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**LEADING WITH WISDOM:  
STRUCTURAL MODEL TO LINK WISDOM DIMENSIONS AND  
LEADERSHIP OUTCOMES**

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*A tutte le persone che Amo e che Stimo:*

*ai miei genitori Franco e Donatella*

*a mio fratello Stefano*

*alla mia squadra di nuoto*

*ai miei amici*

*ed in particolare, alle mie amiche Donne.*



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## Introduction

Leadership is, of course, one of those topics in which interest never wanes (Judge, Woolf, Hurst, Livingston, 2006) Leaders represent the pinnacle of any society's organizations, therefore their actions have the potential to trigger and produce big changes.

Steve Jobs, Mark Zuckerberg, President Barak Obama, President Berlusconi, Osama Bin Laden, the Nobel Peace Prize San Suu Kyi and more historical personalities such as Mahatma Gandhi, Adolph Hitler, Joseph Stalin, Alexander the Great, all played the role of the Leader upon the respective "society": for example, Steve Jobs inspired intense fervor among all the people interested (or even not) in technology all around the world, Osama Bin Laden, who head the September 11 attacks against the United States and numerous other attacks "mass casualties" against civilian targets and military, lead the well known international terrorist organization (Baker, 2011)(Brookes, 2011), Adolph Hitler was able to build an empire grounded on nationalism and anti-Semitism, instilling the hate on the people, for Jewish populations.

Questions about leadership have long been a subject of speculation. The widespread fascination with leadership may be, because it is such a mysterious process, as well as one that touches everyone's life.

In the twenty first century there is more knowledge, technology and technologists and experts that at any time in human history. It is reported that the average IQ continues to increase (Sternberg, 2003). Thus, why political and economic forces have contributed to the proliferation of weapons of mass destruction and also to massive environmental degradation? Why business enterprises continue to produce stories of corporate collapses due to greed, limited visions and poor judgment despite the increased level of knowledge? (Rooney & McKenna, 2007).

The contemporary organization environment is characterized by a strong competition (which is also developed in different levels and the e-commerce evolution is an example), the acceleration of discontinuous changes, the complexity of internal and external environments is growing and the focus on ethical and environmental issues increased. Consequently businesses and in particular the people who lead them, are really challenged.

There have been several researchers who stated that wisdom is an important factor that is needed to lead effectively: “Wisdom is the pivotal force behind organizational greatness” (Srivastava & Cooperrider, 1998), it “carries tremendous potential for broadening, deepening and realizing more integral ways for current managerial and organizational practices” (Küpers, 2007), it “becomes relevant for transforming today’s personal, social, cultural, political and economic realities into a sustainable, equitable, peaceful and highly enjoyable existence and evolution” (MacDonald, 1995). Moreover, according to Rooney and McKenna (2007), wisdom could help to “address the problems of post-modernity and seeks to stimulate a change in discourse so that it can be more readily spoken of in management by highlighting its practicality.

The purpose of this study was to find evidence about these statements.

We firstly asked ourselves, what does Wisdom mean and thus, which are the factors that contributes to it. Thus, we tried to identify which are the Dimensions that constitutes Wisdom in Leadership. Basically we questioned: which kind of abilities do the leaders have in order to be wise and how can we recognize them?

Moreover, another question to which we tried to give an answer is: has Wise Leadership an impact upon the Outcomes or are only the Single Wisdom dimensions that affect them singularly? This thesis could respond to calls in the management and Leadership literature to articulate the concept of Wisdom.

The thesis is developed in seven Chapters. The study begins with a general explanation of the Leadership phenomenon which has been distinct from the concept of Management. The Leadership Theories evolved throughout the ages and could be classified in five main categories which are thus illustrated in this first Chapter.

Afterwards, Chapter two faces the complex and multifaceted construct of Wisdom providing an overview upon the concept from its origin by Socrates and Plato, to a more contemporary perspective. The six abilities that a wise Leader should have, according to Takeuchi and Nonaka (2011), are explained. It is expressed also in a theoretical way, why businesses should re-incorporate this factor into the organizational discourse. After a general panoramic and definition of the concept of Wisdom, in order to understand how this could be evaluated and assessed in business environment, it has been firstly necessary to assess which variables could represent the dimensions that constitutes this construct. The hypothesized Wisdom

dimensions in this research are Charisma, Morality and Strategy. Chapter three is divided in three sub-sections providing theory and hypothesis concerning these three different dimensions.

Chapters four to six, present the analysis concerning the dataset provided by Professor Van den Berg (from Tilburg University) in order to assess Wise Leadership in business environment. In Chapter four, it is explained how the data have been collected, measured and validated. Cronbach's alpha, in addition to the selection of the items belonging to worldwide tested Scale, represents the main criterion through which the validity of the items have been assessed in this first analysis. Chapter five is splitted in two main sections. The first one concerns the analysis of Wisdom Dimensions. Here the relation between Wisdom and Strategy, Charisma and Morality (its hypothesized dimensions) has been investigated through different lenses, in regard to different levels of analysis. We preferred to face the issue from several perspectives using also panel data models (even if the data provided have not been collected overtime), because we wanted to achieve results as much robust as possible. Thus, we adopted OLS simple regressions with and without robust standard errors, Between, Within and GLS estimators. In the second part, Charisma, Strategy, Morality and the Leadership Outcomes that this survey aimed to analyze, have been put together in a Structural Equation Model (SEM), extending the model obtained in the first part of analysis.

Since we wanted to reach as much robust results as possible, in Chapter six we explore the dataset through another different lens, using Structural Equation Models with Latent variables. A new measurement model has been created with a selection of the items conducted through what we have called a "cross Factor Analysis". This criteria of selection was stricter than the one in the previous analysis. Afterwards, we made a confirmatory Factor Analysis in order to assess the validity of the new items' selection both for Wisdom Dimensions and Leadership Outcomes. Conjointly the final model with both Wisdom Dimensions and Leadership Outcomes provides evidence that the results gained are substantially equal to the ones reached in the main analysis of Chapter 5.

Lastly, the last chapters present the conclusions and limits that these results have with respect of six principal key-points: sample size, response bias, method used to collect the data, subjectivity perception, potential inadequate explanatory processes and the context limit.

# 1. Why should we account for Leadership?

*"it [leadership] does remain pretty much of a 'black box' or unexplainable concept."*

(Luthans, 2005)

## 1.1 The concept of Leadership

In order to understand why it is important to study Leadership, it's useful to have an overview upon this concept.

Leadership has been defined in so many different ways, depending on the theoretical approach used.

In particular, the term Leadership is a word taken from the common vocabulary and incorporated into the technical vocabulary of a scientific discipline without being precisely redefined and as a consequence, the extraneous connotations create ambiguity of meaning (Yukl, 1994). Stogdill (1974) said that "there are almost as many definitions of Leadership as there are persons who have attempted to define the concept".

Nevertheless, almost all definitions gather the most general aspect, which reflects the fact that Leadership is considered a *social relationship*. In particular, it involves an influence process concerned with facilitating the performance of a collective task, which requires the interaction among people that takes place in a situation where some kinds of decisions have to be made and Leaders can influence others in the group more than they are affected themselves. In fact, according to Hogan et al. (1994), the Leadership is persuasion rather than dominion, is something that evolves informally rather than formally. They relate the phenomenon to the influence that the Leader has on his or her group, rather than the formal power belonging to his or her position inside the group.

Thus "Leadership is exercised when persons mobilize institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers (Burns, 1978). This attitude "is about articulating visions, embodying values, and creating the environment within which things can be accomplished" (Richards & Engle, 1986). In particular, the Leader instills a process of "influencing

others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective effort to accomplish a common goal" (Yukl, 1994), whether that goal is to design a fuel efficient car, respond to an international military crisis or find a new company health plan. This last definition, point out not only the effort that should be done to influence and stimulate the current work on some sort of organized setting, but also to guarantee that it is prepared to meet future challenges.

The Leadership is a concept that does not belong only to business environment, but also to the everyday life since it could arise in a group of friends, in a sport team or in a family as long as there is a point of reference (the Leader) and the people who follow him or her (the group members).

In this research, we focus the Leadership concept on the business environment: here the Leadership involves building a team to outperform the competition and all the figures of the Leader are the point of reference.

To conclude, Leadership can be defined in numerous ways depending on the theoretical telescope one uses to view this topic, for example Strategic Leadership, Charismatic Leadership, Transformational Leadership, Effective Leadership, ecc.

Leadership and Management are often used interchangeably. In the following paragraph an explanation of the subtle difference between the two is provided.

### **1.1.1 Leadership versus Management**

There is a continuing controversy about the difference between Leadership and management. Nobody has proposed that managing and leading concern the same tasks and responsibilities but the degree of overlap is a point of sharp disagreement (Yukl, 1994).

Even though the two phenomenon reflect some obvious similarities such as the involvement of people, there are also noticeable differences: the manager is often more task-oriented, Leader is considered more inspirational and visionary.

The two terms are seen very differently by diverse persons. Some scholars (e.g. Bennis, & Nanus, 1985; Zaleznik, 1977) held that the figure of the Leader and manager are qualitatively different and mutually exclusive, some others (e.g. Bass,

1990; Hickman, 1998) think that they are two distinct processes or roles, but they do not assure that Leadership and management require two different types of people. Bennis and Nanus (1985) proposed that “managers are people who do things right, and Leader are people who do the right things”. Whereas Leaders look at the flexibility, innovation and adaptation, they are concern about people as well as economic outcomes and with regard to objectives and strategies, they have a longer-term perspective; the *managers* deal with planning, organizing, staffing, directing, and controlling, and are the ones who perform these functions (Encyclopedia\_of\_Business, 2012).

Still, the ability of a manager concerns easing the work of an organization and being sure that what is done, is in accord with the organization’s rules and regulations. Instead the skill of the Leader is to make sure that, the work the organization is doing, is what it needs to be, facilitating the identification of organizational goals. They initiate the development of a vision of what their organization is about. "Management controls, arranges, does things right; Leadership unleashes energy, sets the vision so we do the right thing" (Bennis & Nanus, 1985, p. 21).

In general, a manager has formal authority by virtue of his or her position or office and contrariwise, as previously pointed out, the Leader mainly deals with influence which is based on a variety of factors, other than his or her formal authority or position. Burns (1978) describes managers as *transactors* and leaders as *transformers*.

How to integrate the two processes has emerged as a complex and important issue in the organizational literature. According to Yukl (1994), the answer will not come from debates about ideal definitions. Questions about what to include in the domain of essential Leadership processes, should be explored with empirical research, not predetermined by subjective judgments.

## **1.2 Backgrounds: different theories upon Leadership styles**

The widespread fascination with Leadership may be, because it is such a mysterious process, as well as one that touches everyone’s life.

Leadership studies is a multidisciplinary academic field of study and has origins in the social sciences (e.g. sociology, anthropology, psychology), in humanities

(e.g., history and philosophy), as well as in professional and applied fields such as management and education and is closely linked to organizational topics (Wikipedia, 2012a).

The complexity of the phenomenon is highlighted mostly by the different study approaches that could be found in literature. Thousands of pages have been written in academic books and journals, business oriented publications, periodical but also in general common readings that everyone could find in bookstores. The Leadership is considered probably one of the most studied topics in the organizational sciences (Encyclopedia\_of\_Business, 2012).

From the historical point of view, Leadership, and the study of this phenomenon, has roots in the beginning of civilization and passes through all the stages of the human life. The concept itself took different shadows, depending on the context in which arose and developed: over time, “organizations have evolved from those with an authoritarian style to ones with a more comfortable work environment, and then to organizations where people are empowered, encouraged, and supported in their personal and professional growth” (Stone & Patterson, 2005).

The variables that concur to analyze Leadership (for instance the ones that belong to the work environment, work outcomes or leader’s characteristics) are countless and have been investigated for almost two centuries (Stone & Patterson, 2005). The selection of the factors that has to be performed when a research has to be conducted, is not easy and it depends on the aim of such study which is, most of the time, really difficult to assess.

This happened because the concept of leadership is not easily isolated from the environment all around. For example, if the aim of the analysis is to understand how the leader’s charisma affects the job satisfaction of the subordinate, taking into account such characteristic of the leader and how much the subordinate is satisfied about his or her work is a necessary but not a sufficient condition. The job satisfaction, could be affected by the charisma of the person who is leading, because he or she could lend to an enthusiastic, energetic and dynamic environment, which stimulates the subordinates and makes them more involved in such job and so, maybe more satisfied. Nevertheless, at the same time, the morality of the leader (where an ethical behavior, the trustworthiness, the availability to listen to what employees have to say are some typical characteristics of a moral leader), or the group performance could affect the job satisfaction. Therefore, in order to analyze the



relationship between the two original variables, it could be important to take into account some other leadership characteristics and/or some other leadership outcomes.

Later, the development of leadership studies and theories over time are presented. Due to the huge amount of literature upon this theme, it's more useful to trace, and briefly present, the different types of studies classified in five categories as illustrated in Table1.

**Table 1 Historical review upon Leadership theories (source: Encyclopedia of Small Business)**

Leadership Perspectives Historical Leadership theories		
Leadership theory	Time of Introduction	Major Tenets
<b>Trait Theories</b>	1930s and 1940s	Individual characteristics of leaders are different than those of non-leaders
<b>Behavioural Theories</b>	1940s and 1950s	The behaviors of effective leaders are different than the behaviors of ineffective leaders. Two major classes of leader behavior are task-oriented behavior and relationship-oriented behavior
<b>Contingency Theories</b>	1960s ad 1970s	Factors unique to each situation determine whether specific leader characteristics and behaviors will be effective
<b>Leader-Member Exchange</b>	1970s	Leaders from high-quality relationships with some subordinates but not others. The quality of leader-subordinates relationship affect numerous workplace outcomes
<b>Charismatic Leadership</b>	1970s and 1980s	Effective leaders inspire subordinates to commit themselves to goals by communicating a vision, displaying charismatic behavior, and setting a powerful personal example.

Following the historical path, these are the different stages or theoretical lenses through which the study upon leadership passed through:

- *Trait & Behavioral theories* were based on the idea that certain traits (such as personality, motives, values and skills) predisposed an individual to emerge as a leader (Bass, 1990). Leader trait research examined the physical, mental, and social characteristics of individuals. Many scholars

have argued that leadership is unique to only a selected number of individuals and that these individuals possess certain immutable traits that cannot be developed (Galton, 1869). Underlying this approach, was the assumption that some people are naturally leaders, endowed with certain traits not possessed by other people (Yukl, 1994).

The Great Man Theory is at the base of this concept since the main principle is that leaders are exceptional people, born with innate qualities, destined to lead. The use of the term 'man' was intentional since until the latter part of the twentieth century leadership, was thought of as a concept which is primarily male.

The attempt of these theories was to describe the types of behavior and personality tendencies associated with effective leadership (Wikipedia, 2012a). After many researchers became discouraged with the trait approach and began to pay closer attention to what managers actually do on the job, the Behavioral research falls into two general sub categories (Yukl, 1994): the first one concerns how managers spend their time and the typical pattern of activities, responsibilities and functions for managerial jobs; the other one investigates how managers cope with demands, constraints and role conflicts in their job. Scholars found a relationship between these aspects and leadership effectiveness.

Understanding the importance of these core personality and behavioral traits which may potentially impact on some outcomes, can help organizations with their leader selection, training, and development practices (Derue, Nahrgang, Wellman & Humphrey, 2011).

