poses is: can entrepreneurial practices alleviate the silo effect in large organizations? Current scientific literature on the topic of both the silo effect and Entrepreneurial Orientation does not propose a connection between the two. The existing literature focuses almost exclusively on external effects of EO, such as brand recognition and financial results. Since there is no pre-existing research linking the silo effect and EO, the aim of this dissertation is to posit and analyse the effect of the former on the latter, and to propose further research into the topic. The results presented herein, while supporting the proposition, are also intended to serve as a framework for future research.

To begin with, it is necessary to determine whether a correlation between EO-related practices and the weakening of the silo effect can be demonstrated. Subsequently, it must be shown that this correlation is causal. Furthermore, this begs the question, how exactly do

entrepreneurial initiatives influence corporate silos? Can this influence be fully understood and intentionally applied by managers when tackling silos?

At the moment, it is impossible to give concrete answers to these questions, as there is no existing body of research with which to compare the results of this paper. However, showing that entrepreneurial initiatives can potentially reduce the silo effect should encourage research and help managers tackle silos. Due to the prevalence and consequences of organizational silos, both for businesses and public institutions, all promising remedies are worth exploring. While it is unlikely that EO and associated practices can completely eliminate silos, they could yield significant results if paired with established methods of dealing with this problem.

2) Methodology

2.1) The internship

The idea for this dissertation occurred to me while I was pursuing an internship at the Coca Cola Hellenic Bottling Company (CCHBC) in Belgrade, Serbia, during the summer of 2019 (*see annex 1*). The internship, dubbed the Coke Summership, numbered 30 participants, all attending Master's studies at various universities, and who were deployed in different departments of the company, based on their studies and experience. The Summership lasted for six weeks, with one day of each week dedicated to workshops and seminars, and included a weekend long teambuilding trip.

I was a part of Field Sales, accomplishing most of my internship in the HoReCa channel which services hotels, restaurants and cafés. In addition to accompanying the Business Developers on their visits to clients, my team leader and tutor assigned me to manage the launch of a marketing campaign targeting the most high-end establishments in Belgrade, which I saw as a sign of great trust. Upon its successful completion, I presented the results of the campaign to the executives of the department.

This project, as well as witnessing how the Business Developers handle various aspects of procurement and client relations, made me realize the importance of smooth inter-departmental collaboration to the continued success of CCHBC. None of the sales deals

which I witnessed, as well as the project which I directed, would have been possible had all departments not worked in unison. Not only that, the various unforeseen obstacles required a great degree of flexibility and improvisation. For this to be successful, all members of all the departments did not only have to be sufficiently skilled and organised, but also willing to adapt and go beyond their immediate duties in order to come up with inventive solutions.

This conscientiousness and motivation fascinated me. From the first day of my internship, I sensed that most, if not all the employees I encountered identified strongly with the firm. As the internship progressed, I remarked that the company places a great deal of attention on community as well as familiarity among both individual colleagues and departments. Indeed, most of the entrepreneurial practices discussed in this dissertation, such as a strong corporate culture, the recruitment of team oriented individuals and lateral mobility to name a few, are employed to great success by CCHBC.

Moreover, I was in a privileged position to witness this coordination. As one of our instructors put it, the entire company works for the sales department, as its success and continued existence rely on selling enough products. Therefore, all the firm's initiatives culminate in providing the best possible platform for the sales department. This was particularly evident during my personal project, as I had to deal with and direct people from accounting, marketing, procurement and sales.

Since the opening of its Belgrade branch in 1968, Coca Cola Hellenic Bottling Company has been at the top of the non-alcoholic beverage market in the country, staying ahead of both local and foreign competitors. Successfully navigating the wars, political unrest and social upheavals which have marred the region, has required constant adaptation and proactivity on the part of the people constituting the firm. Characterised by the above mentioned practices, as well as rotating its top executives every few years and valuing the input of all employees, CCHBC is a true entrepreneurial firm and the inspiration for this dissertation.

2.2) The research

The first step in preparing this dissertation was to identify the causes and consequences of the silo effect, as well as to define the most common and impactful tools for instituting entrepreneurial behaviour in corporations. The current scientific literature provided ample material for analysis, out of which I identified various causes of the silo effect and its consequences. Furthermore, out of the numerous entrepreneurial methods employed by companies, I focused on those which could have a negative influence on the silo effect. Subsequently, I introduced and developed my hypothesis that EO practices can help in dismantling organisational silos on the basis of the literature review and my own empirical observations.

Having formulated my theory, the next step was to show a correlation between the application of entrepreneurial practices and an absence of silos, or at least a lesser prevalence thereof, in a corporate setting. To accomplish this, I conducted a qualitative survey aimed at members of large organizations. As definitions of large enterprises vary significantly, the main criteria for choosing participating organizations was a clear internal division between departments, necessary for the development of silos. The application of Entrepreneurial Orientation, on the other hand, was not a decisive factor in the selection, since its absence can also point to a correlation with the silo effect.

The survey, based on the literature review and featuring both low-level employees and top executives, consisted of 9 open questions aimed at determining whether the respondent's company practices the various methods linked with EO, and whether there is a turf mentality and a lack of communication associated with the silo effect (*see annex 2*). The respondents were assured of the confidentiality of their replies and were invited to express their feelings, in addition to their observations. They were free to skip any question if it did not pertain to their case. In order to guarantee maximum objectivity, they were privy to the main theme of the dissertation, but were not told of its aim.

Starting in January 2020, the collection of replies lasted five months and included numerous people from all over Europe who were contacted, out of which 21 sent in their answers.

2.3) Data analysis

Once the personal accounts were gathered, they were analysed and coded in order to extract prevailing themes, based on the method of Allard-Poesi (2003). First of all, each interview was scoured for words, phrases and sentences conveying respondents' observations and feelings regarding the entrepreneurial practices, as well as the presence of silos in their organization. Then, all the highlighted expressions were sorted and classed into categories based on their topic. Finally, the categories of information were compressed into clear, quantifiable themes, the basis for the conclusions of this study.

Most of the themes extracted from the survey were in direct response to a given question. However, certain tendencies were identified to be in a causal relationship, a valuable discovery for the purpose of this dissertation.

3) Literature review

Following the formulation of the hypothesis, and before its practical examination, it is necessary to understand the relevant scientific literature in order to have a theoretical framework to which to compare the results. Therefore, previous studies on both the silo effect and Entrepreneurial Orientation have been extensively analysed.

3.1) A review of the silo effect

The tendency of members of an organization to form cliques which impede communication has been observed ever since large social structures came into existence. However, it is only recently that this phenomenon has been analysed in the corporate context, with scientific articles looking into the silo effect, also known as turf wars, starting to appear around the turn of the millennium. These papers, which deconstruct various types of organizational silos and examine their causes and consequences, serve as the foundation for researching possible remedies for the silo effect.

3.1.1) Manifestations and characteristics

Regularly associated with the silo effect, the term „silo mentality“ designates the frame of mind of individuals and groups entrenched in an internal cellular division. While silos and silo mentality are not the same, in the sense that the former introduces the latter, the two terms are mutually dependant. If silos are allowed to sprout within an organization, they will necessarily induce a silo mentality, which creates a vicious cycle. However, when this mentality is eliminated, the silos fall apart. Therefore, the two expressions are used interchangeably in scientific literature, usually referring to the same phenomenon.

In most sources, silo mentality refers to the lack of cooperation, or the will to cooperate, among both executives and employees working in different departments of a large social structure (Cilliers and Greyvenstein 2012). By simply ignoring or openly working against each other, people create an environment of encumbered relations, between both individuals and entities. Meetings are used for disputes over resources, with blame for sub-par performance being laid at other departments (Lencioni 2006). Turf wars are most often instigated by the actions or inaction of the senior management, with dissatisfaction and partisanship subsequently affecting the lower levels.

Kleinbaum et al (2008) identify three types of silos. Organizational silos exist due to the rigidity of a firm’s internal structure, which hampers spontaneous communication and collaboration between functions. Social silos, which are the most common, are caused by the behaviour of individuals within an organization. Conflicts and bad or non-existing relationships isolate the functions and form silos. Finally, geographical silos refer to various sub-divisions of MNCs, which find it difficult to collaborate due to cultural differences (Hotaran 2009) or simply the large distance between them (Stone 2004).

Since organizational silos can be eliminated relatively easily through the implementation of a more fluid internal structure and are much less prevalent nowadays, the silo effect is mostly analysed through its social aspect. The matter of geographical silos, on the other hand, is tackled by the implementation of more efficient logistics mechanisms, based on cross-cultural management (Chew 2004).

3.1.2 Causes

While the issue of silos is being addressed in the business world and observed mostly in this context, it is important to note that such a phenomenon has existed ever since humans started dividing into groups and forming societies. The propensity for favouring the interest of one's group above that of other groups is an essential human characteristic (Bacstrom et al 2006). If left to their own devices, people will form cliques and identify strongly with their group identity, an idea also brought forward by Krackhardt and Stern (1988). Furthermore, most people tend to avoid relinquishing complete control of their duties and exiting their comfort zone, reinforcing any pre-existing divides (Willcock 2014). The corporate environment is no different, with the inclination to inadvertently form silos coming naturally to most individuals.

Nevertheless, while the root cause of the silo effect is innately human, there is a whole host of organizational factors which have the potential to exacerbate the issue. The flaws in the internal structure of an organization can in some instances contribute to the development of silos. This is mostly due to the „lack of (...) opportunities to collaborate“ (Serrat 2017) caused by insufficiently developed internal channels of communication, even when there is willingness to collaborate. Nevertheless, such an issue almost only occurs in young firms which have seen rapid and significant growth, thus lacking the time and experience to adapt their internal organisation. Large, established corporations have overcome this stepping stone early in their development (Greiner 1972).

Most authors mentioned in this review point to the failure of top management to connect the entire organization through a common goal as the biggest reason for the creation of silos. A common, general objective such as the accruing of revenue on the part of the organization helps link all the departments into working together for the common good. However, when success isn't defined uniformly throughout all divisions, departments develop separate and sometimes clashing objectives. For example, if the main goal of the marketing department is to organize a certain number of promotions of new products per year, its employees will strive to accomplish that. However, this may put them at odds with the sales department which may not be able to keep up with the various changes of portfolio. This can lead to colleagues blaming each other for a lack of results, further solidifying the silos.

