

The Impact of International Experience & Seniority on Cultural Intelligence: A Case Study

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by

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Executive Summary

In today's diverse business environment, an important topic for international companies to understand when hiring and managing employees in a multicultural environment is Cultural Intelligence (CQ), the ability to work and relate effectively across cultures (Leung, Ang, Tan 2014). Individuals who are capable of managing, interacting, and working effectively in various inter-cultural situations are benefiting from one of the most important ability of the 21st century's business settings in the name of CQ. Based on significant empirical research within the cultural intelligence's field, this notion is assumed to be growing along with two important antecedents: the worker's international experience as well as their work seniority.

The goal of this research is to investigate the previously mentioned hypothesis by applying it within the business environment of Geneva. The present report uses a quantitative-based design where 42 Multinationals Enterprise's junior and senior managers completed the expanded CQ 39 items scale to measure their cultural intelligence quotient as well as to determine the impact that both work seniority and international experience have on their CQ score.

Results from an independent sample t-Test and a one-way between subject ANOVA demonstrated that junior managers scored higher on the four different CQ dimensions: Cognitive, Metacognitive, Motivational and Behavioral, compared to senior managers. However, international experience, in contradiction to previous CQ empirical research, did not impact participants CQ score. CQ sub-dimension results are also analysed and discussed.

The present research underlines, at a business perspective, the crucial importance for Multinational Enterprises dealing with diverse workforces to consider and hire people coming from multi-cultural cities and who have experienced multi-culturalism from a young age rather than betting on expensive foreign staff with a lot of international experiences.

Moreover, in a city like Geneva where different cultures are constantly interacting, it is feasible that individuals who grew up in such multi-cultural environment have already gained a significant amount of international experience and thus increased their CQ even without having left the city. This could be beneficial and make a significant cost and complexity reduction, for companies, in terms of business practices. In their quest of

culturally smart individuals in the workplace, businesses will not have the necessity to rely on expensive inter-cultural programs and trainings to form culturally intelligent workers because these persons, who grew up in a multi-cultural environment, would be already smart in that domain and ready to work and bring their cultural intelligence within the business field.

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1. Introduction

Globalization has changed multiple aspects of our lives (Collins 2015), from economic factors to population factors. Today we are living in a situation where nations are dependent on each other and this connection is naturally affecting the business environment (Stief 2019). This process has led to numerous changes to the modern business setting. For example, workers residing and taking position outside their native country, called expatriation but also the rapid spread of multinational corporations and international organizations are no longer restricted by national boundaries. However, by operating globally it does increase their complexities. For example, managers of such companies not only need to deal with multicultural stakeholders on a daily basis, but they also have to realize that business performance and success in the 21st century requires both cultural awareness as well as cultural adaptability (Livermore 2010). The executives of today must manage, communicate, and conduct business in a multi-cultural environment which is challenging due to differences in thinking, values and social action that exist among societies (Hofstede 1980).

In effect, thanks to cultural diversity, every community carries their own values, practices, way of doing business, communicates and negotiate with others, or manage teams. The early work of (Hofstede 1980), presented one of the first empirical study linked to cross-cultural values' differences among more than sixty countries and making Hofstede one of the most cited social scientist as of today (Beugelsdijk, Welzel 2018). The author developed, using factor analysis, a cultural dimension's model in which cultural values could be analysed and compared. The original theory of Hofstede comprise four different dimensions in which cultural values could be interpreted as follows: 1) Individualism-Collectivism, 2) Uncertainty avoidance, 3) Power distance, 4) Masculinity-Feminism. Later on, two additional dimensions were added to Hofstede culture's model based on independent studies of Bond 1991, Minkov (2007) to screen additional aspects of values which was not yet studied within the original archetype : 5) Long-Short term orientation, 6) Indulgence-Restraint (Hofstede, Hofstede, Minkov 2010). This model allows international comparison between countries but most importantly, it shows cultural differences are still very significant or even more with today's interconnected world. For instance, by looking at variations between Switzerland and China using Hofstede country comparison, we notice that China scores twenty out of hundred in individualism which make it a very collectivist society where people act in the interest of the group rather than of themselves. In the opposite, Switzerland scores sixty-eight in this dimension which

make it, in contradiction to China, a very individualist society (Country Comparison 2021). This demonstrate how countries can be significantly diverse in cultural values and which needs to be understood within today's globalized world.

Understand cultural gap is now a must in today's business settings so as to have good and respectful cross-cultural interactions with stakeholders but also to drive performance. For example, when negotiating with a Chinese counterpart, an Australian worker has to be aware of cultural differences between the two society. Contrarily, if two Chinese businessman need to sit around a table and negotiate, they will be naturally on the same page in the way things are negotiated and the dos and don'ts because both of them having the same cultural values. In comparison, in the Chinese culture, negotiation style is based on building a trust relationship rather than quickly negotiating an agreement, and ultimately sign a contract (Graham, Lam 2003). While for example a Canadian businessman tend to be more directed toward a fast agreement process, avoiding any other type of non-business activities or any kind of building strong relationship with their counterpart (Katz 2017). Since the introduction of the cultural dimension model, many research have been built on Hofstede's work that demonstrate the strong impact of organizational culture on their overall performance. (Altaf 2011; Hofstede, Hofstede, Minkov 2010; Kumari, Singh 2018). This shows that cross-cultural awareness within the business setting is nowadays, crucial for both organizations and individual in their drive to success and performance.

This multi-cultural framework within the business settings is noticeable in metropolises throughout the world. In Switzerland, Geneva, which is a global city with an international working sphere in a multicultural and multilingual business setting niche, there are almost 180 different nationalities working here and more than 750 Multinational Enterprises (MNEs) operate out of the city (Geneva Academy 2020; Ville de Genève 2020). Consequently, any manager needs to be fully aware of this inter-cultural atmosphere and capable of adapting their management approach to different national business settings, value, and norms. In fact, today those different inter-cultural capabilities form the cultural intelligence quotient (CQ) which is defined as the capability to function effectively across inter-cultural environment (Van Dyne, Ang, Tan 2017). This concept is closely linked to the emotional intelligence quotient, the ability to recognize, understand and monitor our own emotion and the one of others but different in that it focuses on skills required for success within foreign cultures situation (TalentSmartEQ 2020).

Nowadays, multiple concept of intelligence such as purely cognitive, social, economic, or cultural exists and are widely used in today's society. Moreover, people are

comfortable and find ease at using the word intelligent to describe something or someone but in a majority of the cases, without considering or even knowing the actual meaning and mechanism behind. In addition to that, research demonstrate that the concept of intelligence was adapted, understood, and used differently from a person to another which make this word very divergent according to people's opinions (Sternberg et al. 1981).

Following this path, the present research proceeds as follows. There will be a complete literature review touching upon the notion of cognitive, social, and cultural intelligence. This will allow to assess their definitions, evaluate their measurements, and review various research. After this mentioned, we will review the hypothesis of the present study before we review the method used to respond to them. This will describe various details such as the participants, data collection tools, as well as ethical perspective and the statistical analysis. Finally, the results of this study will be analysed and presented. Completed by a discussion and conclusion section.

2. Literature review

2.1 IQ: the notion of Intelligence

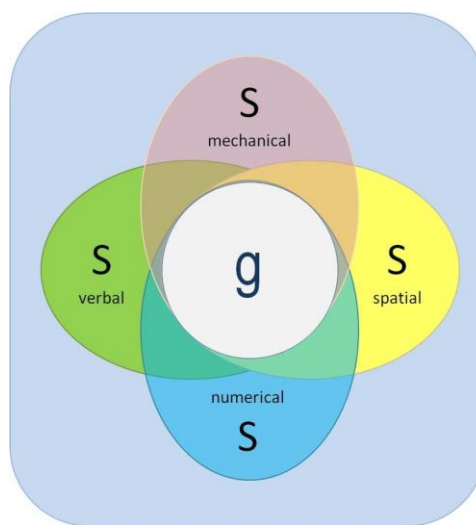
2.1.1 Definition and theories

Intelligence has been a very questioned and one of the oldest topic in the field of psychology (Fogarty 1999). As far as we can remember, people have been constantly compared between each other at both a physical and a cognitive level for example (Webber 2017). Nowadays, there is a systematic cognitive comparison between each and every individuals for the most attractive job title, the most well-known universities or even the best life's companion (Fogarty 1999). But the notion of intelligence is also something which has fascinate people throughout history. From the ancient Greek and their philosophers Aristotle among them, every single culture has been greatly passionate about the concept of intelligence (Gençten 2018). Even today and especially in this very mediatic environment, people still find considerable natural interest in knowing which person is the best at memorizing, computing or to be the next Albert Einstein who will revolutionize the world. But what is interesting is that intelligence also named IQ is a topic that people still struggle to put unique words in order to define it (Goertzel, Wang 2007). After more than a century of research on intelligence, there has been multiple definitions and interpretation of the notion, some of them more precise or succinct than others. Moreover, no unique definition seems to be considered as the legitimate one accepted from everybody. Even under the impulsion of two different symposium of field experts in 1921 and 1986, the question of defining intelligent is still a moot question. For example, intelligence was named as “the ability to learn” (Buckingham 1921), as “the power of good responses from the point of view of truth or fact” (Thorndike 1920), as “the capacity to acquire capacity” (Woodrow 1946), as “mental self-government” (Sternberg 1994).

As for the definition, many theories related to human intelligence have been done since the late 1800's, some of them more persuasive than others. One of the most preliminary and influential empirical theory on intelligence was the one provided by Charles Spearman, and is also known as the g factor (Spearman 1904). While, many studies came before Spearman's work, such as the initial work of Francis Galton and Alfred Binet, Spearman's work is the first reliable and valid theory, using a factor analysis technique created by Spearman himself to establish a two-factor measurement's theory of intelligence. The research shows that participant's verbal, spatial or numerical score tends to vary together. Spearman concluded therefore that there is a unique factor called

“g” which represent an individual's intelligence across various abilities as well as another factor called “s” which points out individual's specific ability in one specific area (Spearman 1904). Considering how old this research is, other research such as the one of Deary et al. (2004), replicated one century later Spearman' study and confirm that the g and s factor correlated at .68. Of course, even though this theory shows multiple evidence, there are some criticism that can be made. For example, the fact that a single factor could explain all of the human abilities is very difficult to admit. Human abilities are very diverse and someone with high intelligence can still be very weak socializing according to research (Ingraham 2016; Marquardt 2017).

Figure 1 – Two-factor theory of intelligence



Source: Simply Psychology (2020)

Even if the fundamental work of Spearman has largely impacted the field of intelligence as of today, various researchers and studies had different view and opinion on the unique g model of intelligence developed in the 1900's and propose other construct of intelligence. For example, the work of Thorndike (1920) and Thurston (1938) did not agree in the fact that intelligence could be grouped and explain only through one factor called g and then challenged the concept by making the distinction between several different component which could explain intelligence. Thorndike views intelligence as composed of three independent different factors including: 1) Abstract intelligence, 2) Concrete intelligence, 3) Social intelligence (Thorndike 1920). On the other hand, Thurston's theory underlines that human intelligence include seven different primary mental factors independent from each other which mean that someone could excel in one ability while been very weak in another one compared to Spearman's theory. Thurston developed its own test called “Primary Mental Abilities test” to test the different

factors of his theory (Thurston 1938). A few years after, the replication work of Bernreuter, Goodman (1941) applied the “Primary Mental Abilities” theory with freshman engineering students and were able to demonstrate that this intelligence framework exists and that scholastic success could depend on several different primary mental factors. Even though the intercorrelation among the mental abilities were positive, the goal of proving the complete statistical independence between abilities were not reached with this study. Both of Thorndike and Thurston’s theory relied on a statistical measure called “Multiple-factor analysis” and these breakdowns of intelligence seem more intuitive and reflecting some form of reality. In contradiction, criticism can be mentioned; especially when it focuses on proving that the score of all Thurston’s seven factors of intelligence vary together and were highly correlated to the g factors ranging from .672 up to .876 which tend to bring back, a contrario, to the theory of Spearman itself (Ruhl 2020).