- *Situational & Contingency theories of Leadership* incorporates environmental and situational considerations into leader behavior. Introduced in 1967, Fiedler's contingency theory was the first to specify how situational factors interact with leader traits and behavior to influence leadership effectiveness (Encyclopedia\_of\_Business, 2012). Even though the Fiedler's contingency theory has been criticized on both conceptual and methodological grounds, many of the specific propositions of the theory have been supported by empirical research, remaining an important contribution to

the understanding of leadership effectiveness (Encyclopedia\_of\_Business, 2012).

According to this theory, no leadership style is best in all situations, since the success is function of a number of variables, including the leadership style, qualities of the followers and aspects of the circumstances (Cherry, 2012). The aim of these theories is identifying the situational variables which best predict the most appropriate or effective leadership style to fit the particular situations (Bolden, Gosling, Marturano and Dennison, 2003). Since the behavioral theory provides guidance in developing particular leadership behavior and this may not be suitable or even right under all circumstances, the contingency-situational theories were developed to indicate that, the style to be used, is contingent upon such factors as the situation, the people, the task, the organization, and other environmental variables (Bolden, Gosling, Marturano and Dennison, 2003).

The situational leadership theory was initially introduced in 1969 and revised by Hersey & Blanchard (1977). The theory suggests that the task-related *maturity* of the subordinates is the key contingency factor affecting leaders' choice of leadership style (defining the maturity as the ability of subordinates to accept responsibility for their own task-related behavior). Even this theory has been criticized but it remains one of the better-known contingency theories of leadership and offers important insights into the interaction between subordinate ability and leadership style (Encyclopedia\_of\_Business, 2012).

- *Leader-Member Exchange (LMX)*, differently from the Traits and Behavioral theory which are focused on the leader, emphasizes the dyadic (i.e., one-on-one) relationships between leaders and individual subordinates and in particular “the type of leader-subordinate relationships that promote effective outcomes and the factors that determine whether leaders and subordinates will be able to develop high-quality relationships” (Encyclopedia\_of\_Business, 2012). That’s why it was initially called the vertical dyad linkage theory, introduced by Graen & Schiemann (1978). According to this theory, a high-quality relationship between the two parts will lead to positive outcomes such as better performance, lower turnover, job

satisfaction, and organizational commitment. Empirical research supports many of the proposed relationships (Steers, Porter, and Bigley, 1996).

- *Charismatic Leadership* that will be treated later on in Chapter 3.1, represents a still not clear construct that some researchers called also Transformational Leadership. The two concepts, in reality, are slightly different. Their main difference is in their basic focus (Encyclopedia\_of\_Business, 2012). Whereas the Transformational Leader aims to transform the organization and, quite possibly, their followers, the Charismatic Leader may not want to change anything but the issue will be faced later on. Anyway, in general charismatic leadership instill an energetic and dynamic atmosphere that makes the followers proud to work with the leader finding on him or her the symbol of success .

Leaders are, by definition at the pinnacle of any society's largest organization and their actions have the potential to change the course of history (Judge, Woolf, Hurst, Livingston, 2006).

That's why it might be important for businesses or even for the leaders itself, to understand which are the attitudes necessary in different situations, in order to fulfill their aims, which are the elements that contribute to the accomplishment of this specific attitudes and still, which are the consequences of this kind of behavior on the followers and in general on the business environment.

In this complex and turbulent environment the use of explicit and tacit knowledge, being smart and strategic isn't enough. As Gini (1998) reminds us, the primary issue is not whether leaders will use power, but whether they will use it wisely and well. Now companies have to live in harmony with society rather than clash with it. According to Nonaka & Takeouchi (2011), "CEO must also draw on a third, often forgotten kind of knowledge, called practical Wisdom. Practical wisdom is tacit knowledge acquired from experience that enables people to make prudent judgments and take actions based on the actual situation, guided by values and morals. When leaders cultivate such knowledge throughout the organization, they will be able not only to create fresh knowledge but also to make enlightened decisions".

Leadership is of course one of those topics in which interest never wanes and even if the Leadership Literature has a long story since the 30's, it's surprising that, besides McKenna & Rooney (2005) and Van den Berg(2008), there is no conceptual framework which describes the specific characteristics a *wise* leader should fulfill.

Rather than theoretical models to explain the issue, some empirical studies would be necessary, in order to bring some more evident results.

## 2. Wisdom in Leadership: defining the construct

*Because of the culturally rich meaning and heritage of Wisdom, defining and operationalizing the concept of Wisdom as a scientifically grounded psychological construct is not easy. Wisdom may be beyond what psychological concepts and statistical methods can achieve.*

(Baltes & Staudinger, 2000)

### 2.1 The concept of Wisdom

Wisdom is a complex and multifaceted phenomenon, embracing a plurality of concepts, in regard to the different spheres of the human being and is grounded in a sound orchestration of them. In fact, the aim of this chapter is not to end in a final correct definition of Wisdom, rather to give an overview upon this ambiguous concept.

Till now, countless of conceptualizations have been associated to this construct which has various mythological, spiritual, philosophical and secular facets; it is a concept that had borne different interpretations across time and cultures (Küpers, 2007). Thus, since it covers an astonishing broad and diverse collection of attributes, Wisdom represents a still not well defined concept.

Generally speaking, Wisdom characterizes the most enlightened and successful people or collectives. “Philosophers and religious thinkers, scientists and scholars, authors and artists alike, have attempted to crystallize its character. One might rightly conclude that there is nothing simultaneously important and mysterious as Wisdom” (Kessler, Eric & Bailey, 2007). Throughout history, Wisdom has been seen as “supreme” form of human knowledge and a peak of human excellence leading to the highest levels of performance, the pinnacle of insight into the human condition and about the means and ends of a good life (Staudinger, 1992) (Kekes, 1995).

But which is the origin of this world? To speak about its origins, we should appeal to Socrates and Plato. They argued that Philosophy was literally the love of Wisdom (philo-sophia): the theoretical Wisdom (*sophia*), for the Greeks, had depicted the right use of knowledge, also in regard to facing the matters of life. Whereas, a more scientific and rationally grounded type of Wisdom had been

called *episteme*, which is developed when someone is searching for the nature of things and the principles governing his or her behavior (Sternberg, 1990).

There was also the so called *phronesis* or practical Wisdom which constituted the complement to those “more contemplative, introspective and reflective searches for truth” (Sternber, 1990). The practical Wisdom signified the “soundness of judgment in the choice of means and ends and corresponding action measured by day-today effectiveness” (Arnoud, 2000).

According to the Aristotle’s ethics, the phronesis or prudence is “a true and reasoned state of capacity to act with regard to the things that are good or bad for man”, it is the “experimental knowledge that enables people to make ethically sound judgments” (Nonaka&Takeouchi, 2011). According to Aristotle, whereas the *episteme* represents the skill-based technical know-how, *phronesis* is know-what should be done. In his *Metaphysics* he defined Wisdom as the “understanding of causes, i.e. knowing why things are in a certain way, which is deeper than merely knowing that things are in a certain way” (Wikipedia, 2012b).

Later on, during Renaissance, and then with the Industrial Revolution, the concept of Wisdom was put in the shadow because the scientific knowledge, was starting to replace it or, to be more precise, the wisdom itself was increasingly equated with “rational knowledge”, “expertise” or a “competency” (Kessler, Eric & Bailey, 2007). If we look at Wisdom definitions in different dictionary or encyclopedia, knowledge and judgment are common aspects among all of them: according to the *Oxford English Dictionary (2012)* it is the “Capacity of judging rightly in matters relating to life and conduct; soundness of judgments in the choice of means and ends”. The *Cambridge Dictionary Online (2012)* defines Wisdom as “the ability to use your knowledge and experience to make good decisions and judgments”. And still, *Britannica academic edition (2012)* describes it as the “accumulated philosophic or scientific learning: KNOWLEDGE; ability to discern inner qualities and relationships: INSIGHT; good sense :JUDGMENT”.

*Wikipedia(2012)* provides a more broad definition, embodying also the element of passion, seen as a temptation the wise people should resist: “Wisdom is a deep *understanding* and *realization* of people, things, events or situations, resulting in the ability to apply perceptions, judgments and actions in keeping with this understanding. It often requires control of one's emotional reactions (the

"passions") so that universal principles, reason and knowledge prevail to determine one's actions. Wisdom is also the comprehension of what is true or right coupled with optimum judgment as to action".

This last definition introduces the concept of *context* in which the person is dip into. McKenna, Rooney(2009) depicted the wise person as the one who finds the best possible resolution to a complex situation when at the same time, the others are not.

Nowadays, realities of leadership and organizations are characterized by increasing complexity and uncertainty. According to Sternberg & Jordan (2005) Wisdom becomes increasingly important for dealing with the challenge of this current business contexts. The nature of work is rapidly changing, the pace of technological innovation is currently experiencing an acceleration, the complexity of internal and external environments is growing, the competition is really hard to bear. The modern organizations are being developed constantly indeed (Sternberg & Jordan, 2005).

In fact, new conditions require adaptation; adaptation requires a period of adjustment during which performance is far from a peak and it could be argue that Wisdom could initiate and guide change in firm environment, "quicken the path of the learning curve" (Kessler, Eric & Bailey, 2007). Wisdom was also described by Brugman (2000) as an "expertise in, and acceptance of, uncertainty". And in this uncertainty Wisdom brings discernment, clarity and knowledge to face different situations. Of course, those are not the only elements necessary to cope in this context, but they enable the actors "to see more complexity, because of their ontological acuity, see more clearly what the complexity means, and know how to respond in the most appropriate way"(McKenna B.& Rooney, 2005). Thus, "world needs leaders who will make judgments knowing that everything is contextual, make decisions knowing that everything is changing, and take actions knowing that everything depends on doing so in a timely fashion" (Nonaka&Takeouchi, 2011).

The leaders who are defined as wise, have "the capacity to simultaneously distinguish the technical, the social complexity, the cultural and the ethical complexity by critically understanding their ontological foundations, and combine them in a plausible narrative that responds to that complexity" (McKenna, Rooney, 2009).



There is no doubt that Wisdom is based on knowledge. However, one may argue that being intelligent is one way to result wise but, this is one of the necessary but not sufficient conditions since the most important thing is not to have a significant quantum of knowledge, but how effectively leaders deal with the shifting nature of knowledge (Rooney & McKenna, 2007). Also Kessler, Eric, Bailey (2007) described the essence of wisdom as something that lies in the way in which knowledge is held and, at the same time, put it in practice knowing that is fallible and therefore being aware about the existing balance that should be reached between knowing and doubting in order to be wise. Thus knowing “without excessive confidence or excessive cautiousness to both accumulate knowledge while remaining suspicious of it, and recognizing that much remains unknown”(Kessler, Eric, Bailey, 2007).

Uncertainty and strong changes are the two main characteristics of the twenty-first century business environment. The level of knowledge is continuously growing, there are even more technologists and experts, than at any time in human history. It has been showed that average IQ continues to increase (Sternberg, 2003). From a global perspective, it is difficult to argue that this accumulation of intelligence, knowledge, expertise and technology has put the world in an ambiguously better position than it was 50 or 100 years ago.

However all the knowledge in the world did not prevent the collapse of the global financial system in 2007 or stop institutions, like Lehman Brothers and Washington Mutual, from failing (Nonaka&Takeouchi, 2011).

Implicit theories (research that is associated with folk-psychological or common-sense approaches) showed that Wisdom and intelligence are sometimes overlapping in meaning but they argue not the same concept. The difference is that wise people know what they know, know what they do not know, know what they can or cannot know under certain limitations imposed on them. Whereas, the intelligent is someone who recalls, analyzes and uses knowledge.

So if one asks why does not knowledge result in wise leadership, Nonaka and Takeuchi (2011) replied that the problem is twofold. Many leaders use the knowledge improperly and most don't cultivate the right kinds of it. They provide the example of the scientific, deductive, theory-first approach. This kind of attitude, assumes a world independent of context and seeks answers that are universal

and predictive. However businesses are context dependent, and “analyzing them is meaningless unless one considers people’s goal, values and interests along with the power relationships among them”. They argued that in the creation of the future, leaders must go beyond the company, to pursue the common good. Businesses are one of the key mediators between the economic sphere and the social, environmental and technological spheres. Our lives are melted in organizations because our surviving strictly depends on them, hence we spend our time interacting, serving and being served by such firms. Businesses are both pervasive and important. For example, many of us were being treated in hospital; the food and the clothes come from organizations. For this reason the organizations need to be wiser, not simply for intellectual or commercial reasons, but also for ethical ones (Rooney & McKenna, 2007).

That’s also why companies have a role in shaping our future. Thus, they should be a positive ethical force in constructing it and it could be argued that the most important factor in an organization’s success is Wisdom (Kessler, Eric & Bailey, 2007).

Re-incorporating Wisdom into managerial and organizational discourse, will yield important insight about how to do things differently in the future and about how to re-invigorate our assessment of what we do and how we work. The means of applying Wisdom to organization practices is the *adoption* of the Wisdom elements by an organization’s leaders. If an organization’s leader will install and integrate the wisdom elements into their personality and disposition, they will continually discover ways to apply wisdom in their business decisions and practices (Jones, 2005). To conclude, Nonaka and Takeuchi (2011), stated that the most effective leaders are the ones that had acquire a practical Wisdom that allows them to take the right decision, ethically correct, bring at the same time a profit to the business.

Among the recent researchers that spoke about Wisdom, Nonaka and Takeuchi (2011), they provide and explain the six abilities of Wise Leader which are reported below:

1. Wise leaders make decisions only after they figure out what is good for the organization and society.

2. They can quickly grasp the essence of any situation or problem and intuitively fathom the nature and meaning of people, things and event.
3. They constantly create informational as well as formal shared contexts for senior executives and employees to construct new meaning through their interactions.
4. They know how to use metaphors and stories to convert the essence of their actual experiences into tacit knowledge for individuals and groups.
5. They exercise political power to bring together people with conflicting goals and spur them to action.
6. They encourage the development of practical wisdom in others, especially employees on the front lines, through apprenticeship and mentoring.

In order to apply Wisdom to the business activities, we should investigate which are the *variables* that might be at the basis of this still not defined concept. In the following section, we are going to illustrate the three Leadership Styles that have been hypothesized as the key factors of Wise Leadership.

## **2.2 Wisdom dimensions in this research.**

Charisma is worldwide known to be the most obvious leadership criterion: leaders need charisma to influence their subordinates because it makes the former attractive to their followers. However the aspect of Charisma is twofold: the positive and the negative side. A positive charismatic leader has socialized power orientation, strive for commitment and make personal sacrifices whereas the negative side of charisma could lead the leader to have a personalized power orientation, a high level of narcissism and a great concern for self-glorification but also unrealistic vision or debatable policies and mission statements (Yukl, 1994) . Thus, having controlled for the negative side, what is missing in charismatic leader?

Strategy, Morality with also the Age of the Leader have been identified as the additional potential dimensions of an effective wise leadership in this research. In order to select the potential dimensions, we took into account the Sternberg definition of Wisdom cited below:

*Wisdom is the application of intelligence and experience as mediated by values toward the achievement of a common good through a balance among intrapersonal, interpersonal and extrapersonal interest, over the short and long term, to achieve a balance among adaptation to existing environments, shaping of existing environment and selection of new environment.*

Sternberg (2004)

Of course at the basis of Wisdom there is knowledge, which in turn affects Intelligence (that include different abilities such as abstract thought, understanding, being self aware, communication, reasoning, learning, problem solving (Wikipedia, 2012c)), but also the application of Experience is important, as previously explained speaking about phronesis, the practical wisdom indeed.