In the long run, such a conflict of interests within an organization, caused by the absence of a common goal, becomes untenable. An atmosphere of rivalry is created where for

one department to accomplish its goals, it must force the others into disregarding theirs and helping the former. Naturally, no-one wants to be in an inferior position and abandon their objective for the sake of a rival group. Moreover, any failure to meet the requirements is immediately attributed to other departments pursuing their own interests and stepping on toes. Employees learn to rely only on their immediate colleagues while seeing others as competitors, thus creating distrust between departments.

An extreme example of this would be the case of Sears, Roebuck and Company, an American department store chain which is on the verge of bankruptcy (Phillips and Rozworski 2020, p.28)^[a]. With the aim of increasing quality by creating an “internal free market”, the CEO dismembered the corporation into numerous independent sub-units. However, instead of creating a healthy internal competition which would yield better products, the departments engaged in turf wars and were unable to cooperate, causing the corporation grave financial difficulties.

Closely related to a common goal is the company identity, represented by its mission, vision and values. The absence of a clearly defined common identity, around which employees could rally, makes it unlikely for them to identify with their company, and to be motivated to fight for it. On the contrary, they tend to relate with the department in which they work (Sy and D’Annunzio 2005). This then leads to the formation of silos in much the same way as the lack of a common goal.

The corporate culture inside an organization plays a big part in everyday proceedings and can have a hand in the build-up of silos (Stone 2004, De Waal et al 2019). Institutions with a stiff, hierarchical structure are particularly at risk. Individuals interact in a highly formal and official way, under the supervision of strict superiors, and risk being punished for overstepping their assigned roles. This leads them to plant their feet into the ground and to accomplish only what is directly asked of them. Focus shifts to the immediate, direct tasks at hand and communication with other departments occurs only when necessitated by work related obligations.

This occurrence is prevalent among larger and older organizations. In order to function more efficiently in spite of the complexities presented by their sheer size, the leaders put in place a cellular division (Schutz and Bloch 2006). This way, the duties and responsibilities of each employee are clear. Everyone is held accountable for their actions. While this makes for smoother internal organisation, such a structure ossifies over time

(Greiner 1972) and introduces a silo mentality (Flap et al 1998). This becomes the norm and is seen as a tradition. To break with such a tradition would be to betray company values (Schwartz and Davis 1981). While this way of operating was common a few decades ago, today's generations are much less inclined to accept an overly hierarchical structure (Hershatter and Epstein 2010), which can lead to conflict.

Dissatisfaction with the organization in general can also lead to the formation of silos. Daily negative emotions in relation to one's workplace sour interpersonal relations, thus deteriorating collaboration (Warr 2001). In the occurrence of an internal crisis, this is exacerbated. If the employees are unhappy for whatever reason, they tend to form small groups centred around their feelings. These cliques then enter into conflict during a crisis period, according to Krackhardt and Stern (1988). Even in the absence of a crisis, dissatisfaction significantly reduces collaboration, as people get along better when they are all happy. And while internal division does not always lead to conflict, the potential is increased when one or several components of the organization appear to be doing better than others. Jealousy and resentment set in, the perfect breeding ground for turf wars (Willcock 2014).

The reward system put in place by top management is, in some instances, another contributing factor to the development of silos (Stone 2004, De Waal et al 2019). This is particularly notable in cases where rewards encourage personal results, rather than collaboration. Incentives such as quotas, bonuses and internal competition are there to motivate employees to work harder in order to achieve a certain gain. However, this may lead to excessive rivalry between individuals and departments (Baucus and Beck-Dudley 2005). For example, the selection of the 'employee of the month' can lead to resentment between colleagues, while performance races between teams or entire departments can turn friendly rivalry into bitter feuds. In the end, instead of employees pushing their own limits, they end up working against each other.

The attitude of managers is equally essential to the formation of silos (Stone 2004, De Waal et al 2019, Sy and D'Annunzio 2005). Being the ones in charge of the various functions, they are constantly in touch with the heads of other departments. When the managers happen to be in bad relations, it enables the formation of silos for two reasons. Firstly, having a bad relationship encumbers cooperation at the top level, with the two managers having trouble finding an agreement over most things. This leads to less common

projects and a general distancing between their departments. Secondly, dissatisfaction on the part of the top manager is passed down through the ranks of his or her own department. Influenced by their boss, some employees may begin to see the other department as a competitor and the reason for any perceived difficulties they encounter.

The detention of knowledge and resources can also cause silo mentality (De Clerq et al 2009). If one department, manager or employee holds a certain resource or piece of information which is relevant to other entities in the organization, a power dynamic is created. The holder then has leverage over those seeking the valuable information or resource, and may attempt to use it to his or her own advantage. Knowledge and resources thus become a source of power, according to De Clerq et al (2009), with the holder in position to ask for favours from the seeker, or to exact revenge upon them by refusing to share. When such a dynamic is set in motion, it creates a positive feedback loop. If the person or department which was the seeker in the previous exchange becomes the holder, they may want to 'settle the score'. The process then repeats itself for every newfound piece of information. Since it brings such power to exchange interactions, any opportunity to gain knowledge necessary for others leads to bitter conflict. People and even entire functions are in pursuit of the coveted source of power, creating rivalries, stifling collaboration and strengthening the silos.

Finally, some people are just difficult to work with. The presence of negative influences sours both inter- and intra-departmental relationships, causing distrust and conflicts (Stone 2004, Sy and D'Annunzio 2005, Lencioni 2006). Based on the Big Five personality model, Kichuk and Wiesner (1997) have found that teams comprised of members exhibiting higher levels of extraversion and agreeableness, and lower levels of neuroticism, produce better results. Conversely, detrimental to team performance are overly introverted, disagreeable and neurotic individuals, and having a significant number of them in close proximity can have a detrimental effect on group performance. It can be argued that there is a causal relationship between these traits and the silo effect; limited collaboration leads to inferior results, causing tension, resentment and ultimately silos (figure 1).

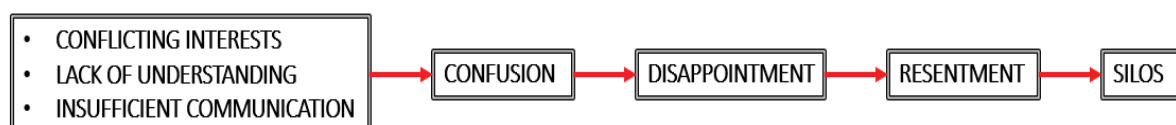


Figure 1: The process leading to the formation of silos (Lencioni 2006)

It is often hard to spot the factors leading to the formation of silos, with managers becoming aware of them only when the damage has already been done. Alone or in unison, any one of these factors can significantly harm the organization if left unanswered.

3.2) A review of Entrepreneurial Orientation

Entrepreneurship is commonly perceived as a personal initiative, executed by charismatic individuals with an innovative idea and with room for flexibility. It stands to reason that it would be the opposite of rigid corporate behaviour. Nonetheless, entrepreneurial practices are equally applicable in the corporate setting, and can positively influence a company's performance if employed systematically. The ensemble of entrepreneurial practices put in place within corporations is most commonly referred to as Entrepreneurial Orientation (EO). This strategy, first defined by Miller (1983), has been employed to various degrees by countless for-profit corporations and analysed by experts for over 30 years. In order for EO to take root and give results, numerous influencing factors need to be taken into consideration and handled accordingly by top management.

3.2.1 Etymology and characteristics

The term 'Corporate Entrepreneurship' (CE) is often used interchangeably with EO. However, Randerson and Fayolle (2010)^[a] distinguish the two. While „EO refers to the behaviours of risk taking, innovation and proactivity (...) CE refers to the identification and pursuit of opportunities“. In this sense, EO is an initiative aimed at the creation of opportunities through innovation with CE being aimed at the external identification of opportunities. Nevertheless, the main goal of the two is the same; encourage employees to take the initiative and work independently to provide the company with an advantage over its competitors.

In the case of CE, this is accomplished through a process of three steps, according to Williams and Lee (2009). First, opportunities, either originating from within or externally, have to be identified. They are then evaluated by the managers in charge and the most promising ones are chosen. Finally, an exploitation strategy is put in place in order to gain maximum value (figure 2).



Figure 2: The pursuit of opportunities in entrepreneurial firms

The purpose of this paper is to explore how the encouragement and subsequent adoption of entrepreneurial behaviour on the part of employees could help deconstruct silos. As CE and EO both accomplish this through slightly different means, they will be encompassed by the term 'EO' following this sub-chapter¹. However, for the sake of academic clarity, this sub-chapter will look at both terms separately.

Stevenson and Jarillo (1990) wrote arguably the most influential paper on the topic of CE. It was their work which fully defined entrepreneurship as a corporate strategy of pursuing opportunities, inspiring a significant body of further research. Apart from pioneering the compatibility of entrepreneurship and the corporate environment, they also describe ways in which firms promote entrepreneurial behaviour on the part of their employees. First of all, companies look for individuals with an entrepreneurial spirit, since not everyone has the capacity to identify opportunities. Subsequently, these people are encouraged to look for opportunities and are rewarded for doing so. Also, firms make an „effort to lessen negative consequences of failure“, another way of encouraging the pursuit of opportunities. Furthermore, firms „facilitate the emergence of formal and informal networks“. Finally, they make all internal resources available to their employees.

The premise of EO and CE is that, like individuals and small firms, large corporations can act entrepreneurially by adopting a corporate strategy based on „innovation, proactiveness and risk-taking“ (Williams and Lee 2009). Unlike small firms and start-ups, where the actors all know each other and an entrepreneurial mentality comes about more naturally, large companies need to adopt entrepreneurship as a corporate strategy. Introducing such behaviour as the norm is the best way to get a sufficient number of employees on board. Of course, it is impossible for everybody to adopt an entrepreneurial spirit and companies with an EO don't punish individuals who don't exhibit the desired behaviour. On the contrary, they reward those who do. This aspect will be analysed later on.

¹ It can be argued that CE falls under the definition of EO, as the identification of external opportunities requires employees to be proactive and independent. Also, pursuing these opportunities presents a certain risk, both for the concerned individuals and the company as a whole.

Closely related to EO and CE is the term 'intrapreneurship'. It is sometimes used interchangeably with the above-mentioned concepts, although erroneously. Amo (2010) focuses on the relation and differences between the concepts. While it can be an essential component of EO, intrapreneurship is different in the sense that it relies on the initiative of individuals attempting to innovate independently of their everyday tasks and the company's strategy. Duncan et al (1988) define practitioners of intrapreneurship, so-called 'intrapreneurs', as „those who take hands-on responsibility for creating innovation of any kind within an organization“. They can be viewed as entrepreneurs operating within corporations. Intrapreneurship originates at the personal level, while EO and CE are company-initiated strategies, implemented in a top-down manner. Therefore, it can be viewed as a method through which CE and EO can be enacted and reinforced.