Other theories have contributed to the field of intelligence but while expanding on the idea of multiple intelligence’s components. Gardner (1983) came up with a more inclusive theory of multiple intelligence which also contradicted Spearman’s g factor. In his study, Gardner set himself a range of eight criteria which must be met in order to call it intelligence. In his view, there are seven independent intelligences, each representing unique skills relevant to a certain category: 1) Linguistic, 2) Logical-mathematical, 3) Spatial, 4) Musical, 5) Bodily-kinaesthetic, 6) Interpersonal, 7) Intrapersonal (Gardner 1983). All of these different intelligences are distinct and do not rely on each other which mean that people’s intelligence in one area does not predict their intelligence in another one for instance.

Although this theory of multiple intelligence was welcomed from both the field and public community as stepping aside from book-smart intelligence component (Miller 2014), it has been heavily criticized for its lack of empirical evidence (Peariso 2008). Something that could also be mentioned is that Gardner’s factors appear to have been determined through a personal judgement rather than a simple accumulation of facts and data which support the theory. In this direction, the different intelligence set in this study appears to strongly dependent on subjective judgment and could be confused with general abilities rather than intelligence.

Another theory that follows the path of multiple intelligence although in a different manner, is Robert Sternberg’s Triarchic theory of intelligence which are: 1) Analytical, 2) Creative, 3) Practical (Sternberg 1985). What is differing from Gardner’s theory is that this time the aspects of intelligence reflect real world success and the theory itself is

based on the following definition: “the ability to achieve success based on your personal standards and your sociocultural context” (Sternberg 1985). Like any other theory, critics can be made such as the unempirical nature of the paper, the fact that Sternberg used more anecdotal manifests to support its claim rather than empirical evidence or the “patchwork” look of the paper which is mostly composed of several previous studies on intelligence.

2.1.2 The measurements of intelligence

While the theories described on the previous section brought some theoretical foundations of the intelligence’s concept understanding, researchers also started to bring words into practice by implementing ways of measuring the intelligence quotient (IQ).

This close look into the measurements started to rise up in the early 1900’s under the impulsion of Alfred Binet and his co-worker Theodore Simon (Ruhl 2020). Binet & Simon, precursor of the field, proposed the first Intelligent quotient scale (IQ scale) to assess who would have more difficulties at school and thus, requiring more support (Binet et al. 1912), while at that same time, Spearman proposed the g factor theory of intelligence (Spearman 1904). In other words, Spearman came up with a theory, Binet with a scale (Fogarty 1999). The original Binet-Simon scale includes 30 items aiming at assessing judgment, comprehension, and reasoning (Binet et al. 1905).

Other IQ scale have been implemented since the work of Binet & Simon. In effect, an adapted version for American students of the Binet-Simon scale called the Stanford-Binet intelligent scale was established in 1916 by psychologist Lewis Terman. (Cherry 2020). The original Binet’s scale and its subsequent versions, adapted throughout the century until today, are considered among the most reliable and valid intelligence tests which are still widely used in today’s modern society (Dacey, Nelson, Stoeckel 1999; Nelson, Dacey 1999).

As for the theories, dissatisfaction regarding the unique g factor were arising with scale implementation and IQ assessment. While the Binet-Simon scale reflected mainly the Spearman’s unique factor of intelligence, another scale was implemented to represent more the idea of an intelligence scale which takes into consideration the multiple mental abilities theory of intelligence (Cherry 2020). So as to be aligned with Thurstone’s, Gardner’s, and Sternberg’s research on multiple intelligence, David Wechsler, American psychologist, implemented a new scale called the Wechsler intelligence scale for children (WISC) as well as another for adult (WAIS) (Wechsler 1955). This scale measures and subsequently provide different mental abilities score through subtests

focusing on specific factors of intelligence such as cognitive, verbal comprehension, perceptual reasoning, working memory, and perceptual speed for example. It was also a scale which confronted and went against the Binet scale which was seen as limited and too closely reflecting the general intelligence of Spearman.

As we can see with the two-following example, IQ scale are heavily linked with how we define it (Canivez 2013). There is a clear distinction between the unique view of intelligence that comes with the Binet-Simon scale and the multiple view of intelligence which is supported by the Wechsler scale tool. Of course, additional IQ scale exists and have appeared since, but the first two form the basis of the intelligence quotient assessment still widely used today in the academic field which are very often revised and improved over the years by researchers. The Stanford-Binet scale is now at his fifth edition and the Wechsler scale is at his fourth edition (Pearson 2008). One of the most important things to notice with an IQ test is that they benefit also from very high validity and reliability. Numerous researches have shown that IQ test are both very reliable and have high construct validity such as the Stanford-Binet scale (Green et al. 2008, Thompson et al. 1986, Nagleri & Pfeiffer 1983, Stephen et al. 1985, Dacey et al. 1999). Reliability explains the fact that the results are highly consistent over time (Tuma & Appelbaum 1980), while validity explain the fact that these tests measure what is meant to be measured: intelligence (Dacey et al. 1999, Nelson et al. 1999).

2.2 Social intelligence

2.2.1 Definition, theories, and issues

With the rapid emergence of theory supporting the multiple components of intelligence, the research field started to take a closer look to other forms of intelligence. In effect, research have showed that even though a person might appear to have a high cognitive intelligence, the same individual can have difficulties in other domain such as interpersonal skills for instance (Ingraham 2016; Marquardt 2017). Anybody can recall a relative which has strong cognitive capacities but when it comes to socialize with others, this person appears to be weaker in this domain. This supports the fact that not only one factors could englobe and explain a person intelligence and that it tends to exist several differences types of intelligence such as social intelligence.

This concept was first defined in the intelligence's concept of Thorndike (1920) who makes the distinction between abstract intelligence or the "ability to verbal and symbolic thinking", mechanical intelligence or "the ability to effectively control your body and

manipulate objects”, and finally social intelligence which is defined as the “ability to understand and manage men and women, boys and girls, and to act wisely in human relations (Thorndike 1920). Even if this idea of multiple intelligence including this social aspects changed the way people perceived intelligence and is still today fundamental (Weis, Süß 2005), Thorndike did not succeed in distinguishing social intelligence as a recognizable form of intelligence. Nevertheless, enthusiasm over social intelligence kept going because the psychology interest as well as their researches switched from a strictly cognitive intelligence to focus on how people interact with each other and how people make judgment on others (Walker, Foley 1973).

In effect, from the beginning, the research on intelligence only focused on strictly cognitive capabilities. The 1930’s marked a very important step where the intelligence’s field broader this concept to go from intelligence seen as computing facts, to understand to importance of taking into consideration a social aspect of intelligence towards human beings and inter-personal interactions.

After the formulation of social intelligence, studies primarily focused on how people carried judgments about others, their accuracy in doing so and the type of person which has ease appraising others (Vernon 1933). But surprisingly, even if social aspects started also to merge at this period within the business settings, right after these first researches, interest in social intelligence in the psychology field has been somewhat sidelined for almost two decades (Walker, Foley 1973). The main reason appears to be rooted in the definition of social intelligence by Thorndike which includes two different aspects: 1) a social action (to act wisely in human relations) 2) a person perception (ability to understand and manage men and women, boys, and girls) (Walker, Foley 1973). These two components of the social intelligence’s definition have created two specialty areas of researches creating a divergence between them. By focusing on these two different components of the definition, researchers appear to have split two very different and distinct concepts of the social intelligence definition. While the researchers in the person perception area have successfully construct various reliable and validated tests (Cronbach 1955; Cline 1964), the other researchers looking at the social action aspects of social intelligence failed to establish a solid test on its own (Thorndike & Stein 1937). Each area has also its own method to assess their problems. In effect, social action’s studies approached their issues with an individual difference, orientation while, taking into consideration a yield group data method (Walker, Foley 1973). Moreover, the main interest between the two aspects of social intelligence studies resides in the fact that they are different from each other. While those operating in the social action area were

passionate about psychometrics, the person perception was interested in social psychology (Walker, Foley 1973).

Within the management business field, the same wave of social factors was started to get considered at the same time of the social intelligence's researches. In effect, while the early field work of Taylor considered employees as purely "machine" and looked at ways to improve their work performance, the work of Elton Mayo, known as the Hawthorne studies, took a different path and demonstrated that workers' performances could also be influenced by social factors such as work surrounding, colleagues and managers rather than strictly human cognitive abilities (Mayo 1924). This research on motivational and managerial style was done within the Western Electric company plant of Hawthorne and lasted for years to be able to provide that within the business domain, motivation, management practices and subsequently performance tends to be more related with socio-psychological aspects rather than a simple tangible increase of salary for instance (Shafritz, Ott, Jang 2015).

As seen previously, the early researches on social intelligence have been quite investigated and with many more definitions of social intelligences having been made in response to Thorndike such as: "the ability to get along with others" (Moss & Hunt 1927), operationalized by analyzing the social intelligence score of more than seven thousand people using the George Washington scale, or the "facility in dealing with human beings" (Wechsler 1958) operationalized in the extension of the Wechsler cognitive intelligence scale considering a social subtest. But unfortunately, these were seen as only variations of the initial definition and did not develop the social intelligence field research any further. Many measurements of social intelligence were created to further develop the research field but most of them faced real challenges as well. For example, the George Washington Social Intelligence test created by Hunt (1928), has been one of the most applied instruments of the field assessing social intelligence (Thorndike & Stein 1937). Nevertheless, it has also been extremely challenged by several studies questioning the validity and reliability of this test. For instance, the work of Thorndike (1936); Thorndike & Stein (1937); Woodrow (1939); Cronbach (1960) all demonstrate the invalidity of this test because it tends to correlate much more with the so-called measures of abstract intelligence (IQ) rather than the one of social intelligence.

2.2.2 From Social Intelligence to Emotional intelligence (EI)

After decade of research, social intelligence appears to have had quite a lot of construct issues in terms of concrete definitions and measurement method. Even more, as mentioned by Salovey & Mayer (1990), there is still an unclear demonstration of whether social intelligence benefits from its own unitary traits, not even when the research's field was rehabilitated with the "Structure of Intellect model" created in the study of Guildford (1967).

It was years after this model that social intelligence took a step further. A very important research was made by Sternberg et al. (1981) aiming to look closely from a panel of experts and laypersons, their own conceptions, more precisely, behavior characteristics of intelligence, academic intelligence, everyday intelligence or even unintelligence. The results, which could appear to be biased because everyone has his own view and perspective of intelligence, demonstrate surprising traits which were mentioned such as sensitive to others, admitting mistake or even making faire judgment. Absolutely thrilled and based on these findings, Salovey and Mayer hypothesized a set of skills effective in the appraisal and regulation of self and others emotion and introduced for the first time the concept of Emotional Intelligence (EI) (Walker, Foley 1973). After having review, the cognitive and social intelligence literature, the authors investigated the place of emotional intelligence within the traditional intelligence notion and presented it as a subset of social intelligence focusing on the ability to manage emotions. They defined this notion in their ability model of emotional intelligence as an "ability to accurately perceive and manage one's own and others' feelings and emotions, to discriminate among them and use this information to guide one's thinking and action" (Salovey & Mayer 1990).

As an emerging field, emotional intelligence gained success thanks to the research of Daniel Goleman with his book "Emotional intelligence: Why it can matter more than IQ" (Goleman 1995). Even with a clear lack of empirical evidence, the research of Goleman marked a milestone to the wide interest of emotional intelligence into the modern society especially within the business settings (Gayathri 2013). In effect, the concept of emotional intelligence became an important topic within the business sphere as it brings answers on why people with excellent IQ score sometimes fail professionally while on the other hand, the one who had trouble at school ended-up been one of the most successful individuals within their business field (Goleman 1995). Moreover, emotional intelligence have showed to be a critical skills to have as well as a major component of success within today's business settings (Sanfilippo 2019; Winter 2018). Of course, other model and theories linked to emotional intelligence exist such as the Bar-On's trait model

(Bar-On 2002). With Mayer and Salovey's ability model on one side and the Goleman's competency model as well as the Bar-On's trait model on the other, these three structures the main theories of the emotional intelligence field. For this thesis, we will not be able to dig deeper into each single theory. Instead, the goal will be to look at empirical studies which demonstrate the importance of emotional intelligence within the business-related settings topic of this research.