As Fisher & Birren (1990) stated in their definition of Wisdom, its level tends to increase with life experience and therefore age, but is not exclusively found in old age.

Living longer, together with experience and organized practice are necessary but not sufficient conditions for the acquisition of an expert level of knowledge. Kessler&Bailey (2007) described Wisdom as an area of late-life potential, arguing however that not all the older people will be wise, but suggesting that among wise persons there may be a disproportionately large number of older individuals. Since they defined Wisdom as expert knowledge about the nature of human development and the human condition, they expect that the acquisition and maintenance of Wisdom is facilitated by living longer, thus being older. A pilot study by Birren (1969) examined the strategies used by successful middle-age executives. The results indicate that as executives matured, they noticed an increasing ability to generalize and to deal in a more detached manner or more

abstractly with information, in order to reach the most effective solution. Wisdom is detached concern with life itself in the face of experience, in spite of the decline of bodily and mental functions. For all these reasons we stated the following hypothesis:

*H1 The age of the leader is positively related to Wisdom in Leadership as it is perceived by the follower.*

Continuing to refer to Sternberg definition, Morality acts as a mediator between intelligence and experience, which makes the people (leaders) seek the understanding of what will work not only for them but for the society (organization) as well.

So Wisdom is involved when practical intelligence is applied to maximizing not just one's own or someone else's self interest, but rather to balance a various self interest (intrapersonal) with those of the others (interpersonal) and of the context in which one lives (extrapersonal). This represents the first of the sixth abilities described by Nonaka and Tacheucki (2011) to be a Wise leader.

The second part of the Sternberg definition depicts the strategic factor, which called upon rational judgment but also on what Rooney & McKenna (2007 ) called "counter-intuition", vision and humanity (so the ethic, moral aspect). Good judgments often require that a person should not be bound completely by the rules of reason, rather the resources should go beyond the realm of logic and rationality. Organizational theorists, Malan & Kriger (1998) speak about a "sixth sense or...well-developed intuitive powers" which helps to achieve foresight and insight; thus look at what the future holds. A wise leader should have a visioning and perspective-taking capacity that incorporates long-range goals indeed (McKenna & Rooney, 2009). Describing the traits of a wise leader, Kessler & Bailey (2007) spoke about someone who has a large framework vision and exceptional understanding.

Managers tend to restrain their range of experience or thought in regard to phenomena, striving to react in a traditional and rule-based ways and as a consequence, they struggle along ambiguous situations.

Whereas, being tolerant of ambiguous situations and even more being readily able to respond or even seek out a broader range of environmental phenomena, is one

of the most salient predictors of Wisdom (Baltes & Staudinger, 2000). It is necessary the capacity to adapt, think, understand and decide in a dynamic way. In synthesis, being a creative or fluid thinker. To achieve such result, three other skills or virtues are needed: having backgrounds of domain-specific knowledge, focusing at the right level and making unusual associations ( McKenna & Rooney, 2009).

Charisma is the dimension that should functions as a glue, that makes the subordinates looking at their Leader as a role model, instilling an energetic and dynamic atmosphere.

Whereas the hypotheses concerning the relationship between the age of the leader and the Wise Leadership has been stated in this Chapter, the others concerning Charisma, Morality and Strategy will be discussed separately, later on in Sections 3.1, 3.2 and 3.3 respectively.

To conclude, if the principle features of Wisdom are understood leaders can be evaluated according to a robust criteria based on these principles. By providing a conceptual foundation of wisdom principles, hopefully it allows to avoid falling into another stage of managerial faddism because leaders can learn from them, improving their leadership in the best way because still, “for real Wisdom does not merely cause us to know: it makes us “be” in a different way “(Hadot, 1995 ).

### **3. Wisdom Dimensions and Leadership outcomes**

As explained in the previous chapter, in order to assess the concept of Wisdom, three constructs have been taken into account: Charisma, Morality and Strategy. In this Chapter, every section gives a theoretical panoramic upon the construct, in order to gain a general knowledge about it and afterwards some theoretical results, which could support the hypotheses that this study aims to test.

#### **3.1 Charisma : theory & hypotheses**

*“ Leaders must aspire to more than just getting others to follow: they must see the development of their associates as their personal responsibility if the organization is to grow and maximize its potential”*

*Kuhnert (1994)*

Prior to the 1980's, charismatic leadership was a relatively obscure research topic within the field of organizational behavior (Conger & Kanungo, 2000).

Since the late 1980s interests in charismatic leadership theory has grown exponentially (Lian, Tanzer, Brown, Che, 2011). Weber (1947) defined charisma as being “set apart from ordinary people and treated as endowed with supernatural, superhuman, or at least ...exceptional powers and qualities...[which] are not accessible to the ordinary person but regarded as of divine origin or as exemplary, and on the basis of them the individual concerned is treated as a leader”. Likewise, Roe & Taillieu (1999) stated that charisma refers to individuals endowed with special qualities, standing out of the crowd.

Weber (1947) originally articulated the concept describing it as a form of influence on the follower perception that the “leader is endowed with exceptional qualities” (Yukl, 1994, p. 263). But this kind of influence is not moved by the social position of the leader itself, but it is generated from a profound connection between the leader and the followers and it creates excitement about the mission (Bass, 1985a). It is the

follower perceptions that the leader possessed special and unique attributes. Charismatic authority is considered in sharp contrast with rational and traditional authorities indeed.

To a large extent, the degree to which followers display admiration, affection and trust depends on the leader's personality and their perception of it. When this kind of devotion to him or her arouse, it motivate and inspire the followers to pursue the vision of the person who is leading. Employees want to identify with the leaders, and they have a high degree of trust and confidence in them (Bass, 1911). Thus, the leader is a sort of driving, inspiring source.

In particular, in Weber opinion, this characteristic occur when there are social crisis (Yukl, 1994). In this situation, the leader comes out with a solution, the followers are attracted by this vision because charismatic leaders inspire and excite their employees with the idea that they may be able to accomplish great things with extra effort. The use of innovative strategies that appear successful, results in attribution of superior expertise to the leader by followers .

While working to advance a model of charismatic leadership, House & Baetz (1979) developed the Weber's theory in a more articulated one, where he argued that followers use an *attributional* process regarding their leader: "based on certain behaviors displayed by leaders, followers attribute extraordinary or heroic leadership abilities to those leaders" (Woolf, Livingston, Judge, Hurst, 2006). Among those there are: high degree of self-confidence, strong moral convictions, and a tendency to influence others as well as engaging in impression management behaviors to boost trust and confidence in the leader. Furthermore, the articulation of a mission, setting challenging goals and arousing motives (Case & Jordan, 2004). In summary, House (1977) stated that a charismatic leader has profound and unusual effects on followers.

Across all the "new leadership" approaches, as Bryman (1992) calls them, charisma remains a cornerstone (Case & Jordan, 2004). Indeed, Charisma is a major component of all prominent transformational and transactional theories of leadership ( Bass, 1985b).



### 3.1.1 Charismatic leadership & transformational leadership

As stated before, when in the 1980s the interest in emotional and symbolic aspect of leadership arouse, some progresses has been made on understanding how the leaders influence followers to make self sacrifices, considering first the needs of the mission or organization, rather than their materialistic self-interest (Yukl, 1994 p. 262). Subsequently, transformational and charismatic leadership has captured the scholar's interests till now and their theories highlighted these important aspects of leadership.

Even though the two terms are really similar and often interchangeably used by many researchers, there are some important distinctions between them.

In the first years of study upon this topic, Bass (1985) argued that charisma is necessary to pursue a transformational leadership, but a leader could be charismatic and not transformational. Since the essence of a transformational behavior consist on being inspiring, developing and empowering followers, these effects could reduce the attribution of charisma to the leader rather than increase it. He pointed out that the processes of transformational and charismatic leadership could be not entirely compatible since the second one concerns dependence on an extraordinary leader. Some support for this distinction is provided in a study by Kark, Shamir, & Chen (2003).

A decade later, Charismatic leadership has been considered one of the four dimensions of Transformational Leadership (Tepper & Percy, 1994):

1. *Charismatic leadership*: the leader instills pride and faith in followers by overcoming obstacles and confidently expressing disenchantment with status quo
2. *Inspirational Leadership*: the leader inspires followers to enthusiastically accept and pursue challenging goals and a mission or vision of the future
3. *Individualized Consideration*: the leader communicates personal respect to followers by giving them specialized attention and by recognizing each one's unique needs

4. *Intellectual Stimulation*: the leader articulates new idea that prompt followers to rethink conventional practice and thinking

Superior leadership performance (transformational leadership) is gained when the leaders expand and elevate the interest of their employees, they make the followers aware and accept the purpose and mission of the group, they encourage them to look beyond their own self-interest for the good of the group ( Bass, 1990). These kind of leaders reached these results in one or more ways undertaking, as illustrated before, charismatic, inspirational, individualized, intellectual actions.

A clear and worldwide approved definition of the two aspect of leadership has still to be reached.

To conclude, if the charismatic leaders instill pride and faith in followers by overcoming obstacles broadening enthusiasm and commitment by articulating an engaging vision , the transformational leaders“ make the followers more aware of the importance and value of the work” (Yukl, 1994), connecting their sense of identity and self, to the mission and the collective identity of the organization. In this way the subordinate feel more independent and empowered (Kuhnert, 1994) (Yammarino, 1994).

Despite this sharp difference, both the leadership style may arouse strong emotions and identification on the leader by the subordinates. Leaders may also serve as a coach, mentor or teacher.

### **3.1.2 The influence process**

As stated in the previous paragraphs, Charisma is more likely to be attributed to leaders who act in unconventional ways to achieve the mission. The undertaken methods to accomplish the idealized goal, differ from conventional ways of doing things.

The aspect that distinguish a charismatic leader from a non charismatic one, is that he or she generally doesn't support the status quo advocating only small, incremental changes (Yukl, 1994) but rather he or she promotes a vision that is highly discrepant from the traditional ideologies “but still within the latitude of acceptance by the

followers” (Yukl, 1994 p.264). In fact, the followers are likely to consider the leader as incompetent or crazy if he or she provides a too much radical vision. In regard to this it's worth to point out that the charisma factor, represents a double face coin, because it could have a positive but also a negative effect on followers, and the latter is moved by “Dark side of charisma” (a separate section has been dedicated to this topic later on). Basically, the traits that distinguished the dark side of charisma, represent mostly an exacerbation of the ones that belong to the positive side and that are presented below.

Therefore the typical traits of charismatic leaders that allow such influence on the subordinates include: *strong need for power, high self-confidence, and strong convictions*, high personal risk incurring in high costs and engage in self sacrifice to achieve the vision, impression management, articulation of an appealing vision, communication of high expectations and finally, being sensible to the need of the followers showing confidence in them. (Roe & Taillieu, 1999)(Rao, 2008).

Vision, challenges, risk, trust, role modeling, values and future optimism are the key words that lump all the theories on charismatic leadership.

There is a consensus among new leadership theorist regarding one of the primary sources or better, a prerequisite for a leader to become charismatic: vision (Awamleh & Gardner, 1999).The vision can be defined as “a mental image that a leader evokes to portray an idealized future for an organization” (Conger, 1989), it is long term strategy on how to attain a goal. It represents the link between the present and a better future. As soon as it is articulated, the leader start to mobilize followers to strive for it. As a matter of fact, the vision is incomplete unless it has an accompanying vision statements thus a formal articulation of it and, when it has been articulated, the leader communicates high performance expectations and expresses confidence in followers that they can achieve them; this enhances follower self esteem and self confidence (Awamleh & Gardner, 1999).

The willingness of the followers to be influenced by the charismatic leader is in part based upon their trust in the leader. The leaders are considered trustworthily as long as they support their position in a disinterested manner and they have regard for the followers' need rather than their own self-interest (Kouzes, 1987).Trust is essential to the fulfillment of the goal and so to the long-term viability of the mission.

Dirks & Ferrin (2002) provided evidence that trust in leadership is significantly related to each of the attitudinal, behavioral and performance outcomes. In their meta-analytic research they stated that “ trust may affect performance, it may have a marginally greater impact on Organization Citizen Behavior and a substantially greater impact on people’s evaluations and attitudes regarding the workplace”(Dirks, & Ferrin, 2002). They proved a relationship between trust and 23 other variables such as Job Satisfaction and Organizational citizen behavior. Moreover Mayer & Gavin (2005) provide empirical support for their assertion that trust in management allows employees to focus on the tasks that need to be done, to add value to their organization, so trust helps in daily performance.

As a consequence, the leader might endeavor to foster deep level of follower trust (Conger, & Kanungo, 2000) because only in this way he or she induces their subordinates to achieve great things with extra effort (Bass, 1990).

To conclude, the personality adjectives which characterized the charismatic leader and contribute to install a strong relation among leader and followers are “dynamic, adventuresome, inspiring, enthusiastic, outgoing, sociable, insightful, enterprising and competent” (Roe & Taillieu, 1999).

### **3.1.3 Charismatic leadership and Leadership outcomes**

Since the 1980s, several studies empirically proved that charismatic leadership can change the values, attitudes, assumptions, and behaviors of subordinates.

However, in order to relate charismatic leadership to Wise Leadership there is no known theory that could support the hypotheses beneath.

Following meta-analyses, charisma can be considered as the essence of leadership and therefore, it should be related to wise leadership. However, because charisma might have a dark side, it is not enough to be a wise leader. Wise leadership includes in addition two elements: moral leadership and strategic leadership. Moreover, Kessler & Bailey (2008) stated that “wise leader may have something like charisma or the power of stimulate others through own intensity [...] thereby a subtle skill that maybe eases the development of Wisdom itself”. Only Van den Berg (2008)

developed a conceptual framework which tries to break up Wisdom in its dimensions. This leading-with-wisdom model integrates charisma, morality and strategic approach into the concept of Wise leadership.

As this model stated, we formulated the following hypothesis:

*H2 Charismatic leadership is positively related to the Wisdom in Leadership as they are perceived by the followers*

As explained previously, Charisma is considered one of five characteristics of transformational leadership (Bass, 1985a)(Bass, Avolio & Goodheim, 1987). However there is not an unanimous consensus whether charismatic theory is submitted to transformational theory or, in reality, are functional equivalents for one another (Judge & Piccolo, 2004). The charisma dimension, is “clearly the most influential” of the five dimensions and has the strongest relationship with outcome variables (Conger& Kanungo, 1998). Judge and Piccolo (2004) demonstrated that the charismatic and transformational leadership would display similar overall validities thus some of their results upon transformational leadership could be applied in a certain sense also to the variable Charisma. They argued that empirical evidence has suggested that the leader who engages in a transformational leadership , he or she engender many positive outcomes such as follower job satisfaction, follower leader satisfaction, follower motivation, group or organization performance, and rated leader effectiveness. Thus, given the previous result, the same conclusions could be made in regard to charismatic leadership.