Duncan et al (1988) further look at intrapreneurship and what it means for companies. Their main premise is that the promotion of intrapreneurship requires a complete reorganization of corporate entities. A setting characterised by a cellular internal division discourages intrapreneurship by default. As immediate, short-term goals are prioritized by the executives, there is little time for prospecting. In addition, independent initiatives are not guaranteed to be profitable, making it disadvantageous for such firms to encourage them. Furthermore, managing creative people is a challenge in and of itself (Mumford 2000), so most companies avoid it and therefore limit the possibility to innovate from within.

Those companies which choose to adopt intrapreneurship as „a strategic commitment“, implement it through four practices. These are, according to Duncan et al (1988), „public statements reinforcing the importance of innovation to the firm“, giving high importance to creativity and innovation, encouraging them through the reward system and having top management understand the specific mindset of creative people. In their view, an intrapreneur is an upgrade to the entrepreneur in the sense that they have the inventive mentality of the latter, coupled with corporate discipline.

Innovation invariably occurs at the hands of the employees. While managers are tasked with organising and overseeing their units, it is their subordinates who create change, either as part of the Research & Development department or as independent intrapreneurs. Therefore, it is the top management which decides to pursue EO, putting in place the necessary steps for it to be applied by the employees. When a breakthrough is achieved, it brings value to the company, and the innovator is rewarded and encouraged to continue.

Thus, a positive feedback loop is created (figure 3). Nevertheless, even in the absence of a breakthrough, attempts at innovation are rewarded in order for the person(s) not to give up their pursuit.

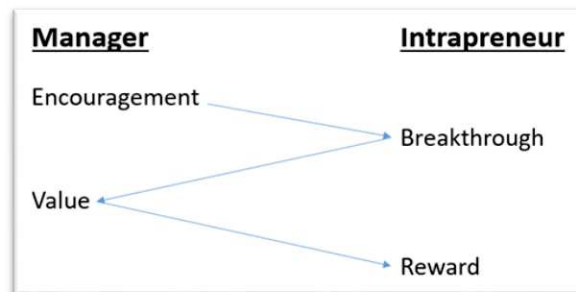


Figure 3: The intrapreneurial process

Entrepreneurship is not limited to local companies or units; it can also be applied by multinational corporations (MNC). Even though their size and the distance between subsidiaries present an obstacle in the elaboration and implementation of a corporate strategy, MNCs have an advantage over their counterparts. According to Williams and Lee (2009), it is the „international network of resources already under the hierarchical control of the firm“. This means having a larger territory in which to pursue opportunities. These authors further identify two main avenues through which MNCs enact EO. These are the internal development of new technologies through R&D and the external investment in new ventures. Gupta and Govindarjan (1991), among others, stress that the free flow of knowledge within MNCs is crucial to the successful adoption of EO and CE.

3.2.2 The flow of knowledge and resources

Various scholars identify the free flow and availability of information (or knowledge) and resources as the most important tool for corporate entrepreneurship, for MNCs and local corporations alike. Knowledge is required both for external investment and for internal innovation. In the case of EO, the focus is on the accumulated knowledge within the company, as well as its dynamics. Gupta and Govindarjan (1991) refer to this as „intra-corporate knowledge flow“. In order for the intrapreneur to gain the best ideas and evaluate possibilities, he or she must know as much as possible about the specific field they are exploring. Next, in order for the idea to be materialized, they need as much resources as possible at their disposal.

However, this is usually a separate challenge. Bits and pieces of the needed resources are dispersed throughout the corporation, and the intrapreneur does not necessarily know where to find them. This problem increases with the size and organizational complexity of a company. He or she must, therefore, „obtain access to resources scattered throughout the organization“ (Stevenson and Jarillo 1990). Furthermore, as discussed previously, holders of valuable information may be reluctant to share. Consequently, when applying EO, managers have to take this into account and put in place systems of „internal coordination [which] enable collection of various pieces of information“ (Walter et al 2006).

Gupta and Govindarjan (1991) argue that communication patterns are key to the flow of knowledge within large corporations. They introduce the concept of „density of communication“, to describe inter-unit exchanges. This is defined as „the number of people in the two units who interact with each other“, and is crucial to the creation and diffusion of innovation. By interacting and collaborating with colleagues from other units, intrapreneurs have access to more knowledge and resources, which increases the likelihood of a meaningful breakthrough. Gupta and Govindarjan (1991) further state that in order for this to happen, companies must have an „adequate information-processing capacity“, and be adaptable to environmental uncertainty.

According to Brown et al (2001), entrepreneurial firms are skilled at applying resources which do not belong to them, borrowing them from partner firms. Randerson and Fayolle (2010) follow this up with the argument that they „identify new combinations of resources, even if the organization does not own them“. This requires intrapreneurs to look beyond their immediate surroundings and envision solutions which require the resources detained by other firms. Doing this broadens the horizons of employees, increasing the potential for innovative ideas. Looking outward in search of resources can lead to them gaining both extra knowledge and human links, which are important factors of entrepreneurial performance (Wiklund and Shepherd 2003).

Another way of spreading knowledge more efficiently is through friendship ties between managers of different functions. According to De Clercq et al (2009), „social exchanges are instrumental for the firm’s ability to combine knowledge across different functional areas“. Being on good terms with peers implies trust and therefore more willingness to share knowledge. Instead of seeing information as a source of power, managers see each other as „partners with common interest in identifying and exploiting

entrepreneurial opportunities for the firm“ (De Clerq et al 2009). This argument applies to department heads and, while these are rarely intrapreneurs, the knowledge which they obtain can then be transferred down the hierarchical ladder to the people coming up with new solutions. On their part, Gupta and Govindarjan (1991) argue that the „socialization of managers can be a powerful mechanism for building identification with and commitment to the organization as a whole, as distinct from the immediate sub-unit“.

Cohen and Levinthal (1990) stress the need to properly utilize the available knowledge, as accessibility on its own is not enough. They use the term „absorptive capacity“ to define the „ability to recognise the value of new information, assimilate it and apply it to commercial ends“. Firms looking to pursue EO „can enhance [their] own absorptive capacity through coordination capabilities“ (Williams and Lee 2009). It is up to senior management to enable and educate the employees to make the most out of the knowledge at their disposal. While having access to resources is a solution to the former, the latter is achieved through targeted learning exercises. These activities have been found to positively affect a firm’s entrepreneurial performance (Rezaei and Ortt 2018).

In the end, all the practices previously described have no effect if the members of an organization do not want to share information and resources. Therefore, the priority for senior management when introducing EO is to make it both possible and desirable for the employees to act entrepreneurially.

3.2.3 Corporate culture

The term ‘corporate culture’ (CC) is used to describe the way of life within organizations. Just as every society has its own distinct culture, so do different types of corporations. Rashid et al (2003) define CC as a „a set of values, beliefs, and behaviour patterns that form the core identity of organizations, and help in shaping employees’ behaviour“. Schwartz and Davis (1981) argue that CC has an immense effect on performance, and can significantly influence success or failure.

The corporate culture develops from the very beginning of a company’s existence, ossifying and becoming permanent shortly thereafter. Habits that are developed at work, manifested through daily interactions and supported by company values, become part of its very essence. According to Sadri and Lees (2001), „over time a dominant set of norms will emerge, guiding the way in which work is accomplished within the organization“. The

distinctive beliefs and values held by both management and employees „create situational norms that are evidenced in observable behaviour“ (Schwartz and Davis 1981).

Departing from the established norms, societal or organizational, is often encountered by resistance, making any attempt to profoundly modify CC a challenge for executives. According to Schwartz and Davis (1981), any attempt at radical change causes dissatisfaction and resentment on the part of both senior managers and employees. This holds true particularly for older organizations (Williams and Lee 2009), as „employee behaviour becomes (...) more difficult to change when attitudes are outdated“ (Greiner 1972). Nevertheless, Sadri and Lees (2001) argue that it is possible to modify CC, if applying the appropriate steps. Schwartz and Davis (1981) assert that it is unwise to completely modify CC, and that firms doing this need to focus only on changing the aspects which are not in line with the current strategy. They also maintain that, instead of doing it rapidly, CC „is best altered by gradually reducing the perceived differences between current norms and the new behaviour“.

Due to its profound impact on life at work, CC can be used to complement the corporate strategy. Hence, this can also be the case for Entrepreneurial Orientation. Stevenson and Jarillo (1990) linked EO and CC by introducing the concept of an entrepreneurial culture. Randerson and Fayolle (2010) described this link as „a positive synergy between the detection of ideas, the will to pursue them and the confidence in their success“. Lumpkin and Dess (1996) maintain that the successful implementation of EO depends on a firm's culture, values and vision, elements which are all linked to CC. Therefore, the culture needs to encourage or at least enable entrepreneurial behaviour (Amo 2010). One way to achieve this is through the policy regulating the compensation of desired behaviour and performance.

An integral component of CC is the way in which companies reward their employees' performance. This is known in scientific literature as reward management (Armstrong and Murlis 1998). To begin with, a quantitative goal is set by the relevant authority. This is usually the department leader, and the goal is the same for the entire staff of that department. The quota to be reached, and the subsequent reward, is commonly set on a monthly basis (WorldatWork 2012).

Rewards can be a double-edged sword. As seen previously, they can pit teams in fierce competition against each other, if not managed properly. On the other hand, goals and

the ensuing rewards can be used to cement the corporate strategy. If defined in such a way as to encourage the desired behaviour among employees, they can go a long way in establishing the required mentality across the entire organization.

This holds true especially for entrepreneurial orientation. According to Brown et al (2001), entrepreneurial companies „tend to base compensation on how individuals contribute to value creation“. As seen previously, a pivotal element of EO is the collaboration across functions, enabling the flow of information and resources. Therefore, the goals set by entrepreneurial firms reflect this by encouraging collaboration along with individual performance.

One step towards achieving this is to set additional goals for an entire team, on top of the individual targets. This incentivizes team members to help each other and work together, while also eliminating potential rivalries within a specific team. An even further step is to set goals based on the performance of sub-units or even entire departments (Gupta and Govindarjan 1991). This eliminates the risk of employees being focused only on the success of their team by making it desirable for the collective to succeed through collaboration. However, while common goals solve the problem of team partisanship, they still do not link separate functions and encourage them to work together. This, however, can be accomplished through the very nature of the rewards given for reaching the goals.