2.2.3 The importance of Emotional Intelligence in business settings

Emotional intelligence emphasizes the ability to monitor different feelings and emotions (Salovey & Mayer, 1990). Soon after defining it, researchers have started to apply the concept of emotional intelligence to the business sphere. As EI deals with interpersonal skills, the business context is a perfect example which require people to manage their own emotions as well as the one of others. As long as a situation involves working with other people, managing people or also serve clients, emotional intelligence can be seen as a strong skill which can benefit in a business-related context (Whitener 2020). For instance, according to the future of job reports from the World Economic Forum, EQ is ranked as one of the tenth most important skills to have within the working environment (World Economic Forum 2020). From a Harvard Business Review survey, up to 98% of key industry sector participant answer that EQ was crucial for professional success and job satisfaction (Harvard Business Review 2019).

From a financial angle, EQ can also have a very important impact up to 10% and be correlated with sales performances at .32 according to the research of Gignac et al. (2012). One of the first studies which applied the concept of emotional intelligence into business is the one from Goleman (1998). In his research, he was able to gather results from a sample of almost 200 international companies to assess the set of capabilities required within such organizations to make substantial business performances. The results showed that emotional intelligence was significantly correlated with leadership performance. More precisely, it is the most highly ranked leaders in companies which demonstrate the best results thanks to their emotional intelligence skills (Goleman, 1998).

Other studies demonstrates that emotional intelligence was extremely important in a business context while underlining the importance of EI as a strong predictor of job performance, negotiation, or leadership (Fulmer & Barry, 2004; Humphrey, 2006; Jordan et al., 2002) for example. Moreover, A meta-analysis demonstrate strong empirical evidence in which leader's emotional intelligence were positively impacting subordinates'

job satisfaction.(Miao, Humphrey, Qian 2016). The author of this study emphasizes on the fact that emotionally intelligent leaders are more likely to cultivate an emotionally intelligent organisational culture in which employees will be more successful at dealing with negative feelings and also manage interpersonal interactions.

The impact of emotional intelligence within the business environment does not stop here. Several researches demonstrate the impact of EI on performance and report robust statistical findings. For example, TalentSmartEQ, one of the world's best provider of emotional intelligence program reports several interesting findings from their companies' clients even though these, showing no signs of statistical back-up, could be seen as biased. First, in a US government agency, 63% of their leaders increased significantly their relationship with their coworkers thanks the emotional intelligence program provided while in an another Fortune 500 company, 100% of their senior leaders increased their overall performance (TalentSmartEQ 2020). Other results have been found from this study which reports significant improvement for companies who follow EI training in different concept of human state and trait such as decision making, conflict handling, accountability. Even though these numbers might be seen as appearing from nowhere and without any concrete statistical evidence, the tendency of emotional intelligence benefiting the business settings is very clear especially when it comes to leadership skills (Ovans 2015).

EQ is today a valuable predictor of work performance demonstrated in various meta-analysis where EQ and job performance were correlated from .24 to .30 (O'Boyle et al. 2011; Miao, Humphrey, Qian 2016; Joseph et al. 2015). But more importantly, it is a skill, according to many researches, everyone can learn or develop. (Dulewicz, Higgs, 2007; Goleman, 1998; Whitener, 2020)

2.3 Cultural intelligence (CQ)

2.3.1 Definition and distinction of the CQ concept

Emotional intelligence seen in the previous section is not alone in the inter-personal pool of intelligence which exist nowadays, and which also strongly impact the business environment. In effect, cultural intelligence also known as CQ is another form of relational intelligence which exist, and most importantly, which can be learned. This make these two fundamentally different to cognitive intelligence like IQ which cannot be improved and is a fixed construct.

The notion of cultural intelligence, rooted in the multiple intelligence's theory of Howard Gardner (Gardner,1983,1993) as well as the work of Sternberg (1999) was first introduced by the study of Earley, Ang (2003). In contrast to emotional intelligence which emphasize the ability to accurately perceive and manage one's own and others' feelings and emotions (Ovans 2015), CQ is defined as: "the ability of an individual to function effectively in cultural diverse settings" (Earley, Ang 2003). According to the work of Ang, Inkpen (2008), CQ can refer also to both firm and team capabilities but for the present research, the aim is to concentrate on the individual-level of cultural intelligence. From the work of Ang, Van Dyne (2008), CQ is identified as a very specific domain of intelligence which differs and goes beyond the traditional academic intelligence. In effect, from the very beginning, intelligence researchers were interested in strictly cognitive capabilities but advancing towards the second part of the twentieth century, other type of human related intelligence were started to rise which also reflected the change in management thinking which was occurring within the business environment at that time. (Rockstuhl et al., 2010), identified CQ as an ability to understand cultural differences while also acting as a bridge between them.

Although CQ is strongly linked to other types of intelligence such as social or emotional because it is part of the inter-personal pool of intelligence, at the same time it possess its own clear independent construct as it focuses only on cultural diverse context (Ang, Dyne 2008). For instance, emotional intelligence, the ability to monitor one's own and others' feelings and emotions might be also very important at understanding other culture emotions but keeping in mind that every cultural cluster has its own way of demonstrating and sharing emotions, it is here that the notion of CQ play a significant role compare to EQ. Preliminary research proposes both conceptual dimensions of CQ as well as a practical application of the theory mainly identified and derived through the Sternberg, Detterman (1986) framework of understanding individual's intelligence (Earley, Ang

2003; Ang, Dyne 2008). As a result, the CQ multifactor appears to have been built from a very theoretical concept which lacks empirical evidence but will be rapidly validated by research using confirmatory factors analysis such as the one from Ang et al. (2007). The CQ multifactor construct was first identified into three and subsequently four different reliable up to .70 facets which form the cultural intelligence concept and which is summarized in Ang, Dyne (2008) research:

Metacognitive CQ. This facets refers to an individual's level of cultural awareness within interactions. People who show a great level of metacognitive CQ are usually the one who are consciously aware and interested in cultural differences such as norms, values, and preferences. (Ang, Dyne 2008).

Cognitive CQ. Closely related to metacognitive, cognitive CQ relates the level of knowledge that an individual has on other cultures' norms, standards, practices. It is usually what people have learned at school or via personal experiences for example. As the level of knowledge of a culture shape the way people think and act, it makes them more efficient at interacting with someone from a diverse culture (Ang, Dyne 2008).

Motivational CQ. This feature of CQ emphasize the level of energy and motivation in learning from cultural differences and interacting within very diverse cultural environment. For example, a South Korean worker in a multinational enterprise located in Geneva who enjoys interacting with people from other cultures will be more willing to engage in a conversation with his Swiss co-worker than if he has no interest in exchanging with different people of other cultures (Ang, Dyne 2008).

Behavioural CQ. The last component of CQ is reflecting the ability of someone to correctly communicate with people from other cultures in a verbal or non-verbal context. It is also defined as the way people behave and act accordingly in a cross-cultural situation for instance. In this case, we talk about all the differences in facial expressions, vocal expressions, or salient languages which exists between cultures. For example, a Chinese person will tend not demonstrate a great facial expression even if he is extremely happy. In opposition, A Swiss or French national will have no problem showing off his happiness to other people via facial and verbal expression (Ang, Dyne 2008).

This concept of cultural intelligence is often englobed with other types of interpersonal intelligences such as emotional or social intelligence, but it is important to make the distinction between them having different independent construct. In his research, Crowne (2008) argued the conceptual distinctiveness of the three form of interpersonal intelligence. Interestingly, in this first study, the author proposed a conceptual view, in

which emotional and cultural intelligence were a subset of social intelligence and that EQ and CQ were related yet distinct from each other (Crowne 2009). Even though this research marked an advancement in the way of conceptualizing and frame social, emotional, and cultural intelligence together, the study does not provide any empirical data and only rely on theoretical models. Surprisingly, a few years later, the same author provided very interesting empirical results which proved that statistically, these different concepts of emotional and cultural intelligence were not subset of social intelligence. The research also demonstrated the unique distinction between CQ and EQ and their validity even if the two constructs demonstrated a significant overlap in their constructs (Crowne 2013). The results of this study were demonstrated using a very reliable and valid statistical test called structural equation modeling. Another research, both validity and important in the CQ research underlined the importance of the four-factor taxonomy of cultural intelligence regarding emotional intelligence formulation. The results demonstrate that CQ et EQ were positively correlated and factor of CQ were related to specific factors of EQ. The method used to assess these findings were statistically relevant because the author used confirmatory factor analysis and hierarchical regression analysis. The non-diversified sample composed of only Korean student could be the only point that we could mention as scant (Moon Taewon 2010).

2.3.2 How cultural intelligence is measured

The majority of empirical CQ research are quantitative based and most of the time conducted within international organizations or universities (Van Dyne, Ang, Tan 2017a). The important tool to assess the Cultural intelligence quotient is a self-assessment called the Cultural Intelligent Scale (CQS) advanced by the work of Ang et al. (2007) and Ang, and Dyne (2008). This scale, composed of 20 items measuring the four factors of CQ, benefits from a great validity and reliability because it has been developed using a confirmatory factor analysis. It is used extensively in various empirical research in more than ninety countries (Engle, Crowne 2014a; Moon, Choi, Jung 2012; Van Dyne, Ang, Tan 2017a; Ang, Dyne 2008). In addition to that, while working on the construct validity process of CQ concept, research has showed that the CQ scale assessment were valid across student or business samples using a structural equation modelling test (Van Dyne, Ang, & Koh, 2008). Moreover, with the help of a confirmatory factor analysis and exploring the correlation between global entity and cultural intelligence in multicultural teams, the CQ scale demonstrates statistical validity across different time periods as well (Shokef & Erez, 2008; Van Dyne et al. 2008). In their studies assessing possible antecedents of the four-factor model of CQ using confirmatory factor analysis, (Shannon

& Begley, 2008) also demonstrate consistence validity of the CQ scale across countries such as United States, Singapore, and Ireland, which are, in sum, culturally diverse countries according to the Hofstede metric. Differences can be seen in the CQ assessment within the research. For example, some studies concentrate on the overall CQ quotient while others investigate each and every CQ factors individually or focus just on a single factors. In addition to this CQS, other research present different version of CQ assessment tool but the fact that multiple tools measuring CQ could cause issues when it comes to reliability and validity is something which is worth mentioning. For instance, shorter form of CQ scale called Mini-CQS and SFCQ has been developed and validated by (Ang, Dyne 2008; Thomas et al. 2015) and an expanded version, the E-CQS, including subdimensions for every single factors of CQ and used in the present research, has been implemented and validated by the work of Dyne et al. (2012). While the shorter and expanded versions of CQ scale are less used in the field, the one used for this research, the E-CQS, represents a new and modern trend of CQ research relying on a more focused conceptualization and understanding of each CQ dimensions. Two additional scale exist to assess cultural intelligence. The first one, called the informant-based version of the CQ scale, developed but also validated by the research of Ang, Dyne (2008) focuses on an observation rating of CQ rather than a self-assessment. The author of this study were also able to demonstrate the positive correlation between the self-rated scale and the peer-rated scale (Ang, Dyne 2008). The last form of CQ tool is called the performance-based measure of CQ created by (Rockstuhl et al. 2015) and proposed its predictive validity for both task performance as well as interpersonal citizenship behaviours in intercultural teams. It is important to note and realize that different measures of CQ seize bring different type of theoretical aspects of the concept of cultural intelligence. On the one hand, self-report tools capture people's own sense of CQ competences because it is based on self-perceived abilities. On the other hand, informant measure of CQ demonstrate external manifestation of CQ which could be detected by peers while performance-based measure of cultural intelligence tends to report the maximal CQ abilities of an individual (Van Dyne, Ang, Tan 2017a).

2.3.3 Why CQ matters in business settings

As a form of interpersonal intelligence, CQ is also becoming extremely important within the business environment. In effect, the CQ factors (Metacognitive, cognitive, motivational, and behavioural) constitutes the basis of the CQ understanding that allows to resolve cross-cultural problems within todays multi-connected world. In fact, the four dimensions of CQ, which also determine the ability of a team to deal with cultural

differences within an organization, is heavily impacting business performance (Kadam et al. 2019; Livermore 2010) as well as organizational effectiveness in the global marketplace (Creque, Gooden 2011).

The CQ facets can literally act as a competitive advantage for businesses and predict effective cross-cultural communication, cooperation, teamwork, and performance (Chandan 2015, Early & Gibson 2002). In fact, these consequences on the business context are not necessarily coming from the aggregation of all the CQ facets. According to several studies, one or two CQ facets could provoke this kind of consequences on business features. For example, Rockstuhl, Van Dyne (2018) demonstrates with very reliable statistical method, including a meta-analysis, that behavioural CQ has incremental impact for task performance while motivational CQ positively influenced leadership performance. The same results was supported by the research of Ang et al. (2007) in which four theoretical factors of CQ were proved with a confirmatory factor analysis (CFA). It is worth mentioning that all participant of the study were undergraduate from either the US or Singapore which could be seen as a good point when assessing CQ because university student constantly faces cross-cultural situation with personal travels, exchange program, international student's hosting, or work internship for example (Cushner, Karim 2004).