Since the charismatic leader is seen as the primary source of vision and through the use of empowerment strategies, he or she enhances the sense of self efficacy of the followers in regard to task accomplishment, the followers look at him as the one who brings meaning into their work lives. They look at their leader “as he or she provides them with goals that transcend their own limited existence and which permit them to achieve higher order rewards”(Conger, Kanungo, 2000). The fact that the leader behaves in an exemplary way, involving personal risk and self-sacrifices, builds up follower satisfaction with the leader because of such commitment in realizing “the shared vision and the shared rewards that will accompany the outcomes of the mission” (Conger, Kanungo, 2000). Thus we stated the following hypothesis:

*H3: Charismatic leadership is positively related to leader satisfaction*

Across studies, Charisma was consistently the variable most strongly related to the leader effectiveness (Lowe, 1996). This findings emerged across studies, regardless of the type of organization, level of the leader, or in how effectiveness was measured. Moreover, Judge & Piccolo (2004) in their meta-analysis, show how the followers rate their leaders as more effective than non-charismatic leaders. Another support to the hypothesis that we stated comes from Bono & Ilies (2006). They found a positive relation between Charisma and Leadership Effectiveness, since charismatic leaders express more positive emotions than do less charismatic leaders, and this positive emotional environment has a direct effects on followers. Thus the leaders who were viewed as charismatic by followers were also rated higher on expression of overall effectiveness.

*H4: Charisma is positively related to leader effectiveness*

It has been investigated throughout the leadership studies, the relationship between Charisma and Group performance.

Charismatic leaders have a vision that others find engaging , they are able to recruit a group of people who share that vision and to persuade them to work for and to support a vision. Thus the group members are more committed, satisfied, motivated. They have more trust in their leaders thus they put more effort and engage in organizational citizenship behavior and, at the end, they receive higher performance ratings (Waldman, 2012). Conger, Rabindra, Kanungo, Menon (2000) stated that charismatic leadership and the perceptions of group performance are in a strong direct relationship. Moreover also Judge & Piccolo (2004) stated that the influence of charismatic leader on follower's own behavior and their task results in a more effective performance of the group and a higher follower motivation. This can be explained by the self-based theory (Shamir, 1993). The leadership actions engage the motivations for self-expression, self esteem, self worth and self-consistency of the followers and this self-concept in turn have a strong positive impact on the behavior and psychological states of followers.

We conclude these hypotheses:

*H5: Charisma is positively related to group performance*

*H6: Charisma is positively related to motivation of the followers*

Finally, giving that charismatic leadership arouses a collective sense of mission in followers, induces to make personal sacrifices, performing duties at exceptional high levels (Shamir, 1993), it aligns the goals and mission of the organization with the followers' values (Mendoca, 1996), thereby enhancing the intrinsic values and meaning of work (Bono & Judge, 2003) It can be concluded that a charismatic leader elevates follower's sense of satisfaction and commitment to their work. In fact, it has been proved that followers of charismatic leaders should be more satisfied with the leaders and by extension, their jobs as a whole. (DeGroot, 2000)(Judge & Piccolo, 2004) . So, our hypothesis is:

*H7: Charisma is positively related to job satisfaction*

To conclude, there are a lot of studies that proved the positive effects that a charismatic leader could have in the work outcomes. "Self sacrifice and leading by example are used to communicate commitment to shared values and the mission of the unit, not to glorify the leader. Authority is delegated to a considerable extent, information is shared openly, participation in decision is encouraged and rewards are used to reinforce behavior consistent with the mission and objectives of the organization. As a result, the leadership is more likely to be beneficial to followers, although it is not inevitable if the strategies encouraged by the leader are inappropriate"(Yukl, 1994).

However, even if the majority of charismatic leadership theories emphasize positive consequences, a number of social scientists have also considered the other side of the coin: the negative leadership, also called "Dark side of charisma" (Bass & Steidlmeier, 1999)(Conger, 1989a)(Conger & Kanungo, 1998).

### 3.1.4 Dark side of charisma

*“When a leader’s behaviors become exaggerated, lose touch with reality, or become vehicles for purely personal gain, they may harm the leader and the organization”*

*( Conger, 1989b)*

Till now, the conceptualization of charisma was presented under the socialized positive key. However, in some cases, an especially persuasive charismatic leader (personalized charismatic leader), abuses the interpersonal power that he possessed, by willing and submissive followers. They emphasize personal identification rather than internalization. They seek to infuse devotion to themselves more than to ideals (Yukl, 1994).

The aim of this behavior is to reach “self-enhancement and personal gain, exploit followers who are vulnerable to the leader’s manipulative appeal” (Howell, 1988).

Basically, the dark side of charisma occurs when the same characteristics of a charismatic leader are exacerbated by the leader itself.

For example, the optimism and self-confidence are essential to influence the followers in order to support the vision. However, excessive levels of such factors make it more difficult for the leader to recognize flaws in the vision or strategy (Yukl, 1994). “In a persistent quest to attain the vision, a charismatic leader may ignore or reject evidence that it is unrealistic”(Yukl, 1994). Highly directive and visionary leaders are often described as autocratic. Steve Jobs for example, has been described as dictatorial.

Moreover, being too much confident in his or her decisions could lead the leader to a not properly objective evaluation of the environment around, losing opportunities. The authority for making important decisions is centralized in the leader and information are restricted in order to keep an image of leader infallibility (Yukl, 1994).

Concerning the radical changes in the strategy and culture of the organization, driven by the charismatic leader, sometimes they may not be appropriate for such organizations which are currently prosperous and successful. Thus, the same unconventional behavior that some people view as charismatic could on the other



hand, offend and antagonize other people who consider it disruptive and inappropriate.

There are several historical examples of negative and positive charismatic leader. Adolph Hitler transformed Germany in a manner resulting in a paranoid aggression, persecution, destruction and death. Also Osama bin Laden, who's "charisma is probably the most significant factor in why he has so many followers" says Deluca. "There is something very persuasive about him and the same thing is true with Lenin and Hitler".

To conclude, even though charisma leads to an enthusiastic and committed environment, concerns compelling vision and increases follower confidence about achieving it, it could have also tremendous influence on an organization.

## **3.2 Morality: theory & hypotheses**

### **3.2.1 What is ethical leadership?**

From a normative or philosophical perspective, much has been written about ethics and leadership, suggesting how leaders "ought" to behave. However, those social studies approaches which faced the issue in a more descriptive and predictive way, have remained underdeveloped and fragmented, leaving scholars and practitioners with the most fundamental question: "what is ethical leadership?"(Brown & Trevino, 2006). Most reviews of behavioral science (rather than philosophical) literature on leadership have given scant attention to its ethical dimensions (Bass, 1990)(House & Aditya, 1997). And despite the growing interest in ethical leadership, there is considerable disagreement about the appropriate way to define and assess it (Yukl, 1994) since it has been analyzed from different points of view which may involve: values, traits and behaviors.

According to Brown & Trevino (2006) ethical leadership is the *"demonstration of normatively appropriate conduct through personal actions and interpersonal*

*relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision making”.*

The first part of the definition points out that the leader who is considered ethical by his or her followers, had conducted them to perceive him or her as normatively appropriated thus being honest, reliable, fair and care. Therefore the leader will be contemplated as a legitimate and credible role model (Brown, Trevino, and Harrison, 2005). The term “normative appropriate” doesn’t only refer to generally accepted rules or norms but it is a vague term that is somewhat, context dependent. Moreover what some people consider appropriate, might be disapproved by others. This is to say that morality is in some degree considered a subjective factor.

The second part of the definition, concerns the way through which this kind of leadership is articulated. It is important to point out that an ethic leader, not only draws attention to ethical behavior, making subordinates outstanding in the environment of reference only speaking to them, but he or she also involves the group members providing them “with voice, a procedurally or interpersonally just process” (Bass & Steidlemeier, 1999)(Howell & Avolio, 1992).

After that, when the ethic standards are settled, the ethic leader normally on one hand, rewards ethical conduct and, on the other hand, disciplines those who don’t follow the standards (Gini, 1998)(Trevino, Brown & Hartman, 2003) contributing to an indirect learning.

Finally, the normatively appropriated conduct, is also achieved by the decision making which reflect the fact that principled and fair choices that can be observed and emulated by others, are undertaken by these kind of leaders. And the ethical consequences of their decisions are always taken into account (Bass & Avolio, 2000).

But which are the typical traits that characterize an ethical leader?

According to Brown & Trevino (2004) ethical leaders are first of all described as a visible ethical role models and they are thought to be moral persons, because they are *honest* and *trustworthy*, they care about their followers and they act in a “good manner”, doing the right things, both in their personal and professional lives. Doing the right things means to “make decisions based on values and ethical decision rules, and they are fair and concerned about long-term outcomes and the interest of

multiple stakeholders”. As in charisma, the trust is considered fundamental in order to ease a *social exchange relationship* between the parts. It is “a psychological state comprising the intention to accept vulnerability based upon positive expectation of the intentions or behavior of another”(Dirks & Ferrin, 2002).

Being trustworthy, fair and concern about people, make the followers attached to the leader.

Consequently, it can be expected that the subordinates themselves reciprocate this care and fair treatment by engaging in citizen behavior and by refraining from unethical conduct. This happened because, according to the *social learning perspective* (Bandura, 1977), the leader influences their followers by way of modeling processes: they are likely to imitate the conduct of the person who is leading. “Through modeling, leaders influence subordinates by demonstrating high ethical standards in their own conduct and by using the reward system to teach employees vicariously about the outcomes of ethical and unethical behavior in the organization”(Brown & Trevino, 2004).

To conclude, in order to evaluate ethical leadership, it is necessary to consider the leader’s intentions and values as well as behaviors. To be ethical , the leader must intend no harm and respect the rights of all affected parties (Gini, 1998). In Table 2 are summarized some suggested criteria from Yukl (1994), to evaluate Ethical Leadership.

**Table2 Suggested Criteria for evaluating ethical leadership Yukl (1994)**

Criterion	Ethical Leadership	Unethical Leadership
Use the leader power and influence	<ul style="list-style-type: none"> <li>To serve followers and the organization</li> </ul>	<ul style="list-style-type: none"> <li>To satisfy personal needs and career objectives</li> </ul>
Handling diverse interest of the multiple stakeholders	<ul style="list-style-type: none"> <li>Attempts to balance and integrate them</li> </ul>	<ul style="list-style-type: none"> <li>Favors coalitions partner of who offer the most benefits</li> </ul>
Development of a vision for the organization	<ul style="list-style-type: none"> <li>Develops a vision based on follower input about their needs, values, and ideas</li> </ul>	<ul style="list-style-type: none"> <li>Attempt to sell a personal vision as the only way for the organization to succeed</li> </ul>
Integrity of leader behavior	<ul style="list-style-type: none"> <li>Acts in a way that is consistent with espoused values</li> </ul>	<ul style="list-style-type: none"> <li>Does what is expedient to attain personal objectives</li> </ul>
Risk taking in leader decisions and actions	<ul style="list-style-type: none"> <li>Is willing to take personal risks and actions to accomplish mission or achieve the vision</li> </ul>	<ul style="list-style-type: none"> <li>Avoids necessary decision or action that involve personal risk to the leader</li> </ul>
Communication of relevant informations operations	<ul style="list-style-type: none"> <li>Makes a complete and timely disclosure of information about events, problems and actions</li> </ul>	<ul style="list-style-type: none"> <li>Uses deception and distortion to bias follower perceptions about problems and progress</li> </ul>
Response to criticism and dissent by followers	<ul style="list-style-type: none"> <li>Encourages critical evaluation to find better solutions</li> </ul>	<ul style="list-style-type: none"> <li>Discourages and suppresses any criticism or dissent</li> </ul>
Development of follower skills and self-confidence	<ul style="list-style-type: none"> <li>Uses coaching, mentoring, and training to develop followers</li> </ul>	<ul style="list-style-type: none"> <li>De-emphasizes development to keep followers weak and dependent on the leader</li> </ul>

### 3.2.2 Individual determinants & Situational Influences on Ethical Leadership

Kohlberg (1969) provided in his theories of cognitive moral development, an explanation about the differences in ethical behavior among leaders and the consequences of them for followers and for the organization. He proposed a model to

describe how people develop their morality through different sequential stages as they grow, from child to adult.

Basically he stated the existence of six stages of moral development that can be understood in terms of three broad levels: pre-conventional, conventional, principled (Brown & Trevino, 2004). Unlike physical maturation, moral development is not inevitable, and if some people become fixated at a particular development stage, some others evolve and reach higher and higher levels.

The *pre-conventional* level is characterized by egocentrism, satisfying personal objectives and following the rules in order to avoid punishment. The motivation that primarily moves the person that is in this stage, is the self-interest and the satisfaction of personal needs (Yukl, 1994) rather than the ones of the group, community or organization. If they act in an harmful ways, they know that their behavior will not be punished since their actions are still marginally within the law (Van den Berg, 2008), and so they also will never learn that what they have done, is actually wrong (Shaffer, 2002).

The motivation that pushed leaders belonging to the *conventional level*, is to satisfy role expectation and social norms determined by groups, organization and society (Yukl, 1994). Thus, the aspect that distinguishes this kind of leader are the respect for authority, the strive to sustain the social order and the strong attempt to obey the rules in order to gain the approval of the other people (Shaffer, 2002). Basically they look outside to search for a guidance when determining the ethically right thing to do (Brown & Trevino, 2004).

The people who belong to the last and more high level of moral development are very few (Ho, Vitell, Barnes & Desborde, 1997). What concern this level is a clear understanding of the general principles that belong to the society. The *principled* leader should fulfill internalized values and moral principle. Nevertheless, he or she may deviate from norms and risk social rejection, economic loss, and physical punishment because an important ethical objective should be achieved.

According to Shaffer (2002), an individual at this stage acts independently of the environment, when determining right from wrong, they make decisions autonomously by looking inside themselves

They are confident in dealing with complex problems, acting more with the common good in their mind, rather than thinking about self-interest and they encourage the follower to do it as well (Gibbs, 1991)(Gibbs, 2003).

While the post-conventional leaders see the big picture and are less focused on their self-interests and more in the community ones, the lower stages “demand obedience and have self-interest motives” (Van den Berg, 2008).

In reality, one of the leader’s task is to take decision and this might respect several criteria to be accepted and considered the best choice. Being an ethical leader, involves the fact that in order to take a decision, *values* should be taken into account, evaluating the consequences of behavior or the observance of formalities (e.g. rules, policies, law or traditional practices)(Reynolds, 2006).

In one hand the one who is more concerned about *consequences*, will tend to act in a way that is likely to result in the greatest benefit for others, even if it violates formal rules or laws. On the other hand, a person for whom *formalism* is very important, is more inclined to obey rules and policies so, to conform with the existing environment, even when the behavior is likely to have adverse consequences for some people.

It is a matter of fact that the leadership, thus also its ethical aspect, occurs in a social context, and therefore this could strongly influence them (Brown & Trevino, 2006 ; Trevino, 1986).

Yukl (1994) identified three main factors that could affect the ethical behavior of the leader.

First, the *organization culture* and *the formal reward system*. When the performance goals are quite unrealistic to achieve, a general pressure toward an increases productivity is spread all over the environment, but especially the organization itself does not have strong cultural values and norms about ethical conduct and individual responsibilities (Yukl, 1994), it is easier for the unethical behavior to arise.

In order to promote an ethical climate , the organization could implement several actions such as: initiate discussions with followers or colleagues about ethic and integrity, recognize and reward ethical behaviors by others, help people to find fair and ethical solutions to conflicts.

In regard to this Brown and Trevino (2006) pointed out that also the moral intensity of issues faced, is a factor that carves the ethic of the leader and organization in which he or she is embedded: “morally intense situations draw observers’ attention to the

leader. These situations can be considered providing grounds for ethical leadership. When morally intense situations are handled correctly, moral intensity will interact with the ethical context to influence ethical leadership (Brown & Trevino, 2006). Leaders who work in strong ethical contexts that support ethical conduct, will be better prepared to handle morally intense situations and demonstrate their ethical leadership” (Brown & Trevino, 2006).