Rewards need not be limited to salary bonuses. While this is the primary means of rewarding performance in most cases, there are other methods. Money is a strong motivator for most people (Chung et al 2013) and organizations therefore opt for this type of compensation by default. Duncan et al (1988), on the other hand, argue that monetary gain is not an effective motivator for intrapreneurs, the focus group of reward management in entrepreneurial firms. Rather, it is the promise of the freedom to innovate even more which works best as an incentive. They introduce the idea of intracapital; funds belonging to the firm which are made available to intrapreneurs to pursue their projects. The extra funds at their disposal and the autonomy to develop their ideas encourage them to continue manifesting the desired behaviour. This is in accordance with the findings of Lumpkin and Dess (1996) and Brown et al (2001), who identify the autonomy of employees to develop solutions as one of the main characteristics of entrepreneurial firms.

Nevertheless, espousing an entrepreneurial culture is, in some instances, directly opposed to the prevailing bureaucratic culture. According to Greiner (1972), as organizations

grow, they face the challenge of maintaining internal control and coordination. Therefore, a cellular and hierarchical structure is put in place in order to help manage the multitude of operations and responsibilities. If the control mechanisms rely too much on this structure, a bureaucratic culture develops, „characterized by internal regulations and formal structures“ (Deshpande and Farley 1999). Under the influence of the prevailing culture, members of the company start behaving in accordance with it.

This, however, is at odds with the entrepreneurial spirit (Brown et al 2001). By giving employees the freedom to innovate, companies with an entrepreneurial culture perform better financially than bureaucratic ones (Deshpande and Farley 1999). Nonetheless, large corporations are obliged to implement a bureaucratic structure in order to function smoothly. The challenge for them, in this case, is to „maintain entrepreneurial logic while developing a managerial dynamic“ (Grandclaude et al 2014)^[a]. In other words, to liberate the entrepreneurial spirit from the shackles of formal control mechanisms. According to Grandclaude et al (2014), as they grow, successful corporations put in place formal control mechanisms which enable both efficient management of resources and the flexible pursuit of opportunities.

Corporations pursuing EO reinforce this strategy by adopting and promoting an entrepreneurial corporate culture. Keeping bureaucratic tendencies at bay and supporting entrepreneurial efforts through rewards goes a long way in instituting the desired behaviour. Nevertheless, even with the will and encouragement to act entrepreneurially in place, members require an intra-organizational network in order to materialize their efforts.

3.2.4 Network competence

Network competence (NC) is a sociological term used to describe a person's willingness and ability to form social bonds. It stems from social skills, social reputation and personality type. In the corporate context, the term refers to the number of professional links a person has, which have the potential to lead to mutually beneficial collaboration. Closely related terms are network capabilities and social competence. NC can also refer to the number and importance of links one firm has with other firms, through its employees. Furthermore, it can also apply to a firm's internal network, how closely its employees are tied. In this context, Walter et al (2006) use the definition of network competence as „a firm's ability to develop and utilize inter-organizational relationships“. For the purpose of this study, the intra-organizational aspect of NC will be analysed.

The literature is unanimous in ascertaining that NC improves a firm's performance. According to Flap et al (1998), „within a firm, internal networks are as important a factor of production as its financial capital, buildings and machinery and the human capital of its personnel“. Moreover, even if the above mentioned factors lead it in a positive direction, „the company may still fail“ if inter-personal relations are unhealthy. NC is extremely important for companies for a variety of reasons. Externally, firms with more developed networks are more successful in identifying partners and opportunities, and at negotiating. Furthermore, such an exposed position facilitates innovation through cooperation with other companies (Ritter and Gemunden 2003). Internally, NC is a precursor for a tighter, more connected and reactive social structure. This is a healthy base for entrepreneurial behaviour, as it increases the quantity and reach of information (Baron and Markman 2000).

For this reason, organizations, especially entrepreneurial ones, put effort into developing and maintaining internal NC. Their priority is to build and improve ties between sub-units, more so than within them. While it is important to foster strong relationships within teams and departments in order to better accomplish everyday tasks, inter-unit ties are significantly more effective at diffusing information (Schutz and Bloch 2006). Interaction which occurs exclusively within the confines of a team or department prevents a piece of information from reaching other parts of the corporation.

While the literature focuses mostly on the external aspect of a firm's NC, as well as how it aids independent entrepreneurs, parallels can be drawn with internal collaboration. Extensive networks within organizations assist intrapreneurs in much the same way that they help connect separate firms and entrepreneurs. Intrapreneurs having a developed internal network at their disposal have a greater probability and speed of finding necessary resources, which are rarely readily available (Randerson and Fayolle 2010).

Individuals who are connected with colleagues from other functions „serve as a conduit for information and resources“ (Bolander et al 2015). Moreover, having superior social skills, a key aspect of NC, gives a person more access to information and the opportunity to diffuse it to a larger number of people within the organization (Baron and Markman 2003). This is an important step in connecting the organization and assisting entrepreneurial initiatives.

Cross et al (2007) refer to such individuals as „brokers“ (figure 4). In addition to harbouring a large network within the organization, these people „interact frequently with

external consultants, designers and academics and then funnel information from them to internal teams“. Through their position of bridges, brokers are „the most efficient means of gathering and disseminating information“. Brokers, therefore, do not only gain valuable information from both internal and external sources. They also diffuse it throughout the company, providing intrapreneurs with valuable insight. While interpersonal skills can be improved and organizations put a lot of effort into developing them through training (Garavan 1997), being a broker is an innate skill and it is therefore almost impossible to develop later in life.

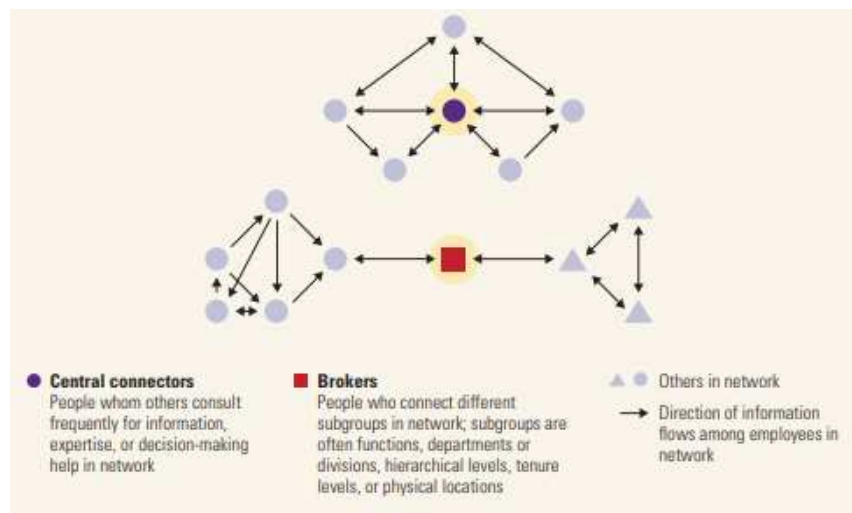


Figure 4: Brokers in organizational networks; Cross et al (2007)

An element of NC which can be improved through training is the quality of relationships at work. This can be accomplished through workplace conflict management, by putting in place and following culturally-based conflict resolution norms (Tinsley and Brett 2001). An environment with good relationships between individuals is a significantly more fertile ground for a developed social network than one marked by strained relations. Activities such as team building and conflict management serve to improve and strengthen the relationships between co-workers, leading to more fruitful collaboration and the spreading of information.

Crucial to the development of strong networks within a corporation is its formal structure. It has to not only enable but also encourage its members to forge bonds, specifically between departments. According to Ritter and Gemunden (2003), „four antecedents of a company’s network competence are distinguished“. These are the access to

resources, network orientation of human resource management, a formal and an informal communication structure and the openness of corporate culture.

However, putting these factors in place and thus facilitating the creation of ties is not enough. Employees must also feel the incentive to bond across functions. According to Barney (1985), a stable and homogenous work environment leads employees to interact predominantly with those directly below and above them in the hierarchy, reducing the number of inter-unit links. However, a less settled environment with regular unforeseen challenges encourages the creation of „many lateral informal links“ to other departments. Organizations can introduce such an environment through training and variations in everyday tasks which develop adaptive skills (Kozlowski 1998).

It is not necessary for companies to focus on building strong ties between their employees. Granovetter (1973) distinguishes a person's strong and weak ties as being 'friends' and 'acquaintances', and asserts that only weak ties serve to connect separate social networks. This is backed up by Friedkin (1980) who found that „interdepartmental ties disproportionately consist of weak ties“. In his model, Granovetter describes friendship networks with either no connection or bridges with a number of links so high that they can be discounted. In the organizational context, no network is completely disconnected due to daily work-related exchanges. However, such impersonal interactions have little or no effect on communication outside of the business framework. Therefore, weak ties between individuals from separate functions can provide an alternative means of connection. These „local bridges create more, and shorter, paths“ for information and collaboration, making the process faster and more efficient, and fuelling innovative projects. Furthermore, Granovetter (1973) demonstrates that the prevalence of strong ties can have the opposite effect, often leading to group rivalry.

The fact that weak ties serve as bridges is practical for organizations as it is virtually impossible to manufacture strong ties. Friendship is a sub-conscious occurrence between individuals based on mutual interests and personal characteristics, and cannot be induced externally. Weak ties, on the other hand, can be forged with relative ease, as acquaintances need not share a deep bond. It is sufficient that they be members of the same professional community and are on positive terms (Wu 2010). Therefore, firms encourage the establishment of acquaintances by designing spaces for mingling, such as cafeterias and game rooms.

Building networks is a primal human characteristic. In the case of corporations pursuing entrepreneurship, they are a valuable tool. However, a social structure enabling this does not come about naturally; it takes a significant effort to develop. If successfully put in place, a multi-layered and far reaching network gives intrapreneurs the chance to explore further avenues and transform their ideas into reality.

3.2.5 Recruitment and personnel policy

In order for the corporate strategy of entrepreneurship to take root, both the executives and the employees need to embrace and apply it. The previously described practices champion entrepreneurial behaviour on the part of all members of the corporation. However, as certain individuals are more likely to behave in such a manner than others, it is equally important to choose the personnel which fits the company's strategy. This is, among other tasks, the mission of the Human Resources (HR) department. Identifying and hiring entrepreneurially oriented individuals is of immense importance to the successful implementation of EO (Amo 2010).