From a leadership standpoint, CQ is becoming a must have for today's global leader as they are facing multi-diverse markets and multicultural personnel daily. In his book *Leading with Cultural Intelligence*, David Livermore says that: "Ninety percent of leading executives from sixty-eight countries identified cross-cultural leadership as the top management challenge for the next century" which underlines the significant importance of CQ for Leadership capabilities (Livermore 2015). Indeed, both individuals and companies benefit from higher CQ (Van Dyne, Ang, Tan 2017a). According to the Cultural Intelligence Center in Michigan, people with higher CQ are both personally and professionally more effective as they have the tools required to perform and respond to the multi-globalized world of today (Earley, Ang 2003). In addition to that, companies benefit from increase in revenues from higher CQ as well (Livermore 2010). In terms of reliability, studies found that 92% of companies implementing the CQ metric and trainings increased their revenues in the following eighteen months (Livermore 2010). In effect, while certain aspects of CQ could be seen as innate and fixed, anyone with certain motivation, consciousness, and effort can increase and shape their level of CQ (Earley, Mosakowski 2004).

2.3.4 Research context and gap

From the start of the 21st century, cultural intelligence has been extensively researched especially in the domain of cross-cultural and intercultural competences (Matsumoto, Hwang 2013; Thomas et al. 2008; Ang, Dyne 2015; Earley, Mosakowski 2004). The early studies tried to assess the impact of CQ and understand how to measure the concept of cultural intelligence (Ang, Dyne 2015; Earley, Mosakowski 2004). The majority of the time, most of CQ research have focused on trying to assess the antecedents of CQ but also its consequences. In their study, (Ang, Van Dyne, Koh 2006) reports from a Singaporean undergraduate sample that CQ score could be strongly correlated with the “Big five” personality traits. In other words, CQ vary depending on five different personality traits: Openness, Neuroticism, Agreeableness, Extraversion, Conscientiousness. A main reason for this relationship would be that the “Big Five” taxonomies is one of the most significant classification of personality traits and is proved to persistently predict work behaviours appearing in different contexts and across cultures and times. Unfortunately, looking at the method of the research, even if the author defined Singapore as a very multicultural city, only 23% of the respondent were foreign undergraduate students (Ang, Van Dyne, Koh 2006). Previous international experience is cited and proved to be a major antecedent of CQ (Van Dyne, Ang, Tan 2017a). For example, previous research demonstrates the strong influence of international experience and more precisely its nature such as educational, working, or non-working experience on the level of cultural intelligence (Crowne 2008; Moon, Choi, Jung 2012). For instance, considering the research of Engle, Crowne (2014), even though with a sample of strictly American student, the results of this study demonstrated a significant relationship between a 7 to 14 days short-term study abroad and the development of all the CQ dimensions.

We can see, as mentioned previously, that CQ seems to be malleable and improved with international experience. In fact, most of the studies analysed throughout the process of this present examination show that the CQ has been extensively analysed in universities or in organizations in different continents like in America (Engle, Crowne 2014a; Crowne 2008; Ang et al. 2007; Groves, Feyerherm 2011) or Asia (Ang et al. 2007; Moon Taewon 2010; Moon, Choi, Jung 2012; Lin, Chen, Song 2012; Matsumoto, Hwang 2013). Interestingly, the research on cultural intelligence within European areas seems to be lacking. Moreover, the CQ research in Switzerland appears to be limited.

Although the notion of cultural intelligence has been largely studying from multiple angles and from various cultural clusters, this lack of focus on Switzerland provides an

opportunity to conduct research towards the CQ notion in an extremely multi-cultural environments, for instance in Geneva. Furthermore, the reasons that makes this example interesting is that the previous research made on CQ were not conducted within a such multi-cultural city. Geneva, the second most populous city of the country is known as a global capital with a high concentration of international organizations which attracts more than 190 different nationalities who all bring their own cultures. Geneva's unique characteristics of high expatriates' concentration and foreign workers amount to almost 50 % of the town's population who bring a wide variety of different culture within a single small city (Geneva Academy 2020; Ville de Genève 2020). The citizens and managers of MNE share cultures and habits of a variety of different cultures which makes this melting pot a very interesting case study to assess the notion of cultural intelligence. In the context of this research, Multinational Enterprises 'criteria were set as follow: 1) Company which operate in at least one other country than its original one 2) The company must have a Geneva based office. Considering the literature review of the cultural intelligence's notion and the opportunity of investigation within Geneva's MNEs, this research will focus on addressing the following assertions:

H1 Senior managers have a higher level of cultural intelligence than junior managers

H2 Managers with more international experience have a higher level of cultural intelligence than managers without international experience.

3. Methodology

3.1 Participant

To test our hypothesis, different managers currently working in MNE's within Geneva's offices has been reach out. This population and especially those with precise job title are usually not easy to find due to various personal and professional reasons. Therefore, a snowball sampling technique was utilized. Initial participants were recruited using a convenience sample approaching personal contacts via e-mail, text message as well as professional platforms such as LinkedIn. Once recruited, participants were asked to forward the study onto any of their contacts.

A priory power analysis was conducted using the GPower 3.1 software to estimate how many participants are required to find a statistical difference between groups. The result of this analysis showed that 70 participants were needed assuming a large effect size, a p value of .05 and a power of 0.95. The final sample size comprised of 42 managers ($\bar{x}$ age = 42.690 years, SD = 10.898, male = 24, female = 18). Demographic data from the manager sample are summarized in table 1. Different reasons can be set forward to defend this gap between the ideal sample size made with the power analysis and the effective sample size. For instance, the COVID-19 pandemic and the manner it is shaping individual attitude as well as business strategy. The fast-paced routine of MNE's managers as well as the nature of the assessment which deals with a dimension of human intelligence has also caused some people to be reluctant to respond the questions.

Table 1 Demographic data

<i>Items</i>	<i>Results</i>
Job description	Junior: 35% Senior: 65%
Current position (years)	0-2: 19%; 3-5: 28.6%; 6-9: 21.4%; 10+: 31%
Management experience (years)	0-2: 16.7%; 3-5: 21.4%; 6-9: 9.5%; 10+: 52.4%
International experience (countries)	1-2: 57.1%; 3-4: 21.4%; 5-6: 9.5%; 7-8: 7.1%; 9-10: 2.4%; 10+: 2.4%

3.2 Data collection tools: Cultural Intelligence scale

The CQ scale self-assessment used for this research is called the expanded cultural intelligence scale (Dyne et al. 2012). This scale was made available strictly in the context of this research by permission from the Cultural Intelligence Center and is built on the global conceptualization 20-items CQ scale developed by Ang et al. (2007) using a confirmatory factor analysis, and used in numerous CQ empirical studies (Engle & Crowne, 2014; Koo Moon et al. 2012; Lee et al. 2013). The reason why this scale is used in this research is that it represents the modern trend of CQ research and it relies on a more focused conceptualization and understanding of each CQ dimensions (metacognitive, cognitive, motivational and behaviour CQ) into sub-dimensions such as intrinsic motivation (3 items), extrinsic motivation (3 items) and self-efficacy to adjust (3 items) for the motivational dimensions (Dyne et al. 2012), while still relying on the valid and reliable basis of the former CQ scale.

Studies have shown that self-report as well as other CQ scale measurement were significantly correlated with each other (Ang et al. 2011; Van Dyne et al. 2008) and in concern of validity, were predicting a panel of capacities such as interactional and work adjustment along with cultural adaptation (Ang et al. 2007; Van Dyne et al. 2008). In addition to that, research has showed during the construct validity process of CQ concept that the CQ scale assessment were valid across multiple samples of individuals such as students as well as business employees using structural equation modelling (Van Dyne, Ang, & Koh, 2008). Moreover, using confirmatory factor analysis, the CQ scale demonstrates validity across different time periods (Shokef & Erez, 2008; Van Dyne et al. 2008). In their studies using confirmatory factor analysis (Shannon & Begley, 2008) also demonstrate consistence validity of the CQ scale across countries such as United States, Singapore, and Ireland.

The expanded CQ scale is composed of 39 items all covering the four dimensions of CQ: 9 items dealing with motivational CQ, (e.g. "I truly enjoy interacting with people from different cultures"), 12 items of cognitive CQ (e.g. "I know the rules (e.g., vocabulary, grammar) of other languages"), 9 items of metacognitive CQ (e.g. "I carefully adjust my cultural knowledge after a cultural misunderstanding"), and 9 items measuring behavioural CQ (e.g. "I modify the amount of warmth I express to fit the cultural context") as well as the 11 sub-dimensions developed by (Dyne et al. 2012). All of the CQ items were measured according to a 7-point Likert-type scales ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's α of each CQ scale dimensions which assess their internal consistency are as follow: 1) Metacognitive CQ: 0.953, 2) Cognitive

CQ: 0.942, 3) Motivational CQ: 0.889, 4) Behavioural CQ: 0.949. An initial part of the CQ scale questionnaire regarded demographic items such as: gender, age, job description, seniority, management experience and finally international experience.

3.3 Ethical perspectives

Throughout the conduct of this research on Cultural Intelligence, one of the main objectives to respect was high ethical standards. For this, the most important factor was to ensure that all data collected remained confidential. All responses will be kept private and within the strict scope of this study. In addition, a copyright agreement was accepted for the CQ scale and granted by the Cultural Intelligence Center as it was made available only for an academic research purpose only. This means that the mention “© *Cultural Intelligence Center, 2018. Used by permission of the Cultural Intelligence Center*” has to be visible at the end of every single page of the electronical questionnaire assessing the manager’s level of CQ.

Informed consent was obtained from all participants before any data was collected and participants were free to omit any questions, they felt uncomfortable with. Each response has been collected after the participant’s full informed consent was given and a detailed participation information sent was given to all participants, which included the intention of the research as well as the guidelines they had to follow to participate in the study.

The data collection tool has been approved by my mentor, Mr. Gareth J Harvey, a Chartered Psychologist (CPsychol) and a certified member of the Global Association of Behavioural Scientists (GAABS) before any data was collected. At all times the researcher has followed the seven General Data Protection Regulation principles (GDPR): 1) Lawfulness, fairness and transparency, 2) Purpose limitation, 3) Data minimisation, 4) Accuracy, 5) Storage limitation, 6) Integrity and confidentiality and finally 7) Accountability (General Data Protection Regulation (GDPR) Compliance Guidelines 2018)

At the end of the study, all participants were fully debriefed, clearly explaining the purpose of the study and were provided with contact details, if they wanted to complain or get a copy of the results.

3.4 Procedures

The first step was to assess and look for eventual contacts who worked for Geneva MNEs. Once suitable participants were identified, the goal was to contact them online via text message, e-mail, or through professional platforms such as LinkedIn to have an initial interaction with all of them and get their informed consent. Moreover, the purpose of this first connection was to explain the research and underline as the subject, the target sample as well as purpose of the research question, guidelines, and the survey's link to click on to participate in the study. Once the informed consent was acquired, we began the process of sending them the questionnaire to fill-up and assess their cultural intelligence quotient along with demographic questions. The results of this first survey will allow to see if international experience and seniority have an impact on cultural intelligence for the sample of Geneva-based MNE's managers.

3.5 Statistical analysis

All data was analysed using JASP 0.13.1.0. In this section, the goal is to use statistical test and more precisely Independent Sample T-test, as well as one way between subject ANOVA test to answer our hypothesis. The previously mentioned test will be conducted to see if there are statistically significant relationships between the variables: 1) Seniority and CQ 2) Years of international experience and cultural intelligence.

4. Results

4.1 Gender's CQ score

To ensure the sample used for this research is representative we needed to check that senior managers had more management experience than junior manager. Consequently, an independent sample t-test was conducted. The results of this analysis demonstrated a significant difference at the $p=.05$ level. Junior manager ($M=2.200$, $SD=1.265$) and senior manager ($M=3.407$, $SD=0.931$) conditions, $t=-3.538$, $p=.001.$, $d=1.086$.