Second, the *society* in which the organization was born and has been evolving (Yukl, 1994). This refers to the cultural values and beliefs in the community or nation. For example, in a society where violence is a very common method used to face problems, unethical behavior are easily to be view as a “normal accepted attitude” .

Third, the *followers* themselves could influence the leader in ethical term. They could encourage unethical leadership if they are strongly convinced that the position of the leader should be strongly powerful and the obedience to the authority is necessary (Yukl, 1994).

Brown and Trevino (2006) also added that having had an ethical role model for the leader itself, is an important aspect to take into consideration in order to explain why some leaders are ethic and some other less or even not. In fact, “the followers are not the only ones who learn from a model”. “Most individuals look outside themselves to other individuals for ethical guidance” (Kohlberg, 1969). In their study, they found that having had an ethical mentor in one’s career, was positively related to ethical leadership. Leaders who previously had an ethical role model at work, were more likely to be identified as ethical leaders by their subordinate.

In summary, the leader personality and cognitive moral development are continually modeled by the environment all around and by the previous experience of the leader itself.

### **3.2.3 Moral leadership and Leadership outcomes**

As stated in the previous set of hypotheses about charismatic leadership, in chapter 3.2, in order to relate moral leadership to Wise Leadership, there is no known theory that could empirically support the hypotheses beneath. Van den Berg (2008)

developed a conceptual framework which tries to break up Wisdom in its dimensions. This leading-with-wisdom model integrates charisma, morality and strategic approach into the concept of wise leadership. Moreover, McKenna et.al.(2009) argued a positive relationship between wisdom and morality stating that: “wise leaders value human and virtuous outcomes and so, since they are humane, they produce virtuous and tolerant decisions” as the moral leader does. To support their thesis, they cited also Aristotle for whom the central capacity of practical wisdom is ethical judgment. For him, our humanity is defined by the inclination to virtue. “Values are an integral part of wise thinking” (Sternberg, 2001). “Wisdom manifests as concern for others, being thoughtful and fair, admitting mistakes, and also learning from them” (Sternber, 1990)(Baltes, Staudinger, Maercker & Smith, 1995). Moreover, if we remember the first part of the wisdom’s definition from Sternberg (2004) in Chapter 1:“*Wisdom is the application of intelligence and experience as mediated by values toward the achievement of a common good through a balance among intrapersonal, interpersonal and extra-personal interest [ ...]*”, it can be noted that it points out the moral dimension since the moral leader strives for the common good and not for his or her own interest.

According to these theories, we formulated the following hypotheses:

*H8 Moral leadership is positively related to the Wisdom in Leadership as they are perceived by the followers*

Brown & Trevino (2004) argued that because most of the employees belong to the conventional level of cognitive moral development, they are “looking outside themselves to find a guidance in ethical dilemma situation”. Therefore, leaders represent the source of inspiration. Because of the proximity of the two parts, and the power of influence that the leader exercises on followers, he or she will influence subordinate outcomes (Brown & Trevino, 2004).

The social learning theory from Bandura (1977) also confirms and explain how leaders influence followers. *Influence* is the essence of leadership and powerful leaders can have a substantial impact on the lives of followers and the fate of an organization. Employees learn what is right to do and what is not, looking at the leaders’ behavior and its consequences.

Another aspect that characterized the moral leadership is the trust that followers have toward the leader and this may also have an impact on the work outcomes. For



example, when the subordinates perceive high level of trust for the leader, they are likely to feel more safe and positive toward the manager's decision making. On the contrary, if they believe that the leader is not trustworthy, it would "likely to be psychologically distressing when the leader has power over important aspects of one's job, and this distress is likely to affect one's attitudes about workplace" (Dirks & Ferrin, 2002).

Dirks & Ferrin (2002) demonstrated that such construct is significantly related to performance outcomes.

In particular, trust in leader have a correlation with job attitudes (job satisfaction and organizational commitment), OCB, job performance and satisfaction with the leader.

For this reason a leader might be a man or woman of integrity. As stated previously, most scholars consider integrity to be an important aspect of ethical leadership. Even though there is still a not clear definition, the most basic one "emphasize honesty and consistency between a person's espoused values and behavior" (Yukl, 1994). Sankar (2003) defines it as "soundness of and adherence to moral principle". It has been argued that, only if the character of the leader is grounded in a solid infrastructure of moral values, it could become wholly integrated (Sankar, 2003). Appropriate norm, values, mental models can facilitate team performance (Yukl, 1994). When the subordinates perceive that the leader is treating them in a fair way, they are more willing to be productive indeed. The motivation to give more of themselves (affectively, cognitively and/or behaviorally), in order to give an added value support to the group or organization, is higher when the perceived fairness is present (Brown & Trevino, 2004). Still, fair treatments contribute to increase satisfaction and loyalty among group members, and so it's more difficult that someone behaves in an unethical manner. Lastly, Yukl (1994) stated that "collective identification with the leader, can provide benefits in terms of increased organizational commitment and loyalty, reduce vacancy and higher performance". Thus we formulate these two hypotheses:

*H9 Leader Morality is positively related to group performance*

*H10 Leader morality is positively related to follower job satisfaction*

It has been proved that leaders play an important ethical role, communicating the standards and using the rewards and punishment to reinforce the proper conduct

(Trevino, Hartman & Brownm, 2000). And the employee's perception that executives and supervisors sincerely care about ethics has been associated with the amount of unethical conduct observed in the organization.

In fact, Brown et al.(2004) demonstrate that the followers of an ethical leader will be willing to put extra effort into their work. This means that there are more frequent organizational citizenship and other extra role behaviors such as employees' willingness to report problems to the leader. This kind of task is normally not required and it can be considered useful for the organization (Brown & Trevino, 2004).

The social exchange processes, create a sense of obligation among subordinates and motivating them to reciprocate (Brown & Trevino, 2004). Since they see the leader as the model, they may reciprocate those behavior that are aimed at their supervisor (Malesta & Byrne, 1997)(Masterson, Lewis-McClear, Goldman, &Taylor, 2000), or they may impede behaviors aimed at harming their leader, work group, or the organization.

Trevino (1992) emphasizes the importance of discipline to send strong signals about the value of organizational norms and leaders' willingness to stand behind them. If the sense of retributive justice and perceived fairness will be satisfied, the employees will be less likely to engage in such behavior themselves.

Since organization citizen behavior basically represents the opposite of counterproductive work behavior, the relationship between these variables and the ethical leadership could be interpreted together: as citizenship behaviors increase, unethical behaviors should decrease (Brown & Trevino, 2004). Thus we stated these two hypotheses:

*H11 Leader morality is positively related to organizational citizen behavior*

*H12 Leader morality is negatively related to counterproductive work behavior*

Brown et al.(2004) demonstrate also that the followers of an ethical leader are more satisfied with their leader, because they recognize in him a role model they feel to be treated with the right manners. Thus the last hypothesis that will be tested, concerning the morality of the leader is the:

*H13 Leader morality is positively related to follower leader satisfaction*

### 3.3 Strategy: Theory & Hypotheses

#### 3.3.1 Preface

Nowadays, the environment that surrounds the organization, strongly affects the business existence and shapes the development of such businesses throughout their lives. It is firstly characterized by an intense international competitiveness, since customers are more and more choosy and difficult to satisfy and the number of trade channels has been growing quickly. Also ambiguity, rapid technological and social change, discontinuities and disequilibrium conditions, informational overload, increasing focus in radical and/or incremental innovation, are embedded in this environment and struggle each organization to survive and to undertake the right path to reach its mission. The environment is becoming increasingly hyper-turbulent (Eisenhardt, 1989).

Under these conditions, it is necessary that the people who possessed the helm of the organization, know how to face this problematic but sometimes challenging reality.

*“Strategic leadership is a series of decisions and activities, both process-oriented and substantive in nature, throughout which, over time, the past, the present, and the future of the organization coalesce. Strategic leadership forges a bridge between the past, the present and the future by reaffirming core values and identity to ensure continuity and integrity as the organization struggles with known and unknown realities and possibilities. Strategic leadership develops, focuses, and enables an organization’s structural, human and social capital and capabilities to meet real-time opportunities and threats. Finally, strategic leadership makes sense of and gives meaning to environmental turbulence and ambiguity, and provides a vision and road map that allows an organization to evolve and innovate” (Boal, 2004).*

According to the definition of strategic leadership by Boal (2004), it is such kind of leadership that might be employed to coordinate and maintain the organizational system while readying it for adaptive changes (Avolio, Bruce, Sosik, Jung, Berson, 2001). Thus, it is useful to effectively respond to this turbulence.

The theories upon strategic leadership started with Barnard (1938) who identifies the best practices that contribute to firm success. Afterwards, other researchers have focused on internal firm characteristics (Hoskisson, Hitt, Wan, 1999). Nevertheless, both the approaches identify the role of the leader as the strategic assets for the firm. Strategic leadership scholars, stated that firms are basically the reflection of their top management (Klimoski & Koles, 2001) and in the following paragraph it is provided a more deepen explanation about those characteristics that are considered its essence.

### **3.3.2 The essence of strategic leadership**

In this paragraph it will be discussed the key implementation tools that the leader should use of in order to lead strategically.

Boal & Schultz (2005) stated that strategic leaders serve as a reference signal in the evolutionary process. The aspect which empower leaders under the strategy lens, is that they possessed the ability to accommodate and integrate both the organization's internal and external environment, managing and engaging in an intricate process of information (Jooste & Fourie, 2009). Consequently the strategy implementation is not possible without a strategic leadership, because the latter is one of the key drivers which help the company to struggle throughout these environments (Hrebiniak, 2005)(Pearce & Robinson, 2007).

Among the activities that are often associated with such kind of leader there are: creating and communicating a vision of the future; developing key strategic competences and capabilities; developing organizational structures process; support an effective firm culture; emphasizing ethical practices; establish a balanced organizational controls; managing multiple constituencies and, of course, making strategic decisions and revising them basing on the environmental changes (Hickman, 1998)(Ireland & Hitt, 1999)(House & Aditya, 1997)(Jooste & Fourie, 2009).

Leadership is multifunctional but it supposed to be also a “management through others”.

Cyert & March (1963) stated that strategic leadership focuses on the people who have an overall responsibility for the organization and this is to say that, leaders are not the only ones who are included but also, for example, the top management or dominant coalitions. In fact, although the environment around challenges the Leaders' capabilities in order to handle it, they cannot do enough on their own, to effectively adapt the strategy and then define, shape and execute the organizational response (Wikipedia, 2012c).

Even if the challenge to develop a winning strategy at a point in time, the aim of the leader is also is to create an environment in which the followers anticipate the company's needs in relation to their own work tasks. Thus Strategic leadership can also be defined as utilizing strategy in the management of employees. In fact, Park (1996) said that the focus of the leader, should be both on the *analytical dimension* (the content of the strategy), and on the process that is used to developed such strategy, the *human dimension*. Employees must be persuaded to acquire the business vision and afterwards, to be more productive. Reward and incentive systems are used to encourage better performance. But also loyalty toward followers, being social and friendly in the right moments, keeping them updated about what is happening within the organization, are the examples of leader's features that are helpful in achieving such goals.

Leadership techniques are used by the strategic leader to empower and motivate the employees rather than abuse of them, because it is recognized that followers have a potential that should be encouraged in a respectful way. If there is this belief, this will ensure that the delivered strategy is what the leader is looking for. In regard to this, according to flexible leadership theory (Lepsinger & Yukl , 2004) the leadership behavior could be classified in three types:

- *Task oriented behavior* focuses on task-oriented functions such as planning and scheduling the work, direct and coordinate subordinate activities, monitor operations and performance (Yukl, 1994). Effective managers guided subordinates in setting high but realistic performance goals. Through this behavior the leader increase the efficiency and process reliability (Van den Berg, 2008)
- *Relations-oriented behavior* focuses on the socialization with the followers showing trust and confidence that they could perform a difficult task,

recognizing contributions and accomplishment, providing coaching and mentoring when appropriate, allowed considerable autonomy in how they do the work and other kind of attitudes (Yukl, 1994).

- *Change oriented behavior* concern the adaptation to the external environments and the attempt to improve it (Van den Berg, 2008). This type of behavior includes monitoring the external environment to detect threats and opportunities, studying competitors and outsider to get ideas, encourage people to view problems or opportunities in a different ways, encourage and facilitate efforts to implement major changes (Yukl, 1994).

Whether the strategy is effective depends on how well the CEO addresses the internal and external environment of the organization (Van den Berg, 2008)

To conclude, in order to implement the strategic direction and to transform the organization, building prepared minds on a large scale could be a critical process that should be undertaken, and this will result in having employees smart enough and motivated enough to execute the strategy and model it, as conditions change (Wikipedia, 2012c).

But what constitutes the essence of “being strategic”?

Boal and Hooijberg (1980) stated that there are three main characteristics that a strategic leader should fulfill: absorptive capacity, adaptive capacity and managerial wisdom.

The *absorptive capacity* concerns the ability to *learn*. In particular, “it involves the capacity to recognize new information, assimilate it, and apply it toward new ends” (Boal & Hooijberg, 1980). Sometimes this process could require just adjustments or modification within the existing environment and sometimes even the restructuring of it (Boal & Hooijberg, 1980). This capacity is very important especially in this turbulent business context, where looking at the competitors, acquiring new information about them, could represent a fundamental aspect in order to pinpoint strengths and weaknesses of such businesses and adapting the strategy of the organization in order to gain a competitive advantage.

Learning occurs through studying, doing, using and it will result in changes in know-why, know-how and know-what respectively (Garaud, 1997). Only the constant experimentation and the willing to tolerate small failures will allow the leader to cultivate this capacity.

The *adaptive capacity* concerns the ability to *change*. For a strategy to succeed, it is necessary to adjust it as conditions require. Due to the new competitive landscape, the strategic leader is flexible and he influences “the organization by aligning their systems, culture, and organizational structure to ensure consistency with the strategy” (Beatty & Quinn, 2010). In order to accomplish this flexibility, there might be also the internal business environment that allows it. For example, the followers should be flexible and open to changes as well. Being adaptive, imply also to have an eye always on the horizon, not just on the near at hand. Moreover, leaders are not only required to ensure that their companies’ products or services are in a continuous improvement, meeting the customer expectations but they are also required to understand how technological advances in related areas can impact on their organizations (Boal & Hooijberg, 1980). Of course the leadership is challenged the most when both products and services and processes (all the performance determinants) are highly important and there are big trade-offs among them. “Flexible, adaptive leadership is essential to deal successfully with the trade-offs, competing objectives and changing situations” (Yukl, 1994).

The last capacity necessary to leader strategically is *managerial* wisdom that summarize the properties of discernment and Kairos time (Bartunek & Necochea, 2000). The first concern the capacity to recognize variation in the environment, understanding the social actors with their relationships and this helps the leader to deal effectively with the right people depending on the necessity. Kairos time involve the ability to take the right decision in the right moment ( Boal & Hooijberg, 1980).

### **3.3.3 Two key responsibilities for leaders**

As stated beforehand the strategic leader has several task to do. Yukl (1994) provides the explanation about the key responsibilities that this kind of leader has: *monitoring the environment and developing competitive strategy*.

The three capacities of a strategic leader (managerial wisdom, absorptive and adaptive capacity) are strained while he or she has to implement a continuous monitoring to the external context. Through this responsibility, the leader would

improve the sensibility toward a wide range of events and trends that are likely to affect their organization (Ginter, 1990).