With the development of the concept of entrepreneurial firms, scholars and managers alike recognized the role HR plays in supporting the corporate strategy. Morris and Jones (1993) were the first to establish a relationship between recruitment and the implementation of EO. Zehir et al (2016) found that recruiting skilled employees whose characteristics match the corporate strategy of entrepreneurship positively affects the firm's performance. Furthermore, by attracting such individuals, firms also make them unavailable to their rivals, providing additional competitive advantage.

However, identifying individuals with entrepreneurial potential is a complex matter. First of all, there is no clear predictor of whether a person will exhibit such a behaviour, even though research has shown that certain personal characteristics are common among entrepreneurs. Of the big five personality traits, most entrepreneurs score high in openness, conscientiousness and extraversion, while being on the low end of the spectrum when it comes to agreeableness and neuroticism (Antončić 2015). However, relying on these results during selection can lead to a logical fallacy; while most entrepreneurs do show this particular configuration of personal traits, there is a large number of people with the same personality structure who have no entrepreneurial inclination. Therefore, hiring an individual with this exact personality type does not guarantee that that person will integrate well into an EO company.

Second, many scholars, such as Gartner (1988), argue that „trait approaches have been unfruitful“ in determining a reliable predictor for the emergence of entrepreneurs. Such efforts by researchers fail to narrow down specific characteristics, yielding findings which are too vast and diluted to reliably predict entrepreneurial behaviour. This would make it impossible to establish a frame of reference to which potential job candidates would be compared.

Finally, entrepreneurial leanings are a small aspect of an individual's personality, and come as a bonus to firms pursuing EO. The main requirement for job applicants is to be sufficiently qualified and motivated to perform the tasks at hand. For this reason, most companies prioritize the same characteristics of job applicants, regardless of their corporate strategy. Robertson and Smith (2001) found that the most highly regarded attributes include intelligence, conscientiousness, ability, experience and adaptability (*see annex 4*). If prospective employees satisfy these basic criteria, only then do entrepreneurial firms look for certain additional traits.

Stevenson and Jarillo (1990) identify a link between individuals with features such as innovation and flexibility, and entrepreneurial corporations. Miller (1983) and Rezaei and Ortt (2018) find technically minded individuals to be more entrepreneurially oriented and to positively affect EO. Williams and Lee (2009) stipulate that younger executives are more efficient at advancing entrepreneurial efforts of multinational corporations. This is consistent with the findings of Brockhaus (1982), who also cites the need for achievement as an entrepreneurial characteristic. Davis and Lawrence (1977), on their part, see individuals who are flexible, adaptable, collaborative and socially skilled as a perfect match. Zhang and Bruning (2011) establish a link between individuals with an internal locus of control and their firm's EO. All of these aspects are, therefore, greatly valued by entrepreneurial firms, and they aim to attract such individuals².

Once job applications have been sent in, it is up to HR to determine the person(s) best fitting the organization's Entrepreneurial Orientation. There is a variety of methods for

² Setting up a job offer which attracts the attention of entrepreneurially oriented individuals is paramount for firms aiming to hire such people. According to Robertson and Smith (2001), the most important elements of a job advertisement are the „description of the job, salary, key responsibilities, career prospects, closing date, company details, location and experience needed .Concerning the tone of advertisement, Bretz and Judge (1998) found that applicants prefer positive terms and phrases ('X encouraged to apply' instead of 'Y need not apply'). On the topic of selection methods, Kroeck and Magnusen (1997) found that people prefer the prospect of face to face interviews, while Rynes and Connelly (1993) observed that applicants dislike taking tests.

evaluating candidates. Cover letters and CVs are initially demanded in almost all cases, followed by one or multiple interviews if the candidate passes the first step. Moreover, numerous tests exist to determine the necessary characteristic(s) of job applicants. These include but are not limited to cognitive capacity, job-related abilities, emotional intelligence and practical skills (Robertson and Smith 2001). Topor et al (2007) find that of the Big Five personality traits, a high score in conscientiousness is most valued by corporations. This is due to the need to be organized and disciplined in order to function efficiently in a corporate setting.

Nowadays, most selection processes employ several of the aforementioned methods, usually in the form of distinct levels. Each round of selection eliminates a certain number of candidates, leaving only those who satisfy all the elements. Furthermore, a number of organizations send their candidates to assessment centres (Klimoski and Brickner 1987). Either part of the organization or a separate entity, the purpose of assessment centres is to accurately evaluate whether a candidate is suited to handle the multitude of tasks and responsibilities which come with a senior position. Knowledge, skills and abilities analysed vary among firms and based on the demands of the position. However, most assessment centres focus on interviews, case simulations and diverse tests.

Once selected, the new recruits undergo a phase of adaptation to the new company, known as onboarding. Bauer and Erdogan (2011) define it as a “process that helps new employees learn the knowledge, skills, and behaviours they need to succeed in their new organization”, and is nowadays applied to some extent by most if not all firms. Onboarding can also be applied in cases of lateral mobility, and is equally beneficial to the company as new employees start making a contribution more quickly. The practice can vary in length, from one week to six months, and in most cases includes the presentation of job requirements and the organization’s culture and values (Graybill et al, 2013). Companies with progressive corporate cultures encourage employees to connect with colleagues as a means of adapting (Hollister and Watkins 2019) and to use their personal strengths as much as possible at the new position (Cable et al 2013).

Identifying and attracting entrepreneurially oriented individuals is a highly complex process, with no guarantees of a successful outcome. It requires a tremendous effort on the part of HR to understand the company’s strategy and support it through the selection of compatible employees and executives. If this is accomplished, even in the case of a small

number of individuals, it reinforces EO, which contributes to competitive advantage and financial gain in the long run.

4) Results

The research for this dissertation is divided into two axes; the hypotheses based on the relevant scientific literature on both topics discussed, and the quantified information gleaned from the survey.

4.1) Conclusions from the literature review

The stated goal of Entrepreneurial Orientation is to create competitive advantage for the company pursuing it by engaging all employees to come up with innovative products and services. Another benefit of this strategy, as this paper argues, is that through its application, existing silos can be significantly reduced. Furthermore, sustaining this strategy should prevent the reappearance of the silo effect. The elements of each entrepreneurial practice which can reduce the silo effect, and the manner in which this is achieved, are presented herein in the form of fifteen distinct hypotheses. These hypotheses are subsequently grouped into five antecedents to the reduction of the silo effect through the implementation of EO.

4.1.1) Hypotheses pertaining to flow

The pursuit of EO is impossible without the uninterrupted flow of information and resources throughout the organization (Stevenson and Jarillo 1990). Crucial to intrapreneurs when materialising their ideas, the unavailability of necessary resources impedes internal innovation. Therefore, the silo effect is an obstacle when implementing EO, as it prevents employees to access necessary information and resources. Conversely, it stands to reason that the improvement of the flow of information and resources, with the aim of advancing EO, reduces silos. Based on the relevant literature on the subject, this effect is achieved by supporting several initiatives presented here.

- **Increasing communication density between units (F1):**

The increase of the frequency of communication between units brings them closer together and improves mutual understanding, as well as creating more inter-unit ties.

- **Setting up internal coordination mechanisms for the collection of information (F2):**

Making information readily available to intrapreneurs reduces its bargaining power, thus diminishing conflicts that arise when information and resources are used as a source of power.

- Creating friendship ties between managers (F3):

This leads to better relations among units, potentially increasing the number of inter-departmental projects and links, and reducing the probability of turf wars.

- Initiatives aimed at personal learning and development within the workplace (F4):

Trainings and seminars increase the employees' autonomy and skills, decreasing silo-inducing factors like confusion and the focus only on one's immediate surroundings.

Moreover, the skills learned increase understanding of the organization as a whole.

4.1.2) Hypotheses pertaining to network competence

Network competence is pivotal to the execution of EO as it helps make the organization more internally connected, providing intrapreneurs with easier access to material for the execution of their ideas. However, the development of NC also harms the silo effect.

- Organisational structure encouraging the creation of ties between sub-units (NC1):

Incentivising employees (common rooms, organized social events, inter-unit projects...) to forge ties beyond their team, brings units closer together and increases communication.

- Improvement of the quality of relationships (NC2):

Better relationships diminish the propensity for conflict among employees, both within and beyond the assigned team.

- Giving importance to brokers (NC3):

These individuals interact to a great extent both internally and externally, increasing interconnectedness and serving as bridges between units.

- Supporting the creation of weak ties (NC4):

Having more weak ties than strong ones, especially among units, implies less group partisanship and rivalry, and strengthens the internal network.

4.1.3) Hypotheses pertaining to the recruitment policy

Another important step in the execution of EO is the recruitment of people who are likely to fit in with the corporate strategy. Although difficult to pinpoint, entrepreneurially oriented individuals tend to exhibit traits related to the collaboration and working in teams. These characteristics, beneficial to the pursuit of EO, are also useful in the effort against silos.

- Selection of entrepreneurial candidates (R1):
Job candidates who display traits such as flexibility, adaptability, team-mindedness and social skills, are favoured. These traits represent the polar opposite of the behaviour leading to the formation of silos.
- Use of personality tests and assessment centres (R2):
These practices help organizations better evaluate the candidates' personal make-up, allowing them to choose those who are more likely to engage with their colleagues.
- Encouragement of lateral mobility (R3):
Frequent movement of employees between departments increases understanding of the organization as a whole, and creates more inter-unit ties.
- Holding an on-boarding stage (R4):
This practice helps new arrivals adapt to their post, leading to a better understanding of their role within the system, as well as less confusion and conflict emanating from a lack of clarity regarding their tasks.

4.1.4) Hypotheses pertaining to corporate culture

The above-mentioned practices fall under the scope of corporate culture, which buttresses them and has the power to turn them into the norm, facilitating the application of EO as a whole. Therefore, CC is instrumental in advancing the mechanisms which weaken the silo effect.

- Increasing a sense of community and the strength of beliefs and values (CC1):
The feeling of belonging to the organization, both in terms of an internal community and its values, reduces the probability that employees will side with a particular team and view others as rivals.
- Rewarding team effort (CC2):
Promoting team results rather than individual efforts limits selfishness and rivalries between colleagues, improving collaboration and increasing team spirit.
- Discouraging bureaucratic tendencies (CC3):

Employees are incentivized to take initiatives and create bonds. An entrepreneurial culture fosters understanding of the entire organization, as opposed to focusing only one's immediate surroundings and duties.

4.1.5) Theoretical model

On the basis of the above presented hypotheses, five antecedents to the weakening of the silo effect have been identified (figure 5). These include the formation of inter-unit ties, the improvement of workplace relationships leading to less conflict, the understanding of the organization as a homogenous unit ('seeing the bigger picture', so to speak), socialization among the organization's members and constructive, team-oriented behaviour. The five antecedents are comprised of the fifteen hypotheses, and serve to summarize them based on themes.