After this manipulation check, the first test used for this research's analysis was an independent sample t-test who was conducted to see if male or female participants scored differently on the total CQ scale. The results of this analysis revealed no significant difference at the $p = .05$ level. Taking a closer look at each dimension of CQ, the same test was conducted to see if there was a difference between male or female in Motivational, Cognitive, Metacognitive and Behavioural CQ. The results of this analysis revealed no statistical difference at the $p=.05$ level and are summarized in the following table.

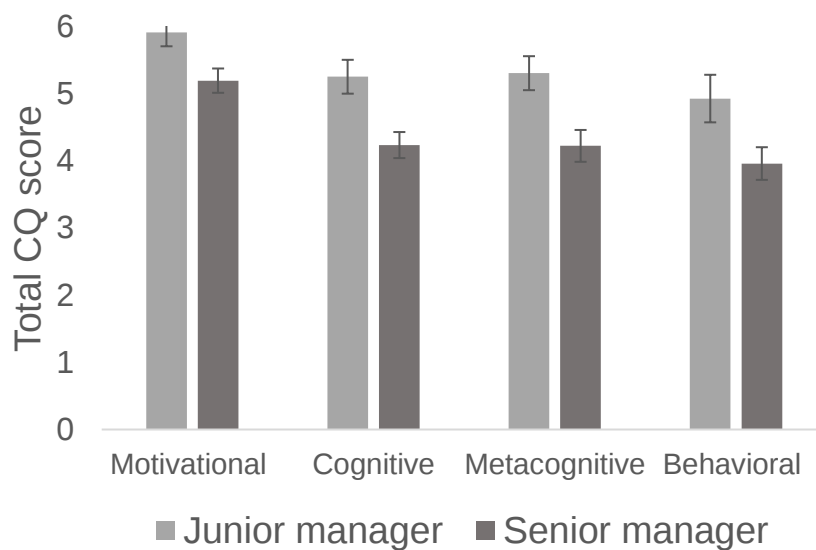
Table 2: Gender's CQ score on each dimension

<i>CQ Dimension</i>	Female		Male		<i>t</i>	<i>p</i>	<i>d</i>
	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>			
Motivational CQ	5.451	1.009	5.449	0.926	0.005	.996	0.002.
Cognitive CQ	4.685	1.058	4.532	1.152	0.443	.661	0.138.
Metacognitive CQ	4.895	1.164	4.394	1.296	1.295	.203	0.406.
Behavioral CQ	4.488	1.278	4.167	1.446	0.747	.459	0.235.
Total CQ score	4.880	0.893	4.635	1.060	0.790	.434	0.249.

4.2 Result of Hypothesis 1: CQ and seniority

Going into the statistical analysis of the overall CQ score of managers, an independent t-test was conducted to see if junior or senior manager scored differently on the overall CQ scale and subsequently if hypothesis 1 was supported or not. The results here showed a statistical difference at the $p = .05$ level but surprisingly, junior manager having a higher CQ score than senior manager. This prove that H1 is not statistically supported and therefore rejected. If we take a closer look at the four dimensions of CQ which are Motivational, Cognitive, Metacognitive and Behavioural, we can realize that using a second independent sample t-test at the $p = .05$ level, junior manager mean scores is statistically higher than senior manager on each and every dimensions of cultural intelligence which can be seen in figure 2.

Figure 2: CQ dimension score of Junior and Senior manager



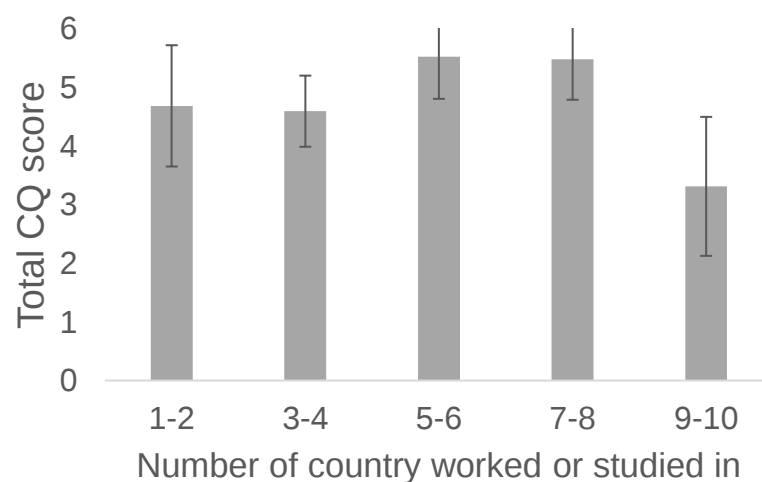
Interestingly, only one out of the eleven sub-dimensions score of CQ, “Intrinsic Motivation”, illustrate no statistical difference through an independent sample t-test between junior and senior manager at the $p = .05$. All of the results of these analysis can be found and summarized in table 3.

Table 3: Junior & Senior CQ score on dimension and sub-dimension

<i>CQ Dimension</i>	Junior Manager		Senior Manager		<i>t</i>	<i>p</i>	<i>d</i>
	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>			
Motivational CQ	5.911	0.801	5.193	0.942	2.489	.017	0.821.
Intrinsic Motivation	6.022	1.073	5.654	0.976	1.130	.265	0.358.
Cognitive CQ	5.251	0.975	4.234	1.10	3.164	.003	0.978.
Metacognitive CQ	5.304	0.982	4.222	1.233	2.918	.006	0.970.
Behavioral CQ	4.926	1.372	3.959	1.265	2.304	.026	0.732.
Total CQ score	5.348	0.739	4.402	0.955	3.317	.002	1.107.

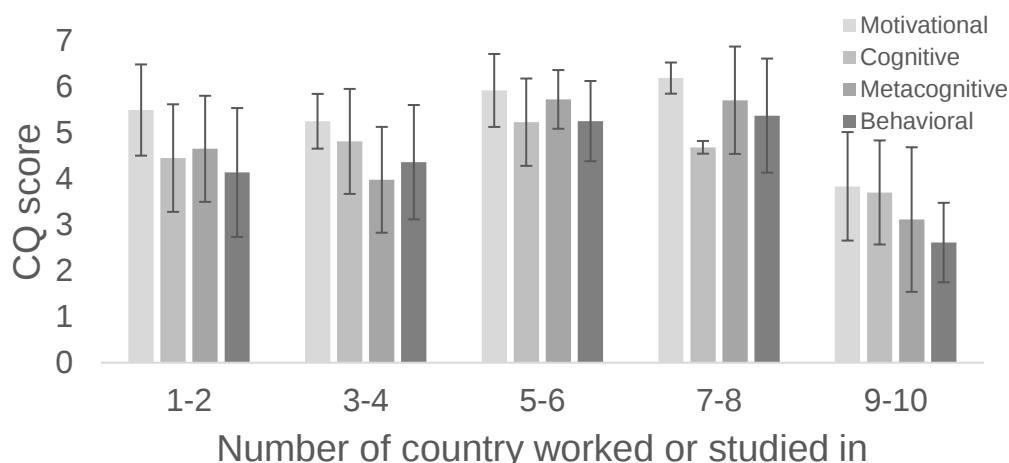
4.3 Result of Hypothesis 2: CQ and international experience

Furthermore, the second hypothesis was assessed using a one way between subject ANOVA to compare the effect of international experience on the overall CQ quotient in 1-2, 3-4, 5-6, 7-8, 9-10 countries conditions. The results of this test, even though statistically very close, showed no effect of international experience on the total CQ score at $p=.05$ for the five conditions and can be seen in the figure 3. In consequence, the second hypothesis is rejected as well.

Figure 3: Overall CQ score over international experience

Interestingly, further analysis demonstrated that even though the overall CQ score showed no statistical difference along the number of country work or studied in, two dimensions of CQ showed, in contradiction to the previous results, statistical differences. Accordingly, a one-way between subject ANOVA showed a significant difference between international experience on Motivational CQ and Metacognitive CQ. The results of these two tests revealed statistical differences of international experience on both Motivational as well as Metacognitive CQ at $p=.05$ for the five conditions. For Motivational CQ, post hoc comparisons using the Tukey HSD test indicated that the mean score of 7-8 country condition was significantly different than the 9-10 country condition. In the case of Metacognitive CQ, the same test post-hoc comparisons using Tukey HSD indicated that the mean score for the 5-6 country condition was significantly different than 9-10 country condition. The results of these test can be found in table 4 and in the following figure 4.

Figure 4: CQ dimension over international experience



Focusing on the sub-dimensions of CQ, results from different one-way between subject ANOVAs demonstrate that a total of four sub-dimensions of cultural intelligence were impacted by international experience. The first ANOVA conducted was comparing the effect of international experience on the “Awareness” score, a sub-dimension of Metacognitive CQ in 1-2, 3-4, 5-6, 7-8, 9-10 countries conditions. The results of this test demonstrate statistical differences of international experience on the Awareness sub-dimension at $p=.05$ for the five conditions. Post hoc comparisons using Tukey HSD test indicated that the mean score of 5-6 countries condition was significantly different than the 9-10 countries condition. Another sub-dimension of Metacognitive CQ, “Checking”, showed a statistical differences with the international experience’s conditions using a

one way between subject ANOVA at $p=.05$. Post hoc comparisons using Tukey HSD test allow us to realize that the mean score of 7-8 countries condition was statistically different than the 9-10 countries condition. The third sub-dimension which was impacted by the international experience is “Non-verbal behaviour”, a sub-dimension of Behavioural CQ. Once again, a one way between subject ANOVA was conducted to compare the effect of international experience on the Non-verbal behaviour sub-dimension score in the five conditions (1-2, 3-4, 5-6, 7-8, 9-10 countries). The results revealed statistical differences of international experience on Non-verbal behaviour at $p=.05$ for the five different conditions. Using post hoc comparison, Tukey test demonstrates that the mean score of 7-8 countries condition was statistically different than the 9-10 countries condition. Finally, the last sub-dimension tested here is “Intrinsic Motivation”, which is part of Motivational CQ. A one-way between subjects’ ANOVA was conducted to compare the effect of international experience on total Intrinsic motivation score in the five previously mentioned conditions. Based on the results, significant statistical differences of international experience have been found on Intrinsic Motivation at $p=.05$ for the five conditions. Considering post hoc comparison using Tukey test, the results revealed that the mean score of 7-8 countries condition was statistically different than the 9-10 countries condition. All the results linked to international experience are summarized in the table 4.

Table 4: International experience on CQ dimension and sub-dimension

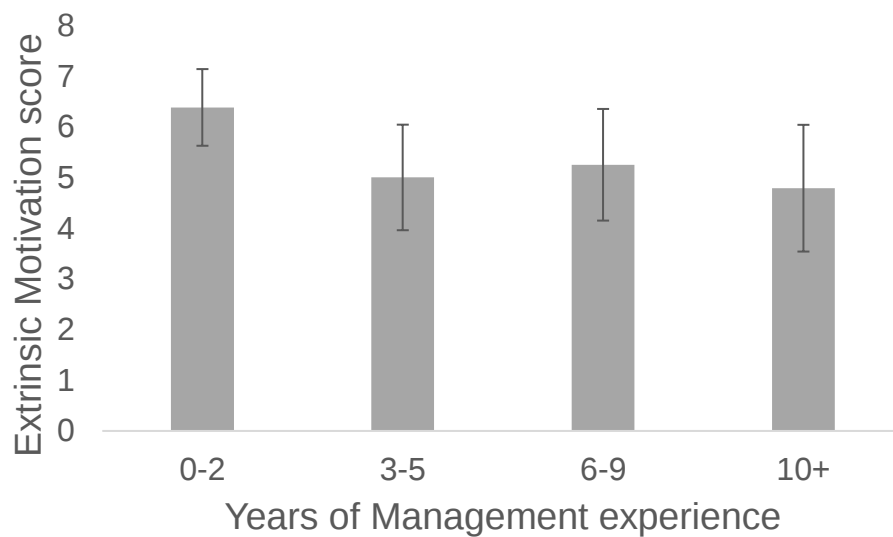
<i>CQ Dimension & Sub-Dimension</i>	1-2		3-4		5-6		7-8		9-10		<i>F (4.37)</i>	<i>p</i>	<i>η²</i>
	<i>$\bar{x}$</i>	<i>SD</i>	<i>$\bar{x}$</i>	<i>SD</i>	<i>$\bar{x}$</i>	<i>SD</i>	<i>$\bar{x}$</i>	<i>SD</i>	<i>$\bar{x}$</i>	<i>SD</i>			
Motivational CQ	5.491	0.991	5.247	0.595	5.917	0.793	6.185	0.339	3.833	1.179	2.602	.052	0.220
Intrinsic Motivation	5.986	0.919	5.259	0.795	6.083	1.032	6.556	0.509	4.000	1.414	3.664	.013	0.284
Cognitive CQ	4.477	1.169	4.809	1.141	5.227	0.949	4.681	0.138	3.700	1.131	0.800	.533	0.080
Metacognitive CQ	4.648	1.153	3.975	1.150	5.722	0.638	5.704	1.167	3.111	1.571	3.244	.022	0.260
Awareness	5.028	1.187	4.037	1.241	6.000	0.861	5.444	1.678	3.000	1.414	3.371	.019	0.267
Checking	4.681	1.339	4.037	1.195	5.667	0.471	6.333	0.577	3.000	1.414	3.546	.015	0.277
Behavioral CQ	4.134	1.400	4.358	1.243	5.250	0.872	5.370	1.239	2.611	0.864	1.957	.121	0.175
Non-verbal Behavior	4.375	1.472	4.519	1.642	5.667	0.720	6.556	0.509	2.500	0.707	3.265	.022	0.261
Total CQ Quotient	4.688	1.035	4.597	0.607	5.529	0.721	5.485	0.693	3.314	1.186	2.487	.060	0.212