Some of the useful questions that a leader could ask to him or herself and also to his or her group members are: what do clients and customers need and want? What is the reaction of clients and customers to the organization's current product and services? Who are the primary competitors? How will the new technologies affect the organization's products, services and operations? How will the organization be affected by changes in the economy? Monitoring the environment, the person who is leading would be able to learn, change and, identifying threats and opportunities, take the right action at the critical moment. In particular, strategic planning and crisis management are the two typical situations where external monitoring (also called "environmental scanning") provides information that are critical to face the reality. For example, "Bourgeois (1985) studied 20 non diverse companies and found that profitability was greater when executives had an accurate perception of the amount of industry volatility in markets and technology" (Yukl, 1994).

Yukl (1994) provides four guidelines for external monitoring that a leader can follow to learn about events and changes in the external landscape:

1. Identify relevant information to gather
2. Use multiple sources of relevant information
3. Learn what clients and customers need and want
4. Learn about the products and activities of competitors
5. Relate environmental information to strategic plans

The second main responsibility for strategic leaders is to develop competitive strategy. Strategy formulation will not improve organization performance unless the strategies are relevant and feasible in term of current capabilities. A relevant strategy takes into account changes in the external environment, moreover it represents a solution that is realistically feasible in terms of the organization's strengths and weaknesses (Yukl, 1994) and it is likely to be effective if it builds on the core competences.

Even for this key responsibility, some guidelines are provided:

1. Determine long-term objectives and priorities
2. Assess current strengths and weaknesses
3. Identify core competences



4. Evaluate the need for a major change in strategy
5. Identify promising strategies
6. Evaluate the likely outcomes of a strategy
7. Involve other executives in selecting a strategy

### **3.3.4 The seven principles of Strategic Leadership by Quong and Walker (2010)**

Quong & Walker (2010) believed that being strategic implies more than having strategic intent and making a strategic plan but it is about deliberating and sustaining the practice. The following “rules” could be taken into consideration by the leader in order to conduct an effective strategic leadership.

*Principle 1 Strategic leaders are future oriented and have a future strategy*

This principle encompasses the concept that strategic leadership is more than having a vision about an ideal future. It is also about recognizing that the nature of the future is complex and unpredictable therefore the strategies that have been developed, are prepared for the unexpected reality rather than being a “plan for the known”.

*Principle 2 Strategic leaders are Evidence Based and Research-Led*

Strategic leaders have to focus leadership actions and decisions on evidence, investing and being led by research.

*Principle 3 Strategic leaders get things done*

This principle suggests to settle the goals and afterwards, strive to reach them because a strategic leader is a person of action and achievement and someone who can be relied upon to deliver outcomes.

*Principle 4 Strategic leaders open new horizons*

Strategic leaders aim to being innovative and receptive to initiatives thus taking new directions in the face of uncertainty

*Principle 5 Strategic leaders are fit to lead*

The resilience is one of the characteristics of a strategic leader and it refers to the ability to overcome the inevitable obstacles which follow change and stress of working with uncertainty. But also the ability to adapt to the turbulent environment and the capacity to cope in all situations are fundamental. The strategic leader

manages his or her physical and mental wellbeing in order to be resilient, flexible and resourceful.

*Principle 6 Strategic leaders make good partner*

The collaboration is a necessary but not sufficient condition to reach the success. Since the parts don't always agree to each other the strategic leader has to possess the skills to manage the conflicts positively and to frame dynamic relationships in ways that are productive.

*Principle 7 Strategic leaders do the "Next" Right Thing*

This last principle refers to the leader faculty to be ethical and values driven

To conclude, lots of researchers stated that strategic leadership does indeed matter in organizations (Cannella & Monroe, 1997)(Thomas, 1988). However the real question should not be whether the strategic leadership matters or not, but rather under which conditions, when, how and on what criteria (Boal & Hooijberg, 1980).

According to the upper echelon theory (Hambrick & Mason, 1984) the organization is the reflection of the leaders' values and cognitions and the amount of discretion, will moderate the relationship between strategic decisions and work outcomes (Kaplan & Kaiser, 2006). Wikipedia (2012) defined discretion as "The ability to make decisions which represent a responsible choice and for which an understanding of what is lawful, right or wise may be presupposed" and from a more practical point of view, it reflects the degree to which managers can turn their intentions into reality (Kaplan & Kaiser, 2006). Discretion summarizes three kinds of factors: environmental constraints, individual differences and organizational factors, moreover it is a reflection of demographic and personality characteristics (Cannella & Monroe, 1997). When it is high, leaders are relatively free to do as they wish and if the contrary, judgments and behaviors are constrained. Since leaders and organizational outcomes are linked by discretion, a dilemma is posed: without discretion, the leader is unable to influence firm performance instead with discretion could put self-interest ahead of their responsibilities and obligations (Kaplan & Kaiser, 2006). In regard to this topic the discussion is still open.

Apart from the ability to make right decisions, it is also important *When* the leader makes the decision or takes an action (Waller, 1999). In other words, timing matters. Burgelman & Grove (2007) stated that throughout the story of a business, there are important inflection points (SIPs) and are the cause of industry dynamics,

technologies and strategies changes that create opportunities for strategic leaders to develop new visions, create new strategies giving to the organization the possibility to move on, improving and gaining a competitive advantage. In this particular point, the organization and in particular the leaders must firstly recognize this situation, take advantage of the opportunities that this offers and take the right decisions at the critical moment (Boal & Hooijberg, 1980).

It is also interesting to understand How strategic leadership is important. Some strategic management theories offer little guidance. For example the positive agency theory assumes that decisions made by leaders are based upon self-interest. Since the leader's interest often deviates from the shareholders' ones, the positive agency theory try to align the two interests through the use of incentive systems and broad oversight (Cannella & Monroe, 1997).

### **3.3.5 Strategic leadership and Leadership outcomes**

In order to support our first hypothesis which states that Strategic leadership is positively related to wisdom perceptions of the leader, there is not so much literature. Rooney, Boal, McKenna (2009) faced the Wise Leadership topic and its related concepts. They stated that a wise leader must have the capacity to be readily able to deal effectively with complex and uncertain environmental phenomena, having the capacity to think creatively giving sense to it thus handling the ambiguity well.

Moreover the leader should display a long-term vision with an infusion of virtue. The commitment that a wise leader displays toward a long-term welfare does not take into account only the immediate stakeholder interest but also the humanity in general (Rooney-Boal-McKenna, 2009) thus performing a balance of interests about one's self, others and the organization. Considerable social, ethical and political behaviors are needed to take good advantage of the complexity. In fact McKenna et al (2009) argued that wisdom does not just imply a rational processing, rather it's a process that "brings together the rational and the transcendent, the prosaic and higher virtues, the short and long terms, the contingent and the absolute, the self and the collective". In this process the technical, social, ethical and cultural complexity, are discerned in order to understand their ontological foundations and then integrated

again all in a plausible narrative that responds to that complexity ( McKenna, Rooney, 2009).

If we remember the first part of the wisdom's definition from Sternberg (2004) in Chapter 1 Wisdom is "*the application of intelligence and experience as mediated by values toward the achievement of a common good through a balance among [ ...] short and long terms, to achieve a balance among adaptation to existing environments, shaping of existing environments, and selection of new environments.*", it can be noted that it points out the strategic dimension of a strategic leader.

The strategy is the last dimension that Van den Berg (2008) include in his leading-with-wisdom model which tries to explain Wise Leadership. Thus we stated the following hypothesis:

*H14 Strategic leadership is positively related to the Wisdom in Leadership as they are perceived by the followers*

The next hypothesis concerns the relation between strategy and the perceived effectiveness of the leader. This aspect could represent a vague term since it is represented and measured through countless criteria (the effectiveness measures in term of ROI, subordinate satisfaction, work atmosphere, etc.). Chapter 4 will illustrates the measure that has been used in order to evaluate such construct in this research.

In general, a leader is considered effective when he or she is able to manage both the external environment and the organization one enhancing the firm's adaptability, innovativeness and fitness, when he or she is able to create a context for learning by managing dialog among followers, when he or she is able to support innovative behavior and lastly to instill in the group the sense of mission and the desire to achieve goals. As stated before, an alignment of the leader's characteristics with the strategy of the organization is indeed necessary to achieve effectiveness (Gupta & Govindarajan, 1984)(Thomas & Ramaswamy, 1996)(Kimberly & Evanisko, 1981)

"A mismatch between the firm's strategy and leader's characteristic would not only lead to poor organization performance, but also to the dismissal of the leader"( Boal

& Hooijberg, 1980). Thus, the leader should have that kind of sensitivity which enables him or her to understand where the discretion lies, in which stage of the life cycle the product or service is in, and which kind of impact his or her decisions could have on overall organizational performance “Leaders who have absorptive capacity, adaptive capacity and managerial wisdom will be more effective than leaders who do not” (Boal & Hooijberg, 1980).

Moreover Yukl (1994) defines effective leaders as the ones who are continuously reading the situation trying to determine how to adapt their behavior to it. They seek to understand the task requirements, situational constraints, and interpersonal processes that determine which course of action is most likely to be successful and these are the typical attitudes of a strategic leader. Therefore, an effective leadership entails the capacity to react in an adaptive manner to emergent, dynamic and intricate situations and for this reason those leaders are asked to be ready to acquire new skills and strategies for coping with complexity and change (Pratch & Jacobowitz, 1997).

Thus we state the following hypothesis

*H15 Strategy is positively related to leader effectiveness*

Connected to the concept of leadership effectiveness there is the one of group performance. Yukl (1994) stated that planning, clarifying and monitoring are specific of task-oriented behavior belonging to the strategic leadership style and these jointly affects subordinate performances. *Planning* involves the level of strategic capacity that a leader has, such as the ability to decide about objectives, priorities, strategies, allocation of resources, assignment of responsibilities, scheduling of activities. *Clarifying* means being available for any clarification from the followers, but it also includes assigning tasks, explaining job responsibilities, explaining rules and procedures. Lastly, *monitoring* involves getting information to evaluate the operations of the work unit and the performance of individual subordinates. The relationship with group performance can be argued, because an organizational strategy is focused on the achievement of high organizational or departmental performance.

We state that the more the leader is strategic the more the followers are prone to put much more effort on their own work and this will lead to better group performances.

*H16 Strategy is positively related to group performance*

The Strategy was the third and the last dimension of our wisdom construct.

In Chapter 5 we are going to test all these hypothesis.

## **4. Assessing Wise Leadership in business environment**

The major purpose of this study is to examine whether Charisma, Strategy, Morality and the Age of the leader, would contribute to explain the construct of Wisdom and how the supposed Wisdom dimensions (Strategy, Charisma, Morality), affect Leadership Outcomes.

For this reason we rather prefer to divide both the "*Measurement and Validation of Constructs*" and "*Analysis and Results*" in two sections: Wisdom Dimensions and Leadership Outcomes.

The methodological issues of items selection and data aggregation, as it applies to the validity of subordinate descriptions of leadership, are the focus of the following sections.

### **4.1 Research setting and Data Collection**

In order to answer to the research questions posed in this study, data have been collected from four business organizations in The Netherlands throughout 2009: *Philips Health Care in Best*, the Provincie Noord-Brabant (a governmental organization, the head quarter of the Province of Noord-Brabant), and two accountant offices *Mazars Paardekooper Hoffman N.V.* and *Berk Accountants en Belastingadviseurs*.

The respondents completed the questionnaire during the normal working hours. They were assured of the confidentiality of responses and their anonymity was guaranteed through written instructions.

The total amount of subordinates in this dataset were 151 (27 are female) which ranked their own leaders in regard to the leader's characteristics discussed in the previous chapters (charisma, strategy, morality, wisdom) and the Leadership outcomes (Leader effectiveness, Leader satisfaction, Job Satisfaction, Group Performance, Motivation, Organization Citizen Behavior, Counterproductive Behavior). According to Hogan et al. (1994), subordinates are in a unique position to judge the Leadership.

The total amount of leaders that were involved in this study is 40 of whom 4 are female.

It should be noted that per each leader there is a different number of subordinates who ranked him or her, from a minimum of 2 persons to a maximum of 9.

The average leaders' age is 43.90 ( $SD = 9.31$ ) and the subordinates one is 43.31 ( $SD = 9.81$ ).

Packages with questionnaires were distributed to contact persons, such as human resources management managers, who were centrally located in the organization. The questionnaires then, have been distributed to the leaders who gave them to their subordinates. In the Appendix A1 a copy of the original questionnaire in Dutch is provided.

The modality through which the survey has been conducted represent one of the limit of this research that will be faced in Chapter 7 (Limits and future development).

Even though the sample size is quite small, several other studies in this field have been conducted with comparable sample (Yperen, 2004) (Wang, Law, Hackett, Wang, & Chen, 2005). With regard to the type of businesses that were considered in this study, the differences among them, can help to ameliorate potential context effects that may occur from using respondents from a single company and a single site. Multi-group or stratified analysis by component are not feasible due to small sample size. Moreover, since the sample is not balanced in term of male and female presence, comparative analysis in regard to the gender variable has not also been performed.

## 4.2 Measurement and Validation of Constructs

The questionnaire submitted to the 151 subordinates consists in two parts: the first one (part A) aims to measure the followers' perception of the leader's characteristics, concerning the level of Wisdom, Charisma, Strategy and Morality. The 66 items that measure these variables have not been grouped per construct but mixed together, thus the responses were not influenced by the structure of the questionnaire itself.

In the second part (part B) the subordinates had to express an opinion about the Leadership Outcomes, that in this research have been measured by a circumscribe



group of seven factors with 30 items: Leadership Satisfaction, Leadership Effectiveness, Group Performance, Job Satisfaction, Counterproductive Behavior, Organization Citizen Behavior and Motivation.

Subordinates used 5-points Likert scales from 1 (totally disagree) to 5 (totally agree) to rate their leaders and the Leadership Outcomes.

Gender, age and tenure of the subordinate have been collected too. However, because of some missing values, these variables have not been taken into account in this research, even though, it would have been interesting to include them in the final model.

In order to make the data as much valid as possible, part of the items used in this questionnaire, belong to worldwide tested scales. The rest of the items do not belong to worldwide tested questionnaire, but they have been already used in some Tilburg University's study research. In the Appendix A2 there is the list of items that were used in the questionnaire, divided per factor measured. The classification with respect to the source, is also indicated.

#### **4.2.1 Cronbach's alpha**

The selection of the items is a really important step in the analysis, in order to guarantee a good validity of the final results. In this section the criterion used to select the items of Wise Leadership dimensions and Leadership Outcomes is discussed.

The main criterion used to assess the Reliability of the items and to make an appropriate selection used to create afterwards the different constructs, is the Cronbach's Alpha.

According to Tavakol & Dennick (2011) there are two fundamental elements that should be investigated in the evaluation of a measurement instrument: Validity and Reliability. The first one indicates "the extent to which an instrument measures what is intended to measure" and the second one concerns with the ability of an instrument to measure the internal consistency, that is how closely related a set of

items are as a group. They argued that the reliability of an instrument and its validity are two closely associated concepts: an instrument cannot be valid unless it is reliable.

Cronbach's alpha index was developed by Lee Cronbach in 1951, is a function of the number of tested items and the average inter-correlation among them:

$$\alpha = \frac{N * \bar{c}}{\bar{v} + (N - 1) * \bar{c}}$$

Where N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

Average-inter item covariance is, as the Cronbach's alpha itself, one of the measures for Internal Consistency Reliability. The average inter-item correlation uses all the items that are designed to measure the same construct and it represent simply the average of the correlations computed between each pair of such items. The more the correlations are high, the more it is supposed that the items reflect the same construct.