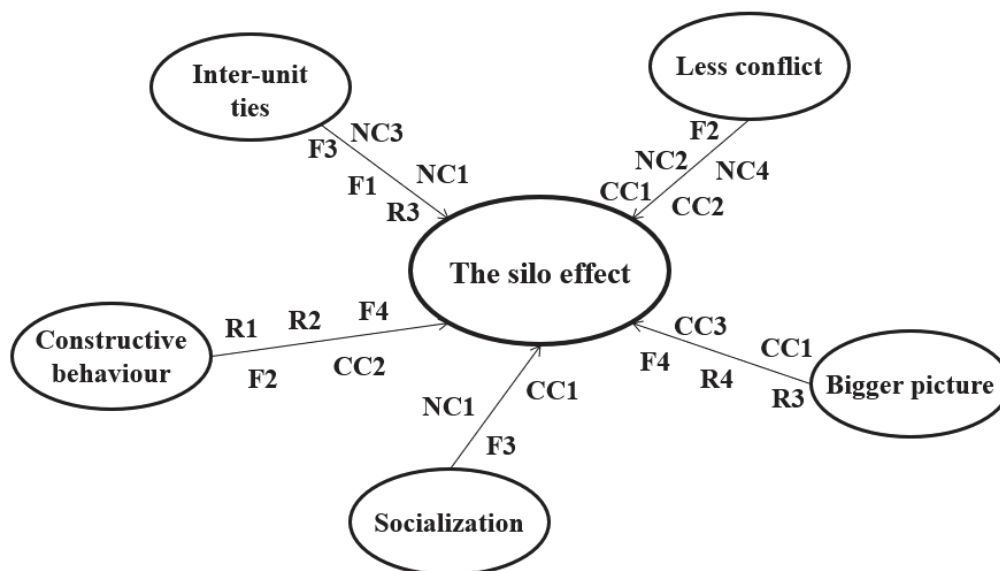


Figure 5: Five antecedents to the attenuation of the silo effect

The antecedents themselves have been, mostly individually, proposed by various authors examining potential solutions to the silo effect. The manner in which the above-presented hypotheses weaken silos, as well as their applicability in practice, are analysed in detail in the Discussion chapter.

4.2) Survey results

The aim of the survey, conducted among members of large organizations, was to examine whether there is a correlation between the application of practices associated with

Entrepreneurial Orientation and the attenuation of the silo effect, and whether said correlation is causal. In total, 21 persons were interviewed, who are members of the following organisations:

- Arhipelag publishing house, Belgrade
- Coca Cola Hellenic Bottling Company, Belgrade
- Council of Europe, Strasbourg
- Council of Europe development bank, Strasbourg
- Euro Games Technology Ltd, Sofia
- Europa-Park, Rust
- EXL Service, Sofia
- Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), Strasbourg
- International Residual Mechanism for Criminal Tribunals, The Hague
- KPMG Luxembourg
- KUK Serbia Doo, Belgrade
- Logitech, Sofia
- Mercedes-Benz Switzerland
- RCM Technologies Inc, Niš
- Rosa Water bottling plant, Surdulica
- Schaeffler France, Haguenau
- Serbian Ministry of Youth and Sport, Novi Sad
- United Nations, The Hague
- Vip Mobile, Belgrade

Figure 6: List of organisations featured in the survey

In order to make the results, and subsequent conclusions, as reliable as possible, I strove to include a diverse range of organisations and positions. The participants range from conveyor belt operators to top executives, with their organisations belonging to the fields of manufacture, tourism, political relations, law and culture, among others. The corporations themselves also vary in size; while almost all fit the description of large organisations, some are local whilst others are present on the global stage.

The questions (see figure 7) were designed in such a way as to cover all the topics analysed in the literature review. Following the analysis of the participants' responses, several prevailing themes were identified and quantified pertaining to the goal of the dissertation.

- 1) **What post do you occupy? Please, describe your job briefly.**
- 2) **How would you describe your company, its identity and values? Are they clearly defined and highlighted? If yes, how so?**
- 3) **Is the company putting effort into developing team spirit and internal networks? If yes, how so?**
- 4) **How often do you interact with people from other departments within the organization, both professionally and socially? Please, describe these interactions.**
- 5) **Are there certain colleagues, teams or departments with whom it is difficult to collaborate? How is this manifested? What do you think are the reasons for this? On the other hand, if cooperation is smooth, what do you think are the reasons?**
- 6) **How would you describe the atmosphere at your work environment?**
- 7) **Apart from those that are relevant to the post occupied, what skills are most sought after and appreciated in your company? Does the company organize workshops for the development of these skills? If yes, please describe them briefly.**
- 8) **When recruiting, what personal characteristics do you look for in people? What methods do you apply to determine these characteristics? Do you use personality tests?**
- 9) **Does your company practice lateral mobility? If yes, how do you manage the adaptation period for a new post? If no, why not?**

Figure 7: The survey questions

Regarding their organization's values and internal culture, 76% of respondents reported, among other elements, an emphasis on community. This is evident through the attention the organizations give to their staff; their wellbeing is prioritized and they are viewed as a valuable investment and the main strength of the company. These respondents are proud to be part of their organization and feel a sense of purpose.

Furthermore, 19% of respondents directly quoted entrepreneurship as a core value. These include an emphasis on staff evolution, constantly developing new products and technologies, and testing the new ideas in the market, and regular teambuilding activities.

Conversely, 24% reveal a rigid internal structure. They describe outdated hierarchical approaches to daily tasks and interactions, and an overly bureaucratic and inflexible mentality amongst executives.

Concerning team spirit and internal networks, 90% of respondents declare that their organization places importance on these aspects and strives to develop them. As part of this effort, 57% of participants mention some form of organised social events. These include beer Fridays, corporate getaways, internal clubs based on hobbies... Other factors influencing good

teamwork and the formation of internal networks include strong mutual relationships based on trust, teambuilding activities and seminars, as well as the selection of team-minded individuals.

All but one of the participants have regular contact with colleagues from other departments in a professional capacity, and 52% interact with their colleagues socially, away from work. Ten percent of respondents affirm that an important reason for good teamwork and numerous social contacts are facilities designed for mingling, such as common rooms and self-service kitchens.

When it comes to the quality and ease of collaboration with colleagues from neighbouring departments, 52% report no difficulty as opposed to the 48% who convey that there are certain obstacles. Those who collaborate smoothly credit mutual respect and trust, common goals, good internal communication instruments, the presence of young and ambitious colleagues, and a friendly environment with team-minded individuals as the main reasons. On the contrary, those facing obstacles stress difficult people who disregard regulations, strained personal relations, a lack of team spirit and communication, geographical distance, competition for resources and turf wars as the principal causes.

On the topic of the general atmosphere at their workplace, 90% of interviewees describe it as positive, using varied expressions such as great, pleasant, stimulating, dynamic, relaxed and collegial. In their opinion, this is due to openness and communication, weekly team meetings and social events, the recruitment of positive people and the exchange of ideas. On the other hand, the 10% who disclose a negative atmosphere use words like stressful, tense and artificial.

Of the skills and traits appreciated by their organizations apart from those necessary for their posts, 52% of participants list teamwork, followed by communicativeness (38%), the willingness to learn and improve (29%), management skills, perseverance and language skills (all three 24%). Nineteen percent of organizations value conscientiousness and flexibility and 10% look for people who exhibit innovative thinking and the capacity to resolve conflicts. For the development of these skills, 81% of organizations hold trainings (voluntary or mandatory) in the form of online platforms, workshops and seminars. When searching for these characteristics in job applicants, 24% of organizations use personality tests and 14% seek the assistance of assessment centres.

According to the survey, 38% of organizations participating carry out and/or actively encourage lateral mobility, the practice of relocating employees in various parts of the organization in order for them to better understand its internal functioning. Sixty-two percent of those organizations employ specific adaptative practices for a new post, such as ad-hoc training, tutoring, presentations of the entire department and short term „renting“ of employees between departments.

Five participants directly mention silos or turf wars, three of whom also relay the absence or failure of lateral mobility, and four report a rigid, bureaucratic organisational structure. Additionally, two respondents state that younger staff are less likely to show signs of silo mentality and that they exhibit traits and behaviour related to EO. One participant establishes a direct link between the practice of lateral mobility and the reduction of silos. According to the five interviewees, the major causes for silos are difficult people, a rigid internal structure, competition for resources, unsuccessful cross-cultural management, a lack of mobility, bad atmosphere, ego-driven executives and an unavailability of resources.

5) Discussion

As stated before, the goal of this study is to examine the link between the strategy of Entrepreneurial Orientation and the attenuation of the silo effect in large organizations. Even though there is no mention of such a link in the relevant scientific literature, the nature of the practices aimed at fortifying EO could in theory bridge the gaps in inter-unit communication. The results of the survey back up the hypotheses laid out in the previous chapter, showing that there is indeed a correlation between the silo effect and the application of certain entrepreneurial practices, or the lack thereof.

5.1) Analysis and comparison of the results

The silo effect itself is mentioned by five participants in the survey, three of which are members of international political organizations. All three of these respondents, as well as one additional, describe their organization's internal structure as rigid and bureaucratic. This can be due to the fact that, as political entities do not have the imperative to generate revenue, less or no emphasis is placed on strategies which would provide them with competitive advantage. Their main objective being political, they do not practice EO or similar business

strategies. Therefore, the absence of EO, and the need to be innovative and adaptable, could explain the observed statistical prevalence of silos in political organizations.

The various causes of silos listed by the respondents are found in the works of certain authors, both in terms of origins and potential remedies. Stone (2004), Sy and D'Annunzio (2005) and Lencioni (2006) all view people with whom it is difficult to collaborate as a cause of silos. The recruitment of such people can be avoided by selection criteria which targets team-minded people. This can also be applied to ego-driven executives, another cause of silos mentioned by one participant, and identified as such by Stone (2004). These findings, along with the fact that 52% of participating firms taking into account team-mindedness when recruiting, support hypothesis **R1**.

When hiring, entrepreneurial firms target individuals with certain skills and traits which should contribute positively to the corporate strategy. The skills most frequently cited by the interviewees, such as teamwork, communicativeness, the willingness to learn and develop, perseverance and management and language skills, are significant factors in the mitigation of the silo effect. Teamwork, identified by over half of the respondents, and communicativeness are directly opposed to the elements causing silos. Also, these traits can destabilize silos both by increasing interaction across the organization and promoting the flow of information and resources.