Note: International experience is represented in number of countries visited or worked in

4.4 Other statistical test: CQ and management experience

Going into the analysis of management experience and cultural intelligence, A one-way between subjects' ANOVA was conducted to compare the effect of years of management experience on total Extrinsic Motivation, a sub-dimension of motivational CQ, in 0-2, 3-5, 6-9 and 10+ years conditions. There was a significant effect of years of management experience on total Extrinsic Motivation at the $p=.05$ level for the four conditions [$F(3,38) = 3.585, p = .022$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score 0-2 years of experience condition ($M = 6.381, SD = 0.756$) was significantly different than the 10+ years of experience condition ($M = 4.788, SD = 1.250$). Interestingly, Extrinsic Motivation was the one and only sub-dimension been influenced by the variable years of management experience. A graphical representation can be found in the following figure 5.

Figure 5: Extrinsic Motivation score over management experience



5. Discussion

5.1 Discussion of the results

Results demonstrated that female and male participants do not differ in their overall cultural intelligence score. In other words, there were no sex differences linked to overall CQ score. The first theoretical reason that could explain this result is that CQ is part of the so called interpersonal pool of intelligence along with emotional intelligence for instance which is a concept of intelligence, compared to a fixed and inherited trait like cognitive intelligence that can be shape and anybody, regardless of their gender, can get to a certain level of Cultural Intelligence (School 2015; Earley, Mosakowski 2004; Livermore 2010; Lynch 2021). In addition to this, a vast literature demonstrate that people are constantly looking for gender differences in studies when there are actually none. Interest in the study of sex differences and equalities has always been wide throughout the history and research on this topic has largely increased since the last four decades aiming at looking ways in which female and male were similar as well as different from each other (Halpern 2013). However, in a vast majority of the cases sex differences are rarely found within the psychology field (Seidlitz, Diener 1998; Hirnstein, Larøi, Laloyaux 2019; Häfner 2002; Eagly 1978; Schwartz, Rubel 2005). Even though that no statistical differences between gender and CQ overall score has been found, it does not necessarily prove its full certainty as the results is based on probabilities. In fact, there is always a proportional chance of committing a type 1 and type 2 error (Bhandari 2021). A type 1 error in statistic occur when findings are reported to be significant when it actually has occurred by chance while type 2 error occur when no statistical effect is reported when they were actually one (McLeod 2019). One opportunity to have reduced the occurrence of a type 1 error is to have reduced the significant level of 5% used for this research which represent the probability of accepting a finding by chance. However, by doing so, we would have, at the same time, increased the chance of a type 2 error. This demonstrates the proportionality between the two error's types and their importance within this present study and any statistical findings.

Results showed also that junior and senior manager scored differently on the overall CQ score as well as on the four CQ dimensions: Motivational, Cognitive, Metacognitive and Behavioural. But very interestingly the results demonstrated that junior managers had higher overall CQ scores than senior managers, which goes against what was predicted in hypothesis 1. Even though the Cultural Intelligence's literature demonstrated that prior cross-cultural contact and interaction with other cultures as well as international

experiences were developing CQ quotient and that presumably the more senior a MNE manager is, the more intercultural and international experience they should possess, which should subsequently impact their CQ level positively (Van Dyne, Ang, Tan 2017b), this was not supported by the result of the present study. One of the main reasons to explain these results could be that junior manager working within Geneva's MNEs tend to have made them look better, overestimated their own skills and capacities, compared to senior managers which could be linked to the research of Kruger, Dunning (1999) demonstrating that people have the tendency to hold an exceedingly favourable views of their own capabilities in various social as well as intellectual domains of their lives. We could also mention a notion of maturity or experience related to these results where Geneva's MNE senior manager tend to have responded to the questionnaire with more carefulness and experience than junior manager or potentially that senior managers working in such companies tend to know themselves much better than junior managers within the city of Geneva which could be linked with the research of Markus (1983) stating that self-knowledge is constructed along life experiences. In fact, based on this study and considering senior manager generally more experienced, a theoretical reason could be found in stating that the more experienced an individual is, the more knowledge about itself it should possess.

All of this leads to the vast and hot topic of using self-report tools to collect data. This type of reporting data is one of the most used in several fields of empirical studies (Lance, Vandenberg 2009). But in contradiction and according to many research such as the one of Donaldson, Grant-Vallone (2002); Furnham, Henderson (1982); Arnold, Feldman (1981); van de Mortel (2008); Furnham (1986), these forms of data collection tools are prone to several different response-biases, such as the tendency of people responding in a socially-desirable manner or to respond to self-report questions in a way it would value them as an exaggerating behaviour seen as appropriate or even underestimate the behaviour seen as less generally appropriate by researchers.

Here the nature of the study which assesses a concept of human intelligence could also be the cause of this result bias. In effect, asking people to answer some question that will assess a concept of their intelligence, here Cultural Intelligence, could also be the cause of response that would have been overestimated by junior managers. Looking at a theoretical reason, the study of Colladon, Grippa (2018) assessing the correlation between self-report accuracy with academic performance with a sample of undergraduates found that lower achieving student were the one who were significantly less authentic and honest in self-reporting data. Taking this research into consideration,

the same theoretical reason could be applied here in the present study. In fact, junior managers were potentially the weakest in CQ scores and tend to have responded less accurately to the CQ self-report questionnaire, in which case they influenced and biased the results of hypothesis 1.

Zooming on the eleven sub-dimensions of the Cultural Intelligence scale, surprisingly only one sub-dimension of Motivational CQ score, Intrinsic Motivation, demonstrates there is no difference between a junior and a senior manager. Intrinsic motivation is described in Dyne et al. (2012) as the self-generated satisfaction gained from new intercultural interactions, e.g. from working with a culturally different colleague or be part of a multicultural team. The opposite of intrinsic motivation, extrinsic motivation emphasize all behaviours that are driven by external rewards which could be either tangible or intangible and which are coming from inter-cultural experiences such as the increase in employability or the access to higher job titles and promotions (Ryan, Deci 2000). A theoretical reason that could explain no differences in intrinsic motivation between junior and senior manager can be rooted in the Self-determination theory (SDT) of Ryan, Deci (2000). This empirical theory point-out what makes an individuals' self-motivation and determination to grow and change. In other words, people are capable of becoming self-motivated when three basics, innate psychological needs are fulfilled and which every single person possesses: 1) Competence, 2) Autonomy, 3) Relatedness. Considering that these universal psychological needs are innate and can be found in every individuals regardless of their age and seniority, the SDT could be the reason to support here that no differences between seniority and Intrinsic motivational CQ score were found. In fact, all manager participants of this study could have a certain amount of self-motivation to behave and to have the ability to interact effectively within inter-cultural environments which are coming from the fulfilment of these three innate psychological needs of the SDT theory.

Additionally, the results of this study demonstrated that the managers with more international experience tend to have a higher total CQ score, but nevertheless, not sufficient to be statistically accepted. Accordingly, Hypothesis 2 was rejected as well. Even tough international experience has been cited as one of the major antecedents of CQ and studied in many research linked with Cultural Intelligence (Van Dyne, Ang, Tan 2017b; Engle, Crowne 2014b; Crowne 2008), the result of the present research demonstrated that international experiences were not influencers of CQ quotient for Geneva's MNE managers. The theoretical logic that could be mentioned here is the fact that Geneva is such a multicultural city with a pool of various cultures interacting with

each other that international experiences do play an important role for CQ. Geneva's citizens and especially people who were born and lived within the multi-cultural environment of the city are impregnated with multi-culturalism from an early age through their daily inter-personal interaction and also within their scholarship for instance. In effect, globalization as well as the multicultural aspects of some nations and cities have also turned the light into whether or not a country, through its educational system could develop culturally smart individuals (Goh 2012). This goes with having culturally intelligent teachers, teaching style and also classes linked with intercultural topics. This educational framework englobing more and more multi-cultural aspects such as having teachers or classmates from different origins could also explain the fact that international experiences were not impacting the CQ level of managers in Geneva. Instead, this could also explain the fact that junior managers, who must have embraced from a younger age this globalization wave and environment changes in Geneva, are the ones who have demonstrated more Cultural intelligence compared to senior managers who could have potentially been only expatriates or managers which came to the city afterwards, for career purposes, while not benefiting from all the advantages of the city's multi-culturalism.

On the contrary, when looking closely at both Motivational and Metacognitive CQ dimension and their sub dimensions scores, we can notice that Intrinsic Motivation, Awareness, Checking, and non-verbal behaviour were, in fact, linked with international experience. In other words, these results suggest that the manager with more international experience has significantly higher Intrinsic Motivation, Awareness, Checking, and non-verbal behaviour scores than the managers with less international experience. First of all, for intrinsic motivation, which can be referred as the act of doing something because its inherently satisfying and personally enjoyable or interesting (Van Dyne, Ang, Tan 2017b), a theoretical reason found in (Haines, Saba, Choquette 2008) could be supported for these results, which demonstrated that individuals who showed higher intrinsic motivation for an international assignment were the ones, at .39, much more willing to accept this type of foreign experiences. This could explain the fact that the manager's intrinsic motivation of this study tend to be related with international experience because according the research of Haines, Saba, Choquette (2008), the more intrinsically motivated an individual is, the more willing this person is to accept international assignments which increase, in the end, his own international experience.

The goal of Haines, Saba, Choquette (2008)'s research was to assess the motivational construct of intrinsic motivation for an international assignments in relation to the

variables of interest in international expatriation research. Looking at the study, some matters could be discussed. First of all, the study has paid a great attention in the reliability and validity of the results. Moreover, the authors have successfully supported the distinction between intrinsic and extrinsic motivation using a very advanced statistical test called confirmatory factor analysis. In addition to that, result demonstrated that the majority of the research's hypothesis have been accepted and that the research sample of MBA graduate working in a wide variety of industries and occupations seems to have been very suitable for this study as their career usually end up in managerial role which consider international assignments. However, a weaker point that could be mentioned is that only 21% of respondents had previous international experience while a meagre 28% considered their probability to be asked to expatriate for their company ranged from average to very high.

The sub-dimension Awareness is described as the consciousness that people have about how cultures influence their own mental process and behaviour as well as the one of others in intercultural situations (Ridley et al. 1992). Checking is described as the capacity to review its own assumptions and to strategically adjust mental model to fit in intercultural interaction (Bell, Kozlowski 2008). Finally Non-verbal behaviour refers to the capability to adjust the non-verbal component in inter-cultural exchange (Knapp, Hall 2010). This means for example, adapting to gestures, facial expressions and also body languages that could be different from one culture to another (Westphal, Seivert, Bonanno 2010). These three sub-dimensions of cultural intelligence could be seen as intercultural competences and according to our results would be linked with international experiences. An explanation of this could be found in the work of McAllister et al. (2006), where the authors describes international experience as developing intercultural understanding and competences to another dimension. Moreover, various additional research demonstrated that international experience, such as the one taken by students during their university studies, are influencing different intercultural skills such as the awareness of other cultures' values, the dos and don'ts as well as intercultural communication abilities (Halse, Baumgart 1996; McCabe 2001; Landis, Bennett, Bennett 2003).