Back to the formula, if the number of items increases, the Cronbach's alpha increases as well and, if the average inter-item correlation is low, alpha will be low (holding the number of items constant).

According to Cortina (1993) this coefficient "is certainly one of the most important and persuasive statistics in research involving test construction and use". Moreover he suggested to the investigators not to rely on published alpha estimates but rather to measure alpha each time the test is administered. Threshold of  $\alpha=0.7$  has been considered in order to hold a construct, valid.

Even though a "high" value of alpha provides evidence that the items used measure an underlying (or latent) construct, this does not imply that the measure is unidimensional (UCLA\_Academic Technology, 2012). In order to prove that the scale in question is unidimensional, additional analysis such as Exploratory factor analysis, should be performed. Technically speaking, Cronbach's alpha is not a statistical test - it is a coefficient of reliability (or consistency) (UCLA\_Academic Technology, 2012).

In fact, as we will discuss later in Chapter 6, we computed some results gained from a new dataset composed by a different selection of items obtained from a Exploratory and Confirmative Factor Analysis upon the starting dataset (the one that

comprehends all the items in the questionnaire). We investigated whether different measurement affects the main results.

#### 4.2.2 Wisdom dimensions

Taking into consideration every single variable singularly, here a more detailed description of the items' selection for Wisdom and Wisdom dimensions is provided:

- **Charisma (C)** The items used in the questionnaire to measure this construct, belong both to the Multilevel Leadership Questionnaire, the Inspirational Leadership Scale and some items already tested in previous studies at Tilburg University.

In general, the Multifactor Leadership Questionnaire was employed to measure the dimensions that underlie the Transformational and Transactional Leadership constructs which are analyzed separately. As explained in Chapter 3.1, one dimension of Transformational Leadership and thus specific items have been created to measure it, keeping separately from the other Transformational Leadership's dimensions. While increased concerns about the factor structure of the MLQ have been raised in the past, it is nevertheless the most extensively used and best validated measure of leader charisma (Bycio, Hackett, & Allen, 1992). Better, it is labeled the "neo-charismatic" leadership theory (Antonakis, 2002).

Although the MLQ is widely used, the instrument has been criticized in some areas of its measurement factors (Muenjohn & Armstrong, 2008). In fact, many researchers have questioned the content validity of the MLQ over the years, and so frequent attempts to modify the measure to overcome criticisms, have been made (Hinkin & Schriesheim, 2008). Consequently, the MLQ does not have a unique formulation but several ones. For this reason during the questionnaire's drafting phase, the charisma items that have been chosen for this survey (such as "My leader projects a strong, dynamic, and forceful presence", "My leader talks about the future with optimism", he or she "Communicates a clear vision of the future", etc.), belong only in part to this questionnaire.

Lastly, the Inspirational Scale is a valid measure of inspiration (Thrash & Elliot, 2003). According to the Charismatic leadership theory, since such leader should represent a point of reference for all his or her followers, thus a symbol of success or a role model, it has been considered appropriate to include also some items belonging to this scale. An example is “My leader is for me a symbol of success”.

The total charisma items that have been ranked by the subordinate were 19. However, although the Cronbach’s alpha was already high ( $\alpha = 0.930$ ) we decided to take into account only those items that belong to either MLQ or IS (12 in overall) even if the  $\alpha$  decreased to 0.901.

- **Morality (M)** The morality items belong both to the Ethical Leadership Scale of Brown & Trevino and some items have been already tested in previous studies at Tilburg University. The ELS is designed to promote quiet and comprehensive reflection about qualities that together constitute ethical behavior and ethical leadership (<http://www.ethicalleadership.com/EthicalLeadershipScales.html>, 2012) The original scale consists of 10 Likert items, that are represented on a 5-point continuum (1 =strongly disagree, 5 = strongly agree) with higher scores indicating greater ethical leadership behavior. These survey items were designed to “tap the full domain of ethical leadership that could apply to both formal and informal leaders (...) and to leaders at all organizational levels” (Brown, Trevino and Harrison, 2005).

Since not all the Brown & Trevino items have been used in this questionnaire, the reliability of the original scale has been compromised. In fact, if we would have considered only the tested items to measure Morality, the Cronbach’s alpha value was  $\alpha = 0.432$  and the construct would not have been measured in a reliable way. So, we took into account all the items in the questionnaire and the criterion used to select these items is *Cronbach’s alpha if Item deleted*. It provides per each item, the value of the Cronbach’s alpha, that would be reached if such item would be deleted. Sometimes deleting an item could make the coefficient bigger, sometimes could make it smaller and in such case, this means that this item is important to measure the construct reliably

and should not be dropped. After the selection, the  $\alpha$  increased from 0.751 to 0.808 by using only 15 items out of 17. The item A30 and A64 have been deleted (for more details see Appendix A2).

- **Strategy (S)** The items used to measure this construct belong to an unpublished scale developed by Van Os ( n.d.) based on interviews with higher-level leaders of the Dutch Royal Army that was used to measure strategic leadership. The Cronbach alpha could be increased deleting one item (A5 for more details see AppendixA2). The difference is not so big but  $\alpha=0.888$  is still a little bit higher than 0.884 in the starting dataset. Thus we opted to take into account only 19 instead of 20 in the original questionnaire.
- **Wisdom (W)** Wisdom was measured with a newly developed 10 items scale. The reliability of the scale was  $\alpha= 0.825$  and no item has been dropped.

Table 3 shows all the Cronbach’s alpha *before* and *after* the selection, with the number of items per each constructs. The variables have been assessed through 66 items in the questionnaire. But in the main analysis, after this selection only 56 items have been considered.

**Table 3 Cronbach's apha before and after items' selection for Wisdom Dimensions and Leadership Outcomes**

	Starting dataset		Dataset MLQra	
	Number of items	$\alpha$	Number of items	$\alpha$
<b>Wisdom Dimensions</b>				
Wisdom (W)	10	0.825	10	0.825
Charisma (C)	19	0.93	12	0.901
Strategy (S)	20	0.884	19	0.888
Morality (M)	17	0.751	15	0.808
<b>Leadership Outcomes</b>				
Leadership Effectiveness (LE)	4	0.749	4	0.794
Leadership Satisfaction (LS)	3	0.817	3	0.817
Job Satisfaction (JS)	5	0.721	5	0.721
Group Performance (GP)	4	0.766	4	0.766
Organization Citizen Behavior(OCB)	4	0.680	3	0.764
Counterproductive Behavior(CB)	4	0.569	not included	
Motivation(MO)	6	0.463	not included	

### 4.2.3 Leadership Outcomes

Seven Leadership Outcomes have been considered in this study. In the Appendix A2 there are all the list of the items used to describe these variables. In this section we used an unique criteria to assess the reliability of the items and it is again the Cronbach's alpha. Two constructs have been deleted from this research since they were not measured reliably: Motivation and Counterproductive behavior. The results are again in Table 3.

- **Leadership Effectiveness (LE)** was measured with 4 items from the Multifactor Leadership Questionnaire (Avolio & Bass, 2004). Sample items include "My leader is effective in meeting the needs of work-related colleagues" or "My leader leads the team effectively". The Cronbach's alpha associated is  $\alpha = 0.794$ .
- **Leadership Satisfaction (LS)** Satisfaction with the leader was measured by three items from Bass (1985) and the reliability of the scale was  $\alpha = 0.817$  with three items.
- **Job Satisfaction (JS)** This construct was measured by a new scale of 5 items and the Cronbach's alpha is  $\alpha = 0.721$ . No items have been deleted according to the criterion Cronbach's alpha if item deleted.
- **Group Performance (GP)** This outcome was measured through five items developed by Conger, Kanungo, Menon (1997) such as "Most of our tasks are performed quickly and efficiently" or "We almost always achieve our goals". The Cronbach's alpha associated is  $\alpha = 0.766$ .
- **Organization Citizen Behavior (OCB)** 4 items were used to assess this aspect with  $\alpha = 0.680$ . Some examples are "I help colleagues who face a high workload" or "I voluntarily fulfilling tasks for the common good of the department". Only one item (B26) has been deleted reaching a higher level of  $\alpha = 0.764$  (for more details see Appendix A2.1).

The last two Leadership Outcomes, were not considered reliable since the  $\alpha$  was inferior to 0.6, the fixed threshold used in this study.

- **Counterproductive Behavior (CB)** measured through 4 items with  $\alpha= 0.569$
- **Motivation (MO)** measured through 6 items with  $\alpha= 0.463$

#### 4.2.4 The final dataset (MLQra)

To conclude, the final dataset that have been principally used in the Analysis has been called for simplicity “MLQra”, indicating the main criteria used to select items (see Appendix A2 for a list of all items included). It contains the following variables: ID leader, Age of the leader, perceived level of Leader’s Charisma (C\_MLQra), perceived level of Leader’s Strategy (S\_MLQra), perceived level of Leader’s Morality (M\_MLQra), perceived level of Leader’s Wisdom (W\_MLQra), Leadership Effectiveness (LE\_MLQra), Leadership Satisfaction (LS\_MLQra), Job Satisfaction (JS\_MLQra), Group Performance (GP\_MLQra) and Organization Citizen Behavior (OCB\_MLQra).

Each construct per subordinate, have been computed using the average of the scores associated with the items used to measured such factor. In Table 4 there are some descriptive statistics. Despite the good results from the Reliability Analysis, which confirmed the goodness of the items’ selected, in Chapter 6 some robustness check with latent factors are presented.

**Table 4 Descriptive statistics (Mean and SD) for Wisdom dimensions and Leadership Outcomes in MLQra dataset (N=151)**

Descriptive Statistics		
	Mean	SD
<b>Wisdom Dimensions</b>		
AgeLeader	44.11	9.23
w_MLQra	3.79	0.47
C_MLQra	3.68	0.55
S_MLQra	3.89	0.41
m_MLQra	3.83	0.38
<b>Leadership Outcomes</b>		
LE_MLQra	3.77	0.59
LS_MLQra	3.75	0.67
JS_MLQra	3.92	0.50
GP_MLQra	3.66	0.57
OCB_MLQra	3.59	0.68

## 5. Analysis and Results

In order to present a more clear and deep analysis upon Wise Leadership, we decided to split this section of Analysis and Results, in two separated parts.

The first one, *Analysis of Wisdom Dimensions*, analyses the construct of Wisdom under different lenses; in particular, we face the “*level of analysis*” topic, using panel data models to show that the results are quite the same regardless the level of analysis.

In the second part, *Analysis of Wise Leadership Outcomes*, we are going to investigate the relationship between Leadership dimensions and Leadership outcomes, integrating the model reached in the first part into the final one. We analyze the relationships between variables through a SEM model, with observed variables.

SPSS (PASW) Version Statistics 17, StataSE10 and Lisrel were used to analyze the data and test the aforementioned hypotheses.

### 5.1 Analysis of Wisdom Dimensions

Before looking at the different level of analysis’ results, we are going to look at the preliminary analysis conducted upon the MLQra dataset.

It should be remembered that one of the principal aims of this study research, is to investigate whether and how Wise Leadership is affected by the Age of the Leader, Charisma, Strategy and Morality. Thus the following set of hypotheses will be tested:

- H1 The age of the leader is positively related to the wisdom perceptions of the leader*
- H2 Charismatic leadership is positively related to wisdom perceptions of the leader.*
- H8 Moral leadership is positively related to wisdom perceptions of the leader*
- H14 Strategic leadership is positively related to wisdom perceptions of the leader*



### 5.1.1 Correlation analysis

In order to understand the correlation between the Wise Leadership and the factors that should concur to explain it, the matrix of Pearson correlation coefficients has been computed. Looking at Table 5, Wisdom has a strong significant and positive correlation with Charisma (cor= 0.715, p=.000), Strategy (cor= 0.663, p=.000), and especially Morality (cor= 0.723, p=.000). The correlation with the age of the leader is also significant and positive but is only cor=0.407. This is a good point in favor to our hypotheses.

Moreover, it can be noted that also the three dimensions are highly and positively correlated between each other. Instead the Age of the leader has only one more significant correlation (at the 0.05 level) with Morality.

**Table 5 Mean, SD, Correlations between Wisdom Dimensions (N=151)**

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5
<i>AgeLeader</i>	44.11	9.23	1				
<i>C_MLQra</i>	3.68	0.55	.063	1			
<i>m_MLQra</i>	3.83	0.38	.164*	.631**	1		
<i>S_MLQra</i>	3.89	0.41	.073	.752**	.648**	1	
<i>w_MLQra</i>	3.79	0.47	.407**	.715**	.723**	.663**	1

\*p< .05 \*\*p<.01

### 5.1.2 Different Levels of Analysis

One of the problems in organizational research is represented by the level of analysis which continues to arise confusion and controversy in the organizational literature and for this reason it is suggested to put greater attention upon this topic in order to strengthen organizational theory development and research, improving clarity, testability, comprehensiveness and creativity (Klein, Dansereau, & Hall, 1994).

The level of analysis makes the leadership study very complex because leadership phenomena may operate at one or more levels, such as individuals, groups, departments, organizations and industries .

The researchers are commonly advised to align their data analyses with the level of theory which describes the target (e.g. individual, group, organization) that a theorist

or researcher aims to depict and explain. If the construct at the theory level is not specified and tested, research conclusions may differ as a function of the level of analysis that is employed (Antonakis, Schriesheim, Donovan, & Rossomme, 2003). Normally, the theory level, is "the level to which generalizations are made" (Rousseau, 1985)

However, even though this advice is accepted and the appropriate actions are undertaken, this would not prevent them from inadvertently drawing unfounded conclusions from their data (Klein et al., 1994). In fact when the levels of theory, measurement and statistical analysis are not the same ones, the results gained may represent the level of measurement or the level of statistical analysis, rather than the theory one.

A fallacy of the wrong level, could bring to an erroneous conclusion and this can be committed if the researcher attributes the results directly to the theory level, without the proper consideration (James, Joyce, & Slocum, 1988) (Kenny, & La Voie, 1985). For example, in discussing data aggregation problems, Kimberly (1980) asked, "How valid is ...to define leadership style in terms of averaged subordinate ratings?"

A unit of analysis problem, occur when a dataset contains reports from or about individuals who are located in groups such as this particular case study: the subordinates are grouped by leader (Markham, Dansereau, & Alutto, 1977). Groups averages can be computed, correlated and compared in order to analyze the phenomena to a higher level (at leader level in such case). However, they don't guarantee the efficiency of the parameters' estimation since lots of information (in particular the within variance, which represents the variance among individuals belonging to the same group) have been lost with this simple data transformation. The inferences which are drawn from these aggregate average scores, can be problematic (Robinson, 1950). Simply correlations based upon aggregate scores cannot be used to draw inferences about the behavior of the individuals represented in the aggregation.

It is hypothetically possible that followers' reports in the same group could vary so widely that the use of the group average to represent the leadership would create "a fictitious average or middle range score which the leader never displays" (Schriesheim, House & Kerr, 1976).

Nevertheless, without empirical testing it is difficult to determine which level of analysis could be better to perform. Since the literature used to support our hypotheses in this case study, does not specify a clear level of analysis, we decide to perform a more cautious investigation because according to Schriesheim, Castro, Zhou, Yammarino (2001) "if theory analysis and measurement level are not correctly specified and aligned, we wind up erecting theoretical skyscrapers on foundations of empirical jello".