A person's willingness to learn and develop (valued by 29% of organizations) makes it likely that they will attend trainings and workshops (**F4**), potentially developing both silo-breaking skills (communication, networking, conflict resolution...) and creating inter-unit ties (**F1**). Perseverance and management skills (24%), often linked with conscientiousness and extraversion, are traditionally seen as entrepreneurial traits (Antončić et al 2015), and can destabilize silos by improving procedures and rendering collaboration more efficient between departments. Finally, two respondents identify younger employees as both having an entrepreneurial mindset and being less likely to exhibit silo mentality, which is in accordance with the findings of Williams and Lee (2009).

According to several of the respondents, another cause of silos is an overly bureaucratic internal structure, which is echoed by various academic papers on the subject. This particular cause of silos can be changed through the implementation of a more flexible corporate culture, as one respondent who reports silos claims her organisation is attempting to do. Although parting with a bureaucratic culture does not automatically mean introducing an

entrepreneurial one, the above-mentioned observation is in line with hypothesis **CC3**. The fact that a bureaucratic culture is identified as a cause of silos attests to the importance of discouraging such tendencies, which is precisely what firms applying EO are doing.

An additional cause of silos mentioned in the survey, the competition for and unavailability of resources, can be resolved by encouraging the sharing of information and resources through internal coordination mechanisms, according to Walter et al (2006). Furthermore, this encouragement reduces the bargaining power of individuals holding valuable knowledge or materials, reducing the potential for turf wars (De Clerq et al, 2009). Described in hypothesis **F2**, the effect of this aspect of EO on silos remains in the theoretical realm as the survey offers no indication whether this mechanism is applied by the participants' companies. While likely to reduce the silo effect, the influence of internal coordination mechanisms should be examined in future research.

The practice of frequent horizontal movement within an organization, or lateral mobility, is a regularly appearing theme throughout the survey. In fact, 38% of respondents' organizations regularly practice or actively encourage lateral mobility, among them the Coca Cola Hellenic Bottling Company. Their goal is for their employees to develop an understanding of the entire internal structure, as opposed to only their immediate unit or department. This would lead to more efficient collaboration and task fulfilment, as employees who have worked in multiple parts of the organization can understand and manage processes which include several departments.

For this reason, two firms practice the temporary exchange of personnel between units, or 'renting' as referred to by Vip Mobile. According to the two respondents, the aim of these horizontal switches, which usually last for a few weeks, is for teams to acquire the skills and experience of the 'rented' employee. Indeed, on two occasions during my internship, I spent a week in a team which services a different customer segment than the one I was assigned to. This way, I had the opportunity to discover various aspects of Field Sales, and to meet people from other parts of the department.

An entrepreneurial practice in the sense that it encourages employees to learn, develop and take the initiative, both regarding their career and the management of business tasks, lateral mobility has the potential to debilitate the silo effect, according to Schutz and Bloch (2006), supporting hypothesis **R3**. By moving through the organization, members not only discover the realities and needs of other departments and thus become more flexible and

empathetic when collaborating with them, they also create ties throughout the firm. Furthermore, working in various parts of the organization helps visualize its unifying goal, as opposed to that of specific units, an important tool in the effort against silos, according to Lencioni (2006). As a matter of fact, one participant in the survey directly credits lateral mobility for the limiting of the silo effect in their organization.

More than half of the organizations practicing lateral mobility, 62% to be exact, include an onboarding phase. This period of adaptation is also used to aid new hires, and can limit the apparition of silos by eliminating their root (**R4**). By better understanding the duties and expectations of their new post, employees are less stressed by the sudden change. This makes them more motivated and reactive, decreasing the likelihood of confusion and conflict which can lead to silos (Lencioni 2006). Furthermore, onboarding, especially in cases of lateral mobility, increases the employees' understanding of the new unit and its place within the organization, and thus the common goal. Entrepreneurial firms encourage employees to use their previous experience and strengths at the new post (Cable et al 2013), leading to a greater connectedness among the units.

The majority of organizations featured in the survey understand the importance of employee development, and offer (or even mandate) trainings aimed at improving the aforementioned skills. During the selection process, only 24% of organizations use personality tests and fewer still (14%) collaborate with assessment centres. This points either to a lack of prioritizing personality traits, or the use of more subjective methods to predict a person's fit with the corporate strategy, meaning that hypothesis **R2** needs further examination in practice.

Nevertheless, as part of its extensive selection process for the Coke Summership, CCHBC used personal traits to determine whether the candidates fit the role to which they applied. The process consisted of four stages; the submission of one's resume and cover letter, a telephone interview, a group case study and finally an interview with a member of HR and a potential superior. The group case study, for example, served to determine whether candidates were able to find solutions to an internal problem with limited resources; an indicator of entrepreneurial logic. Of the nearly 1000 candidates, only 30 were accepted to the internship program. In addition, the candidates were distributed among departments based on the judgement of HR. For example, even though I applied for Marketing, I was assigned to

Field Sales as the panel determined that my personal traits made me more cut out for this role, which in the end suited me very well.

Based on the survey, firms place great importance on an internal community centred around their values, and team spirit. Over three quarters of respondents report an emphasis on community within their organizations, a cornerstone of the corporate culture. By favouring staff wellbeing and satisfaction, the organizations ensure that their employees are proud and motivated to work for them, in accordance with hypothesis **CC1**. This is something that particularly struck me during my time with CCHBC; the staff were more than welcoming and almost everyone felt pride at being part of both the regional subsidiary and the global corporation. Frequent and interesting trainings and teambuilding activities, the sharing of employees' stories and anecdotes via Intranet and a dynamic and independent workplace, among other things, ensured a developed sense of community within CCHBC.

Apart from increasing employee motivation and hence productivity, the initiatives promoting community values also strengthen internal bonds (**NC1**) and weaken silos. By holding trainings and teambuilding activities, and encouraging personal initiative, companies such as CCHBC not only develop stronger internal networks but also empower their employees to grow beyond their immediate professional surroundings and familiarize themselves with the internal workings of the company. In addition, CCHBC strongly stimulates lateral mobility (**R3**), with employees rarely spending more than a few years in the same team or department. Seeing the bigger picture, as Lencioni (2006) puts it, reduces the risk of departments having separate and conflicting goals, leading to turf wars. Furthermore, in an environment marked by a strong sense of community and friendly relations, conflicts are less likely to occur, decreasing another important factor in the formation of silos (Serrat 2017).

The emphasis on community is directly related to the workplace atmosphere, another important factor in relation to the silo effect. An overwhelming majority of respondents, 90% to be exact, recount a positive atmosphere. This is even higher than the percentage reporting an emphasis on community, suggesting that this is not the only element influencing atmosphere. The entrepreneurial practices leading to a good atmosphere, according to the respondents, are also instrumental in the fight against silos. While good communication and regular professional and social inter-unit interaction (**F1**) are direct opposites of the silo effect (Rezaei and Ortt 2018), the recruitment of positive, socially skilled individuals (Baron and

Markman 2000) and the exchange of ideas (Walter et al 2006) improve communication and coordination. In fact, the 10% of interviewees describing a negative atmosphere also report restricted collaboration, meaning that the former can influence the latter to a certain degree.

Team spirit is encouraged and developed by 90% of the organizations featured in the survey as part of their corporate culture. In an effort to create inter-unit ties and strengthen the internal network, over half of them regularly organize social events for their employees, part of hypothesis **NC1**. Along with this, respondents state that their firms hold seminars and teambuilding activities (effective at tearing down silos, according to Stone (2004)) and strive to hire team-oriented individuals, giving credence to hypotheses **F4** and **R1**. These practices are key components of EO and serve various purposes as detailed above, in addition to eroding silos by connecting departments through inter-unit ties (Friedkin 1980).

As a result, all the respondents, save for one, regularly interact with their colleagues from other departments on a professional basis, and over half of them do so on a social basis as well. As well as creating inter-unit ties, the social links serve as a solid foundation for the flow of knowledge and resources. Furthermore, the fact that over half of the respondents entertain social relations with their peers implies a strong probability that there are friendship ties among managers (**F3**), an important tool against the silo effect both in terms of treatment and prevention. Indeed, only one of the interviewees reporting silos also mentions having social relations with colleagues, although only at the workplace. This suggests that the socialization of managers does have a say in the absence of silos.

Along with social events, two interviewees identify facilities such as common spaces and kitchens available to staff (**NC1**) as an effective precursor for the formation of social bonds. This is backed up by the research of Wu (2010), who also distinguished between strong and weak ties. Weak ties (Granovetter 1973) destabilize silos by bridging gaps between separate units (**NC4**), a role most successfully performed by the brokers (**NC3**) of Cross et al (2007). These ties, in addition to linking the units, permit the flow of information and resources by providing a path between two previously unconnected groups. Furthermore, strong ties can exacerbate the silo effect, especially when they occur within teams. Strong ties imply friendship and loyalty, which can lead to a pronounced group identity and an animosity toward outsiders (Bregman 2019). Weak ties can be created by sharing common workspaces, according to Wu (2010), such as the ones described by the two respondents. While it is difficult to conclusively ascertain whether these findings support hypotheses **NC3** and **NC4**

due to their subjective nature, the existing research and certain responses to the survey point to the potential of brokers and deliberately induced weak ties to reduce the silo effect. Further research is nevertheless needed.

The main goal of the survey was to investigate the way, and extent, in which the aforementioned entrepreneurial practices affect internal collaboration, a clear indicator of the silo effect. Rather surprisingly, despite the majority of organizations employing some or all of these practices, almost half of the respondents express certain obstacles to inter-unit collaboration. This suggests that, while negatively influencing the silo effect to a certain degree, EO by itself is not the only factor at play and is insufficient to completely solve the issue.

The extent to which the described obstacles are present varies in importance, from significant to occasional disturbances. Of the 48% mentioning imperfect collaboration, exactly half directly quote silos or turf wars; the other half recounts less profound barriers to collaboration. Furthermore, the reasons listed in both cases include factors directly opposed to the practices analysed in this study, such as difficult people who disregard regulations and strained personal relations, as well as a lack of team spirit and competition for resources. On the other hand, the 52% recounting efficient cooperation credit EO-enhancing and silo-reducing procedures, namely a common goal (Lencioni 2006), efficient internal communication instruments (Walter et al 2006), younger top management (Williams and Lee 2009) and a friendly, conflict-free environment (Willcock 2014).