This research also demonstrated that Extrinsic Motivation score, one of the sub-dimensions of Motivational CQ were linked to the years of management experience and suggest that less-experienced managers have significantly higher extrinsic motivation score than the manager with more management experience. Referring to the work of Catania, Randall (2013) and considering an experienced manager as supposedly older

than one with less management experience, e.g. a younger individual, being a starting point in his career, which include various financial burdens and uncertainties such as car loan and mortgage for instance, are more motivated by the valuable and tangible benefits that can derive from intercultural experiences such as the increase of their employability, future work opportunities and promotions. In effect, as the study of Crossman, Clarke (2010) is mentioning, globalization as well as internationalisation has emphasized the importance of having inter-culturally experienced people and nowadays all stakeholders understand the crucial links that exist between international experiences and work opportunities. Still, considering a more experienced manager, older than a less experienced one, this result of Extrinsic motivation is also aligned with the empirical findings of De lang et al. (2011); Kooij et al. (2008; 2011) which support that extrinsic motivation tends to decrease with age.

5.2 Limitations

First of all, this study relied only on one data collection method. Even though quantitative researches method are straight forward to set up and statistically analysed, an ideal point would have been to take into consideration more than one data collection method called multi-method research or triangulation technique combining quantitative and/or qualitative approaches which according to Abowitz, Toole (2010) is, of course, more time and energy consuming but which improves the validity and reliability of the results data. The two other limitations concern the use of self-reports scale as well as the length of the questionnaire. The method of using self-reporting data has different issues and sources of bias such as social desirability (Podsakoff et al. 2003) which we have potentially experienced in the result of hypothesis 1 as well as other forms such as answering to questions in a systematic way unrelated to the content called responses sets (Coolican 2004). A notion of duration in the survey completion could be mentioned. In effect with more than forty items to be answered, this could have also been the reason of supposedly responses bias as mentioned by Brace (2018) which demonstrate that enjoyability and boredom varied along the questionnaire's length and which could influence, subsequently, the tendency of people to answer the questionnaire in a manner which can be described as biased.

5.3 Future research and implications for practice

This research is answering and advancing a very limited research field on the notion of cultural intelligence within the multi-cultural city of Geneva as well as the country of Switzerland which are heavily important within business settings. If this present research were conducted with several different MNE manager of the city and were paying a close attention to both international experience and the seniority along with the cultural intelligence score within the business sphere, another study could be conducted to investigate even more the impact of international experience on CQ. In effect, the findings of this research demonstrated that international experience was not impacting CQ score even though that the vast majority of CQ empirical research has proven the opposite. This could raise some questions and some news research's implications to try to double check with a different sample of individuals if there is definitely a link between these two variables within Geneva's borders. An interesting idea of future research linked with this matter would be to conduct a study within a university or even here at HEG Geneva. The goal of this research would be to analyse the impact of international experience on the CQ quotient of undergraduate student taking an Erasmus program but while also doing the same with people who are staying within Geneva's boundaries for a semester or a full year. Assessing students' CQ quotient before and after their semester abroad or within their home university will able the research to demonstrate if the exchange program has an impact on the level of Cultural intelligence of student and if it was the fact that the student went abroad that made a difference on CQ or just the fact of having experienced a semester or a full year withing the multi-cultural city of Geneva. In addition to that, working with international offices of universities and the student themselves who are going on exchange programs, this research could potentially demonstrate, using Mixed within between ANOVA statistical test if it is the fact of going to a very different country culturally speaking that make an impact on CQ or simply the multi-culturalism environment of the city of Geneva.

6. Conclusion

The goal of this research was to assess the impact of international experience and seniority on the level of cultural intelligence of Geneva MNE managers. Based on the results of the present study, international experience has proven not to be linked with the managers' CQ score in the city of Geneva's while in addition to this, result has proven that junior manager had a higher CQ score than senior manager. This contradicts the existing academic literature (Ang, Dyne 2008; Van Dyne, Ang, Tan 2017b; Crowne 2008; Engle, Crowne 2014b) and is a somewhat unexpected finding. However, it could be explained by a number of different mechanisms.

Firstly, it is possible that this counter-intuitive result can be explained by the data collection strategy employed. Junior managers have an incentive to exaggerate their own ability. They may have been concerned that the results would be shared with their managers, and they wanted to present their abilities in a positive light. In contrast senior managers tend to have showed a greater maturity and experience when responding to the study reflecting their actual ability, not their desired ability.

Secondly, as Geneva is a highly multicultural environment where different cultures are constantly interacting with each other it is feasible that junior managers who grew up here have already gained a significant amount of international experience, even without having left the city. This could potentially explain the higher CQ scores for junior managers, who on average grew up in Geneva. In contrast, senior managers are more likely to be none-natives to Geneva, who moved to the city for work. Therefore, they may actually have less multi-cultural experience even though they have worked in more countries. This findings could be beneficial and make a significant cost and complexity reduction, for companies, in terms of business practices. In their quest of culturally smart individuals in the workplace, businesses will not have the necessity to rely on expensive inter-cultural programs and trainings to form culturally intelligent workers because these types of persons, who grew up in a multi-cultural environment, would be already smart in that domain and ready to work and bring their ability to work effectively in multi-cultural settings or in other words, their cultural intelligence.

The CQ scale used in this research allowed to pay a very interesting attention to sub-dimensions of cultural intelligence. For example, the sub-dimension Awareness, Checking and Non-verbal behaviour which can be described as intercultural competences have appeared to be growing along with international experience for Geneva MNE managers. Moreover, CQ Extrinsic motivation of managers were

negatively linked with management experience which tend to prove that younger managers were the ones further looking at the external rewards happening from the ability to work effectively within multi-cultural environments such as their increase of employability within international companies, subsequent promotions, or future work opportunities.

This research also underlines, at a business point, the importance for companies to hire people who are coming from multi-cultural cities and have experienced a multi-cultural context from a young age rather than betting on expensive foreign staff with a lot of international experiences.

Even if the research is based on a quantitative approach using statistical analysis, the result of the impact of international experience on cultural intelligence would still need further investigations as we need to be mindful of, firstly, the potential chances of the most well-known statistical error called Type 1 and Type 2 and also the fact that international experience is cited, in the wide majority of researches, as one of the most important antecedents of CQ, the capability to function effectively within intercultural environments (Earley, Ang 2003) .

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Appendix 1: Expanded CQ scale granted from the Cultural Intelligence Center

E-CQS (Expanded Cultural Intelligence Scale) ©¹

Instructions: Read each statement and select the response that best describes your capabilities relative to those of your peers.
Select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree)

Motivational CQ

Intrinsic Motivation	I truly enjoy interacting with people from different cultures.
Intrinsic Motivation	I thrive on experiencing cultural differences that are new to me.
Intrinsic Motivation	Given a choice, I prefer working with people from different (rather than similar) cultural backgrounds.
Extrinsic Motivation	I value the reputation I would gain from living or working in a different culture.
Extrinsic Motivation	Given a choice, I would value the tangible benefits (pay, promotion, perks) that could be gained from an intercultural interaction more than a same culture interaction.
Extrinsic Motivation	I value the credibility I would gain from developing global networks and culturally diverse connections.
Self-Efficacy to Adjust	I am very confident I can persist in coping with living conditions in different cultures.
Self-Efficacy to Adjust	I am sure I can handle the stress of interacting with people from cultures that are new to me.
Self-Efficacy to Adjust	I am quite confident I can socialize with locals in a culture that is unfamiliar to me.

Cognitive CQ²

Culture General Knowledge

Values	I can describe different views of beauty and aesthetics across cultural settings.
Values	I can describe the different cultural value frameworks that explain behaviors around the world.
Values	I can describe differences in family systems and the varied role expectations for men and women across cultures.
Business	I can describe similarities and differences in political systems across cultures.
Business	I can describe the legal and economic systems of other cultures.
Sociolinguistics	I can speak and understand many languages.
Sociolinguistics	I know the rules (e.g., vocabulary, grammar) of other languages.

E-CQS (Expanded Cultural Intelligence Scale) (continued) ©

Context-Specific Knowledge

Leader	I can describe the ways leadership styles differ across cultural settings.
Leader	I can describe how to put people from different cultures at ease.
Leader	I can describe effective negotiation strategies across different cultures.
Leader	I can describe different ways to motivate and reward people across cultures.
Leader	I can describe effective ways for dealing with conflict in different cultures.

Metacognitive CQ

Planning	I develop action plans before interacting with people from a different culture.
Planning	I think about possible cultural differences before meeting people from other cultures.
Planning	I ask myself what I hope to accomplish before I meet with people from different cultures.
Awareness	I am aware of how my cultural background influences my interactions with people from different cultures.
Awareness	I pay very close attention to how culture may influence what is happening in a situation.
Awareness	I am carefully conscious of how other people's cultural background may influence their thoughts, feelings, and actions.
Checking	I make sure I adjust my understanding of a culture while I interact with people from that culture.
Checking	I double check the accuracy of my cultural knowledge during intercultural interactions.
Checking	I carefully adjust my cultural knowledge after a cultural misunderstanding.

Behavioral CQ

Speech Acts	I modify the way I disagree with others to fit the cultural setting.
Speech Acts	I change how I make requests of others depending on their cultural background.
Speech Acts	I vary the way I show gratitude (express appreciation, accept compliments) based on the cultural context.
Verbal Behavior	I change my use of pause and silence to suit different cultural situations.
Verbal Behavior	I vary my verbal behaviors (accent, tone, rate of speaking) to fit specific cultural contexts.
Verbal Behavior	I modify the amount of warmth I express to fit the cultural context.
Non-Verbal Behavior	I modify how close or far apart I stand when interacting with people from different cultures.
Non-Verbal Behavior	I change my non-verbal behaviors (hand gestures, head movements) to fit the cultural situation.
Non-Verbal Behavior	I vary the way I greet others (shake hands, bow, nod) when in different cultural contexts.

¹ © Cultural Intelligence Center, 2018. Used by permission of the Cultural Intelligence Center, LLC.

Note. Use of this scale is granted to academic researchers for research purposes only. For information on using the scale or items for purposes other than academic research (e.g. consulting, program evaluation, non-academic organizations), send an email to info@culturalq.com

For more information, see Van Dyne, L., Ang, S., Ng, K.Y., Rockstuhl, T., Tan, M. L. & Koh, C. (2012). Subdimensions of the four factor model of cultural intelligence: Expanding the conceptualization and measurement of cultural intelligence. *Social and Personality Psychology Compass*, 6/4, 295-313.

See also <http://culturalq.com>

Appendix 2: Demographic items of the questionnaire

Q1: Did you fully understand the purpose of this survey and are you happy to participate in it?

***1 answer possible**

- ☐ Yes, I understand, and I am happy to participate in it
- ☐ No, I do not really understand the matter of this study

Q2: What is your age?

***open question**

Q3: What is your sex?

***1 answer possible**

- ☐ Male
- ☐ Female
- ☐ Non-binary
- ☐ I prefer not to answer
- ☐ Other

Q4: Which job best describes your role?

***1 answer possible**

- ☐ Junior manager
- ☐ Senior manager
- ☐ Other

Q5: How long have you been employed in your current position?

***1 answer possible**

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-9 years
- ☐ 10+ years

Q6: How many years of management experience do you have?

***1 answer possible**

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-9 years
- ☐ 10+ years

Q7: How many countries have you worked or studied in?

***1 answer possible**

- ☐ 1-2
- ☐ 3-4
- ☐ 5-6
- ☐ 7-8
- ☐ 9-10

Appendix 3: Data turned into statistical language

Q1: Ethic
1 Yes
2 No
Q3: Sex
1 Female
2 Male
3 Non-binary
Q4: Job description
1 Junior manager
2 Senior manager
Q5: How long have you been employed?
1 0-2 years
2 3-5 years
3 6-9 years
4 10+ years
Q6: How many years of management experience?
1 0-2 years
2 3-5 years
3 6-9 years
4 10+ years
Q7: How many countries have you worked in or studied in?
1 1-2 countries
2 3-4 countries
3 5-6 countries
4 7-8 countries
5 9-10 countries
Q8 to Q47: CQ scale items
1 Strongly disagree
2 Disagree
3 Somewhat disagree
4 Neutral
5 Somewhat agree
6 Agree
7 Strongly agree

Appendix 4: Analysis on Jasp 0.13.1.0 for Cronbach's α

Behavioural items

Single-Test Reliability Analysis ▼

Frequentist Scale Reliability Statistics ▼

Estimate	Cronbach's
Point estimate	0.949
95% CI lower bound	
95% CI upper bound	

Metacognitive items

Single-Test Reliability Analysis

Frequentist Scale Reliability Statistics

Estimate	Cronbach's
Point estimate	0.953
95% CI lower bound	
95% CI upper bound	

Cognitive items

Single-Test Reliability Analysis ▼

Frequentist Scale Reliability Statistics ▼

Estimate	Cronbach's
Point estimate	0.942
95% CI lower bound	
95% CI upper bound	

Motivational items

Single-Test Reliability Analysis ▼

Frequentist Scale Reliability Statistics

Estimate	Cronbach's
Point estimate	0.889
95% CI lower bound	
95% CI upper bound	

Appendix 5: Analysis of H1 on Jasp 0.13.1.0

Independent Samples T-Test ▼

	t	df	p
Total Motivational CQ	2.489	40	0.017
Total Cognitive CQ	3.164	40	0.003
Total Metacognitive CQ	2.918	40	0.006
Total Behavioral CQ	2.304	40	0.026
Total CQ quotient	3.317	40	0.002

Note. Student's t-test.

Group Descriptives

	Group	N	Mean	SD	SE
Total Motivational CQ	1	15	5.911	0.801	0.207
	2	27	5.193	0.942	0.181
Total Cognitive CQ	1	15	5.251	0.975	0.252
	2	27	4.234	1.010	0.194
Total Metacognitive CQ	1	15	5.304	0.982	0.253
	2	27	4.222	1.233	0.237
Total Behavioral CQ	1	15	4.926	1.372	0.354
	2	27	3.959	1.265	0.243
Total CQ quotient	1	15	5.348	0.739	0.191
	2	27	4.402	0.955	0.184

<u>Group</u>
1 Junior manager
2 Senior manager

Appendix 6: Analysis of H2 on Jasp 0.13.1.0

ANOVA

ANOVA - Total CQ quotient

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	8.471	4	2.118	2.487	0.060
Residuals	31.506	37	0.852		

Note. Type III Sum of Squares

Descriptives

Descriptives - Total CQ quotient

How many countries have you worked or studied in?	Mean	SD	N
1	4.688	1.035	24
2	4.597	0.607	9
3	5.529	0.721	4
4	5.485	0.693	3
5	3.314	1.186	2

Post Hoc Tests

Standard

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.090	0.361	0.250	0.999
	3	-0.841	0.498	-1.688	0.453
	4	-0.797	0.565	-1.411	0.625
	5	1.374	0.679	2.023	0.275
2	3	-0.932	0.555	-1.680	0.458
	4	-0.888	0.615	-1.443	0.605
	5	1.283	0.721	1.779	0.401
3	4	0.044	0.705	0.062	1.000
	5	2.215	0.799	2.772	0.062
4	5	2.171	0.842	2.577	0.096

Note. P-value adjusted for comparing a family of 5

<u>Group</u>	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 7: Gender and CQ on Jasp 0.13.1.0

Independent Samples T-Test

	t	df	p
Total Motivational CQ	0.005	40	0.996
Total Cognitive CQ	0.443	40	0.661
Total Metacognitive CQ	1.295	40	0.203
Total Behavioral CQ	0.747	40	0.459
Total CQ quotient	0.790	40	0.434

Note. Student's t-test.

Group Descriptives

	Group	N	Mean	SD	SE
Total Motivational CQ	1	18	5.451	1.009	0.238
	2	24	5.449	0.926	0.189
Total Cognitive CQ	1	18	4.685	1.058	0.249
	2	24	4.532	1.152	0.235
Total Metacognitive CQ	1	18	4.895	1.164	0.274
	2	24	4.394	1.296	0.265
Total Behavioral CQ	1	18	4.488	1.278	0.301
	2	24	4.167	1.446	0.295
Total CQ quotient	1	18	4.880	0.893	0.210
	2	24	4.635	1.060	0.216

<u>Group</u>
1 Female
2 Male

Appendix 8: Result of Intrinsic Motivation and Seniority

Independent Samples T-Test ▼

Independent Samples T-Test ▼

	t	df	p
Total Instrinsic Motivation	1.130	40	0.265

Note. Student's t-test.

Descriptives

Group Descriptives

	Group	N	Mean	SD	SE
Total Instrinsic Motivation	1	15	6.022	1.073	0.277
	2	27	5.654	0.976	0.188

<u>Group</u>
1 Junior manager
2 Senior manager

Appendix 9: Result of International experience and Motivational CQ

ANOVA - Total Motivational CQ

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	8.131	4	2.033	2.602	0.052
Residuals	28.905	37	0.781		

Note. Type III Sum of Squares

Descriptives - Total Motivational CQ

How many countries have you worked or studied in?	Mean	SD	N
1	5.491	0.991	24
2	5.247	0.595	9
3	5.917	0.793	4
4	6.185	0.339	3
5	3.833	1.179	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.244	0.345	0.706	0.954
	3	-0.426	0.477	-0.892	0.898
	4	-0.694	0.541	-1.283	0.703
	5	1.657	0.651	2.548	0.102
2	3	-0.670	0.531	-1.261	0.716
	4	-0.938	0.589	-1.592	0.512
	5	1.414	0.691	2.046	0.265
3	4	-0.269	0.675	-0.398	0.994
	5	2.083	0.765	2.722	0.070
4	5	2.352	0.807	2.915	0.045

Note. P-value adjusted for comparing a family of 5

Group	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 10: Result of International experience and Metacognitive CQ

ANOVA - Total Metacognitive CQ ▼

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	16.690	4	4.173	3.244	0.022
Residuals	47.587	37	1.286		

Note. Type III Sum of Squares

Descriptives

Descriptives - Total Metacognitive CQ

How many countries have you worked or studied in?	Mean	SD	N
1	4.648	1.153	24
2	3.975	1.150	9
3	5.722	0.638	4
4	5.704	1.167	3
5	3.111	1.571	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.673	0.443	1.518	0.558
	3	-1.074	0.612	-1.754	0.415
	4	-1.056	0.694	-1.520	0.557
	5	1.537	0.835	1.842	0.366
2	3	-1.747	0.681	-2.563	0.099
	4	-1.728	0.756	-2.286	0.172
	5	0.864	0.887	0.975	0.865
3	4	0.019	0.866	0.021	1.000
	5	2.611	0.982	2.659	0.080
4	5	2.593	1.035	2.504	0.112

Note. P-value adjusted for comparing a family of 5

<u>Group</u>	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 11: Result of international experience on sub-dimension Awareness

ANOVA - Total Awareness

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	19.899	4	4.975	3.371	0.019
Residuals	54.599	37	1.476		

Note. Type III Sum of Squares

Descriptives - Total Awareness

How many countries have you worked or studied in?	Mean	SD	N
1	5.028	1.187	24
2	4.037	1.241	9
3	6.000	0.861	4
4	5.444	1.678	3
5	3.000	1.414	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.991	0.475	2.087	0.247
	3	-0.972	0.656	-1.482	0.580
	4	-0.417	0.744	-0.560	0.980
	5	2.028	0.894	2.268	0.178
2	3	-1.963	0.730	-2.689	0.075
	4	-1.407	0.810	-1.738	0.424
	5	1.037	0.950	1.092	0.809
3	4	0.556	0.928	0.599	0.974
	5	3.000	1.052	2.852	0.052
4	5	2.444	1.109	2.204	0.201

Note. P-value adjusted for comparing a family of 5

Group	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 12: Result of international experience on sub-dimension Checking

ANOVA - Total checking ▼

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	21.459	4	5.365	3.546	0.015
Residuals	55.983	37	1.513		

Note. Type III Sum of Squares

Descriptives - Total checking

How many countries have you worked or studied in?	Mean	SD	N
1	4.681	1.339	24
2	4.037	1.195	9
3	5.667	0.471	4
4	6.333	0.577	3
5	3.000	1.414	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.644	0.481	1.338	0.670
	3	-0.986	0.664	-1.484	0.579
	4	-1.653	0.753	-2.194	0.204
	5	1.681	0.905	1.856	0.358
2	3	-1.630	0.739	-2.205	0.201
	4	-2.296	0.820	-2.800	0.058
	5	1.037	0.962	1.078	0.816
3	4	-0.667	0.939	-0.710	0.953
	5	2.667	1.065	2.503	0.112
4	5	3.333	1.123	2.969	0.039

Note. P-value adjusted for comparing a family of 5

<u>Group</u>	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 13: Result of international experience on sub-dimension Non-verbal Behavior

ANOVA - Total non-verbal behavior ▼

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	26.118	4	6.529	3.265	0.022
Residuals	74.002	37	2.000		

Note. Type III Sum of Squares

Descriptives - Total non-verbal behavior

How many countries have you worked or studied in?	Mean	SD	N
1	4.375	1.472	24
2	4.519	1.642	9
3	5.667	0.720	4
4	6.556	0.509	3
5	2.500	0.707	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	-0.144	0.553	-0.260	0.999
	3	-1.292	0.764	-1.691	0.452
	4	-2.181	0.866	-2.518	0.108
	5	1.875	1.041	1.801	0.388
2	3	-1.148	0.850	-1.351	0.662
	4	-2.037	0.943	-2.161	0.217
	5	2.019	1.106	1.826	0.375
3	4	-0.889	1.080	-0.823	0.922
	5	3.167	1.225	2.586	0.094
4	5	4.056	1.291	3.141	0.026

Note. P-value adjusted for comparing a family of 5

<u>Group</u>	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 14: Result of international experience on sub-dimension Intrinsic Motivation

ANOVA - Total Intrinsic Motivation ▼

Cases	Sum of Squares	df	Mean Square	F	p
How many countries have you worked or studied in?	11.968	4	2.992	3.664	0.013
Residuals	30.215	37	0.817		

Note. Type III Sum of Squares

Descriptives - Total Intrinsic Motivation ▼

How many countries have you worked or studied in?	Mean	SD	N
1	5.986	0.919	24
2	5.259	0.795	9
3	6.083	1.032	4
4	6.556	0.509	3
5	4.000	1.414	2

Post Hoc Comparisons - How many countries have you worked or studied in?

		Mean Difference	SE	t	Ptukey
1	2	0.727	0.353	2.058	0.260
	3	-0.097	0.488	-0.199	1.000
	4	-0.569	0.553	-1.029	0.840
	5	1.986	0.665	2.986	0.038
2	3	-0.824	0.543	-1.518	0.558
	4	-1.296	0.602	-2.152	0.221
	5	1.259	0.706	1.783	0.399
3	4	-0.472	0.690	-0.684	0.959
	5	2.083	0.783	2.662	0.080
4	5	2.556	0.825	3.098	0.029

Note. P-value adjusted for comparing a family of 5

<u>Group</u>	
1	1-2 countries
2	3-4 countries
3	5-6 countries
4	7-8 countries
5	9-10 countries

Appendix 15: Result of management experience on sub-dimension Extrinsic Motivation

ANOVA - Total Extrinsic Motivation ▼

Cases	Sum of Squares	df	Mean Square	F	p
How many years of management experience do you have ?	13.732	3	4.577	3.585	0.022
Residuals	48.522	38	1.277		

Note. Type III Sum of Squares

Descriptives ▼

Descriptives - Total Extrinsic Motivation

How many years of management experience do you have ?	Mean	SD	N
1	6.381	0.756	7
2	5.000	1.041	9
3	5.250	1.101	4
4	4.788	1.250	22

Post Hoc Comparisons - How many years of management experience do you have ?

		Mean Difference	SE	t	Ptukey
1	2	1.381	0.569	2.425	0.089
	3	1.131	0.708	1.597	0.393
	4	1.593	0.490	3.249	0.012
2	3	-0.250	0.679	-0.368	0.983
	4	0.212	0.447	0.474	0.964
3	4	0.462	0.614	0.752	0.875

Note. P-value adjusted for comparing a family of 4

<u>Group</u>	
1	0-2 years
2	3-5 years
3	6-9 years
4	10+ years

Appendix 16: Priory Power Analysis using GPower 3.1