The latter factor is in accordance with hypothesis **NC2**, and numerous other academics have pointed to conflict among employees as a cause of silos. Regarding the survey, this hypothesis can be best analysed through the question relating to workplace atmosphere. In both interviews where a negative atmosphere is mentioned, the silo effect is identified. The words used to describe the bleak atmosphere are, among others, tense and stressful, pointing to the presence of conflict. The link between conflict and silos, while seen in a very small sample and by no means the only factor in play, suggests that the improvement of relationships could help weaken the silo effect in these organizations.

The findings of this study suggest that, while not being the only element in play, EO can help create more efficient collaboration patterns. Furthermore, when enacted successfully, the very procedures used to implement it have the potential to attenuate the silo effect thanks to their inherent characteristics. Conversely, in the case of a number of

organizations reporting hampered cooperation between departments, a lack of EO-related mechanisms is observed. This suggests that there could be a link between the absence of entrepreneurial practices and the existence of the silo effect. Therefore, by comparing the results of the survey and the hypotheses formed on the basis of the relevant scientific literature, it is possible to conclude that a causal correlation between Entrepreneurial Orientation and the silo effect does in fact exist.

5.2) Research limitations

The research presented herein is subject to certain limitations, both in terms of the survey and the hypotheses drawn from the literature review. These limitations should be taken into account when considering the implications of this study.

Not all the hypotheses presented in the ‘Results’ chapter could have been sufficiently analysed and compared to the survey results. In addition to those which could not be substantiated with certainty, as stated in the previous sub-chapter, hypothesis **CC2**, (that rewards for team and departmental results can attenuate the silo effect), was not analysed at all. It turned out to be almost impossible to gain any insight into the organizations’ reward systems, as these are in most cases privy only to the members. In the end, only one participant shared this. Nonetheless, scientific literature describing the effect of bonuses on team spirit, as well as my field observations, point to the conclusion that rewards for common effort can in the very least reduce rivalries among colleagues, if not increase cooperation.

The fact that nearly half of the participants in the survey work in the Balkan region, with yet more being of eastern European origin, could signify a certain cultural bias. Nevertheless, while the Balkan countries most featured, Serbia and Bulgaria, vary in several aspects compared to western countries based on Hofstede’s model of cultural differences, they show more similarities than dissimilarities. Furthermore, the survey pertains to the internal structure and strategies of organizations, which are mostly consistent throughout the world. With Entrepreneurial Orientation being applied in corporations worldwide and the silo effect being an intrinsic human characteristic, the results are pertinent for the majority of cultural settings.

On the topic of the choice of participants, it is likely that the organization of at least one person does not satisfy the criteria to be considered a large enterprise, thus compromising the applicability of these interviews in the study. Nevertheless, as the main element taken into account when choosing the respondents was the presence of distinct and separate departments

within the organization, this does not invalidate the findings from these interviews. All of the accounts provided information relevant to the study, and the conclusions relating to silos and EO emanating from firms with less than 250 employees are also applicable to large enterprises.

The fact that only 19% of respondents identify entrepreneurship as one of their organization's core values raises doubts as to whether a correlation between EO and the silo effect can be demonstrated. Nevertheless, the fact that entrepreneurship as such is mentioned in 19% of cases does not mean that 81% of firms do not apply any mechanism of EO. The survey shows that an overwhelming amount of organizations do in fact implement some of the practices described in the literature review, making conclusions about their effect on silos more well-grounded.

Finally, it can be concluded from the answers that not all the participants' companies apply EO. This is, however, not necessarily a limitation, as the absence of entrepreneurial practices can also indicate a link between EO and the silo effect. For this reason, several people working in intergovernmental political organizations were interviewed. While implementing little or no entrepreneurial practices, these entities have a similar internal structure as for-profit corporations and can therefore also exhibit the silo effect. In the end, it turned out that some of the most valuable insights into the correlation between EO and silos came from respondents working in political organizations.

The entrepreneurial practices chosen for analysis were deemed most relevant to the implementation of EO, as well as the attenuation of the silo effect. Moreover, they strike a balance between exploring the link and keeping the research on topic. The inclusion of any other entrepreneurial mechanisms would have potentially made the research too broad and thus distracted the reader from its main objective.

Additionally, the scope of the research was significantly limited by the Covid-19 pandemic. First of all, with the Summership at the Coca Cola Hellenic Bottling Company being the main inspiration for this study, I intended to use a scheduled internship at UEFA headquarters in Nyon to test and refine the hypothesis. However, due to the pandemic, the internship was called off just days before its scheduled start. Furthermore, apart from depriving me of the chance to explore the hypothesis' validity in an international organization numbering 54 member states and over 500 direct employees, this unfortunate turn of events significantly limited the number of potential participants in the survey.

Apropos the survey, the pandemic made it notably more difficult to collect answers. The need to work from home, as well as the financial burden of Covid-19, meant that organizations had to rapidly adapt and modify their modes of operation. This created a very hectic environment, with many people being unavailable to participate in the survey for various reasons. In the end, the sample size of 21 was reached. The scientific consensus is that this is a sufficiently large sample for a qualitative study, allowing for saturation of information (Dworkin 2012). While every additional account could have provided further useful insights, the current amount of answers provides enough information from which to draw reliable conclusions.

5.3) Practical implications and recommendations for further research

As this study explores a new hypothesis, further research is strongly recommended. Entrepreneurial Orientation and the silo effect have been analysed in depth separately throughout the years; examination of the link between them could impart a wide array of practical applications, as well as further close the gap in research.

To begin with, it is necessary to prove beyond reasonable doubt that practices linked to EO reduce the silo effect. While this study has demonstrated the existence of a link, further research is needed to corroborate this, as well as to better understand how exactly do entrepreneurial practices weaken silos. The understanding of this correlation, and its causality, could have significant managerial implications. If the silo breaking potential of EO is fully harnessed, it could be used to great effect in rendering cooperation in large organizations more efficient, in addition to providing the organization with an advantage over its competitors. Not to mention the improvement of everyday relations at the workplace.

The first step in proving and understanding the correlation would be to investigate on a large scale whether entrepreneurially oriented firms are less influenced by the silo effect. If this were indeed the case, as the findings in this study indicate, an in-depth analysis of every practice used to implement EO should follow. Special attention should be placed on the manner and extent in which these practices shape internal coordination processes, as this would demonstrate how each method could potentially destabilize entrenched silos. While difficult to achieve for such a subjective phenomenon as the silo effect, it would be helpful to quantify the effects of EO practices in order to better understand their relation to silos, as well as provide a framework for additional research.

The practical application of the five antecedents to the attenuation of the silo effect also merits examination. More precisely, whether executives can use the five elements as a guide when tackling silo mentality in their organizations. Although the antecedents are a graphic representation of the fifteen hypotheses, and chiefly serve to categorise them by themes, they could be used as a rallying call to employees in the effort against silos.

Several striking findings presented herein also merit further research due to their potential impact on the reduction of silos. First of all, the practice of lateral mobility, or horizontal movement within an organization, shows promise. While the practice itself is marginally researched, let alone its effects, the results of the survey show that it can be used to weaken the silo effect. Therefore, additional research into this element is recommended. Furthermore, the presence of younger staff and executives is suggested to help reduce silos, both by academics and the survey. While it is impossible and disadvantageous to employ exclusively younger people, the way in which their behaviour potentially limits silo mentality should be better understood and utilized.

Additionally, there seems to be a greater prevalence of the silo effect in political organizations. Understanding the reasons for this could be crucial to fighting it. To begin with, demonstrating that this prevalence is due to the absence of entrepreneurial practices would go a long way in proving and understanding the influence of EO on silos. However, since political entities function differently than for profit corporations, it is possible that a separate method of dealing with silos would better suit the former.

Finally, despite the aforementioned correlation not being reported in the literature, it is plausible that entrepreneurial practices have already been used in some instances to combat the silo effect. It is not inconceivable that managers have noticed the effect EO can have on silos, and thus adapted the approaches to suit the practical needs for smoother coordination. It is worth exploring whether this is the case, as analysing instances of EO being targeted to tackle silos would greatly improve the understanding of how the correlation plays out in practice. Furthermore, the identification of such examples could potentially speed up the application of EO as a strategy against silos on a large scale.

Conclusion

As stated before, the aim of this research was to explore the correlation, and its causality, between the application of entrepreneurial processes in large organizations, and the attenuation of the silo effect therein. Subsequently, the paper analyses the means through which the correlation is enacted. However, the aim of this dissertation was not to provide a definitive answer to these questions, but to study potential practical implications of Entrepreneurial Orientation as an instrument in the effort against the silo effect, and to encourage further research. On the basis of the theoretical elements of the EO practices and the properties of the silo effect, and backed up by the qualitative survey, it can be concluded that there is indeed a causal link between the two.

Upon the analysis of the relevant scientific literature, the causes and manifestations of the silo effect were presented, followed by a detailed examination of the most commonly used strategies to implement Entrepreneurial Orientation in corporations. Based on the literature review, various manners in which EO could debilitate organizational silos were proposed, and presented in the form of fifteen hypotheses. These were subsequently categorised to form five antecedents to the reduction of silos. A qualitative survey, containing the accounts of 21 members of large organizations, was conducted with the aim of exploring the validity of the hypotheses. The information gleaned from the survey shows that, in the majority of cases, firms enacting some or all entrepreneurial practices analysed herein, report a significantly lesser degree of silos than those not pursuing EO. Furthermore, comparisons between the proposed solutions and the respondents' accounts demonstrate the applicability of entrepreneurial initiatives in the combat against silos.

The limitations of this research do not devalue the results. It is demonstrated that EO has the potential to weaken silos, and a gap in the research on both topics has been addressed. Moreover, recommendations for future research have been given, with the aim of expanding on the study's findings. In addition to studying the central hypothesis, this paper provides a detailed and concise encapsulation of the relevant scientific literature on the topic of the silo effect as well as several corporate entrepreneurial initiatives, and can be used for studies on these topics separately.

On the basis of this paper, experts are invited to consider expanding the study of the applicability of entrepreneurial initiatives in creating a more cohesive, cooperative corporate environment. In particular, aspects of EO which show promise in attenuating the silo effect, such as an emphasis on community, lateral mobility and the prioritisation of teamwork both

in recruitment and in training, merit a deeper look. Furthermore, as managers have the opportunity to apply and analyse the effects of EO first-hand, their empirical observations can provide a frame of reference for long-term strategies against the silo effect. Depending on the scope and success of future research into the effects of EO on silos, this paper could be the catalyst for the creation of mechanisms ensuring more efficient and stress-free workplace collaboration.