In the leadership research, only a small group of researchers have used methods developed to test levels-of-analysis effects (Antonakis et al., 2003). Therefore, as Klein & Kozlowski (2000) hoped, concerning the approach toward leadership studies, we tried to use established frameworks but exploring new alternatives.

In the following sections, we are going to illustrate the results gained through different methods of analysis. In particular, we decide to start with the common OLS regression on the whole sample of 151 subordinates. Also the aggregate level of analysis provides interesting quite similar results, even though the estimation is based upon less observations (N=40 leaders).

If the leader's behavior, as perceived by the subordinates, is not homogeneously viewed by the subordinates, then the leader's behavior operates at the individual level of analysis. Therefore, any inferences that are made should be based on the individual using the individual-level data, because individual responses are in this case considered independent (Antonakis et al., 2003).

In the Appendix A3, the values of the *within* and *between variance* are provided which refer to the variance *within* the groups lead by the leaders and *between* those groups. These values computed per each construct, could represent a signal for the homogeneity or non-homogeneity of the ratings among all the followers from two different perspectives. Looking at the results in the appendix A3, it should be noted that the within variance is indeed larger than the between variance, and this could support the hypothesis of non-homogeneity of the perceptions that followers have in regard to their leader's characteristics. Therefore an analysis at the individual level could be appropriate.

For example, considering the variable charisma which has a Std. dev between 0.3459648 and a Std. dev within 0.4312172, this implies that the variability within is

$(0.4312172)^2 / (0.3459648)^2 = 1.55356104$  times bigger than the variability between.

This means that the subordinates of a leader rate charisma (and this happens also for the other variables) in a slightly different way. The variability among the ratings of the followers in regard to their perceptions about their leader's behaviors, is higher than the variability among followers belonging to different groups.

It should be remembered that the small amount of observations could also affect these results and this is also another reason why we rather preferred not to center the analysis upon an unique approach.

Before tackling these arguments concerning different approaches, it's useful to point out and explain why and how we can take advantage of the panel-data literature to analyze our data (for more details see Woolridge, 2010). Panel data contain observations on *multiple phenomena* observed over *multiple time periods* for the same firms or individuals.

Panel data and the ones upon leadership in this research, are comparable since the same multiple phenomena (characteristics of the leader) have been observed over multiple subordinates in regard to the same individual (the leader).

Thus, even though the dataset doesn't provide information *over-time*, we have the same phenomena rated *over-subordinates* and this allows us to take advantage, with careful attention, of the panel theory results to draw meaningful conclusions upon these data.

Even though one could choose to use all the 151 subordinates as statistical units (thus working on a individual level), since this kind of analysis take advantage of the maximum information possible from the data, one could find interesting to use the leader as statistics unit, being aware that these methods imply the aggregation of the data and consequently the loss of information. However, the analysis may draw different and interesting information in comparison to the ones at the individual level.

It is true that the leader with his or her characteristics, represents the focus of this research. Nevertheless the ratings come from the single individual subordinate therefore, given also the previous considerations, working at the subordinate level could be meaningful.

### 5.1.3 Subordinate-level-analysis: simple linear regression OLS estimator

We decide to start with the simpler approach. Thus, we conducted a simple linear regression on the 151 subordinates, in order to exploit as much as possible the information coming from the followers' ratings.

$$y_{it} = \beta_0 + AgeLeader_i\beta_1 + Charisma_{it}\beta_2 + Strategy_{it}\beta_3 + Morality_{it}\beta_4 + \varepsilon_{it}$$

where:  $i = 1, \dots, 40$  and represents the leaders and  $t=1, \dots, T_i$  which represent the subordinates per leader.

Looking at the linear regression formula, the  $y_{it}$  and  $x_{jit}$  (where  $j=2, \dots, 4$ ) represent levels of Wisdom, Charisma, Strategy and Morality respectively of the leader  $i$ , perceived by the follower  $t$ . The  $\varepsilon_{it}$  represent the composite error:

$$\varepsilon_{it} = \eta_i + u_{it}$$

Where  $\eta_i$  are the characteristics of the leader  $i$  that have not been measured and thus not taken into account which are constant with respect to the subordinates, whereas  $u_{it}$  represent the random part of the error that is subordinate-specific and typically due to the case.

The main assumptions of the OLS estimator are:

*A1 Strict exogeneity*

$$E(u_i | x_i, \eta) = 0 \rightarrow \begin{cases} E(u_i | x_i) = 0 \\ E(u_i | \eta) = 0 \end{cases}$$

*A2 Omoschedasticity*

$$E(u_i u_i' | x_i \eta_i) = \sigma_u^2 I_T = \Sigma_U$$

*A3 The permanent component  $\eta_i$  must be uncorrelated with the regressors*

$$E(\eta_i | x_i) = 0$$

If all these assumptions are valid, the estimator

$$\hat{\beta}_{OLS} = \left( \sum_{i,t} (x_{it} - \bar{x})'(x_{it} - \bar{x}) \right)^{-1} \left( \sum_{i,t} (x_{it} - \bar{x})'(y_{it} - \bar{y}) \right)$$

will be consistent and unbiased.

The OLS model ignores the correlation in the error, due to the presence of  $\eta_i$ . Generally OLS is not efficient since all the  $\varepsilon_{it}$ , related to the same leader, contain something in common ( $\eta_i$ ), fixed characteristics that belong to the leader.

To give some example, the  $\eta_i$  could represent the gender or the sex appeal of the leader. These leader's characteristics, may correlates with the perception of leader's charisma, that is an exogenous variable: men, for instance, could be perceived as more charismatic than women, since normally they are more associated to strength and power control than women. A nice appealing could increase the level of perceived charisma since his or her presence instill a sense of well-being.

The level and kind of education that a leader possesses which could affect both the perceived level of Strategy and Wisdom. For example, a leader who has a long academic career could be perceived as more organized, decision making person than someone who has been studying only for few years during the academic path.

The results are presented in Table 6. The total of the OLS regression variance explained by the model  $R^2 = 0.74$ , thus the fit of the model is quite good. The coefficient of the age of the leader, Morality and Charisma are positive and strongly significant to explain wisdom. Conditional on the other variables, the perception of leader's Morality seems to have the greatest impact among Wisdom Dimensions on the perception of leader's Wisdom.

Whereas the hypothesis 1,2 and 8 have been accepted without any doubt, the hypothesis concerning whether the Strategy is positively related to Wisdom, could not be accepted at the 5% significant level. The coefficient  $\beta_3$  is positive ( $\beta_3 = 0.15$ ) but not significant (p-value= 0.055) and clearly lower than other Wisdom Dimensions.

**Table 6 OLS regression upon 151 subordinate. Individual level of analysis**

<i>W_MLQra</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>t</i>
<i>cons</i>	-0.29	0.2263	-1.28
<i>AgeLeader</i>	0.02**	0.0022	7.35
<i>C_MLQra</i>	0.32**	0.0572	5.59
<i>S_MLQra</i>	0.15	0.0774	1.94
<i>M_MLQra</i>	0.42**	0.0713	5.93

\*p < .05 \*\* p < .01

Lastly, in order to satisfy some assumptions in the more complex models in the following, we show that the variable “Age of the leader” has a slight impact on the main evidence about the parameters of interest related to wisdom dimensions. In Table 7 it can be noted that by removing Age from the regression, Morality and Charisma are still significantly and positively related to Wisdom, while Strategy is even less significant, and the fit of the model is still quite good ( $R^2=0.64$ ).

**Table 7 OLS regression without Age of the Leader, upon 151 subordinate. Individual level of analysis**

<i>W_MLQra</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>t</i>
<i>cons</i>	0.19	0.07	4.59
<i>C_MLQra</i>	0.31**	0.08	6.14
<i>S_MLQra</i>	0.14	0.09	1.55
<i>M_MLQra</i>	0.50**	0.25	0.74

\*p < .05 \*\* p < .01

### 5.1.4 Leader- level-analysis: the Between Estimator

In this case it is assumed that the leader's behavior is viewed homogeneously or that the group members' values on a given construct, are identical. Then, it is justifiable to aggregate the individual data to the group level and make inferences at the group level of analysis, because individual responses are dependent on group membership (Antonakis et al., 2003).

Homogeneity among the members of a group is commonly considered a prerequisite for asserting that the construct in fact applies to that group (Damsereau, Alutto & Yammarino, 1984). Nevertheless, there might be some team that are homogeneous with respect to perceptions toward the leader's behavior and some other not.

In this specific analysis we assume that the single leaders' behavior is perceived equally, thus it could be measured by the average followers' score about the perception of charisma, morality, strategy and wisdom.

In general, given

$$y_{it} = x_{it}\beta + \eta_i + u_{it}$$

The BE estimator exploits only the variability between leaders and it consists in a OLS estimator upon this model:

$$\bar{y}_i = \bar{x}_i\beta + \eta_i + \bar{u}_{it}$$

Where  $\bar{y}_i = T_i^{-1} \sum_{t=1}^T y_{it}$ ,  $\bar{x}_i = T_i^{-1} \sum_{t=1}^T x_{it}$  and  $\bar{u}_{it} = T_i^{-1} \sum_{t=1}^T u_{it}$  and the estimator is:

$$\hat{\beta}_{BE} = \left( \sum_i \bar{x}_i' \bar{x}_i \right)^{-1} \left( \sum_i \bar{x}_i' \bar{y}_i \right)$$

The assumptions under which the estimator is unbiased and consistent, are the same of the previous estimator  $\hat{\beta}_{OLS}$ : A1, A2 and A3. Assumed them valid, we computed the BE estimators for the parameters. It should be remembered that even though these assumptions are valid and the estimator could be computed, this does not represent an efficient estimator since only the *between variance* is taken into account.

The results are presented in Table 8. Although the analysis has been conducted on a different level, the results do not differ so much from the previous ones.



The fit of the model is still good ( $R^2$  overall = 0.73) and the construct of wisdom seems to be explained by the same variables: Age of the leader, Charisma and Morality. Strategy is even less significant in comparison to OLS estimator. However, the coefficient is still positive and higher than before, but standard errors are about doubled. Therefore, whereas the hypotheses 1,2 and 8 have been accepted without any doubt, the hypothesis concerning whether the Strategy is positively related to Wisdom could not be accepted but needs some future analysis.

The difference between  $\hat{\beta}_{OLS}$  and  $\hat{\beta}_{BE}$ , concern the interpretation of the parameters. The  $\hat{\beta}_{BE}$  could be interpreted as an average perception of the leader characteristics: for example,  $\hat{\beta}_{BE, Charisma} = 0.21$  means that ceteris paribus, the more the leader is perceived as charismatic in average by his or her subordinates, the more is considered wise in average by all the subordinates of a given group. Whereas  $\hat{\beta}_{OLS, Charisma} = 0.32$  means that the more the subordinate perceived the leader charismatic the more he or she sees the leader wise.

**Table 8 Between estimator (BE) Leader’s level**

<i>W_MLQra</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>t</i>
<i>cons</i>	-0.26	0.46	-0.57
<i>AgeLeader</i>	0.02**	0.00	6.76
<i>C_MLQra</i>	0.21**	0.09	2.38
<i>S_MLQra</i>	0.23	0.14	1.67
<i>M_MLQra</i>	0.43**	0.13	3.44

\*p < .05 \*\* p < .01

### 5.1.5 Within group estimator: Fixed Effects Model

*In asserting that the level of a theory is the individual within the group, the theorist thus implicitly or explicitly asserts that group members are neither homogeneous nor independent of the group, but heterogeneous.*

*Although group members are assumed to vary with respect to the theory's construct, the group is deemed a meaningful entity.*

(Klein et al., 1994)

Even though we feel confident on having measured all the possible relevant control variables, we can never be certain of it. So when we run the OLS estimation we know that maybe some unobservable factors could exist and could be correlated with the variables included in the regression. Consequently, omitted variable bias would result.

One can never be certain about unobservables because, well, they are unobservable! So fixed effects models are a nice precaution, even if the researchers thinks that they might not have a problem with omitted variable bias. Of course, if the unobservables are not time-invariant, then there is still the omitted variable bias (Belloc, 2011).

The major attraction of fixed effects method is the ability to control for all stable characteristics of the individual in the study, thereby eliminating potentially large sources of bias. Thus, we basically put in doubt assumption A3 of incorrelation between  $\eta_i$  and  $x_{it}$ , assumed valid in the previous two models.

Given the general model ,

$$y_{it} = x_{it}\beta + \eta_i + u_{it}$$

where  $i = 1, \dots, N$ ;  $t = 1, \dots, T_i$ ;  $\varepsilon_{it} = \eta_i + u_{it}$  is the error term, and its following transformation,

$$\bar{y}_i = \bar{x}_i\beta + \eta_i + \bar{u}_{it}$$

where  $\bar{y}_i = T_i^{-1} \sum_{t=1}^{T_i} y_{it}$ ,  $\bar{x}_i = T_i^{-1} \sum_{t=1}^{T_i} x_{it}$  and  $\bar{u}_{it} = T_i^{-1} \sum_{t=1}^{T_i} u_{it}$ .

The fixed effects transformation computes a subtraction between these two models, deleting the fixed effects:

$$y_{it} - \bar{y}_i = (x_{it} - \bar{x}_i)\beta + \eta_i + u_{it} - \eta_i - \bar{u}_{it}$$

$$y_{it} - \bar{y}_i = (x_{it} - \bar{x}_i)\beta + (u_{it} - \bar{u}_{it})$$

This, in a compact form, results in:

$$Qy_i = Qx_i\beta + Qu_{it}$$

After eliminating the fixed effects, it is possible to estimate the regression above, through an OLS regression and the estimator is:

$$\hat{\beta}_{WG} = \left( \sum_i \sum_t (x_{it} - \bar{x}_i)'(x_{it} - \bar{x}_i) \right)^{-1} \left( \sum_i \sum_t (x_{it} - \bar{x}_i)'(y_{it} - \bar{y}_i) \right)$$

The assumptions that are required to make this estimator consistent and correct, are the strict exogeneity (A1) and the homoschedasticity (A2)

Said that, we can now look at the results in Table 9: firstly, it should be noted that not surprisingly, because of the model, the within variance explained by the model ( $R^2$  within = 0.71) is higher than the overall variance explained ( $R^2$  overall = 0.63). In comparison to the previous two models the goodness of fit decreased mainly because Age is excluded as it is a fixed characteristics of the Leader.

An important information could be obtained with the computation of this model: the value of the correlation between  $\eta_i$  and the  $x_{it}$  that in this case is very low (-0.04). However, here we cannot conclude if this correlation is significant or not. Further, we will face this issue with the computation of Random Effects model and the Hausman test. Moreover the test F in the bottom of the table, says whether  $\eta_i$  is equal to zero. In this case the hypothesis has been accepted ( $p$ -value\_testF = 0.25) and this is a good point toward the fact that  $\eta_i$  does not represent a problem for our analysis. However we still have to test whether these unobserved characteristics correlate or not with the regressors.

With regard to the coefficient estimates, these provide quite the same results of the OLS and BE models.

The perception of Charisma and Morality impacts on the perceived level of Wisdom even though we are controlling for the unmeasured characteristics of the leader. The main difference here is the fact that, because of the transformation that is necessary to compute the  $\hat{\beta}_{WG}$ , the variables that are constant *over-subordinate*, have been deleted. This represents one of the limits of the Fixed Effects model. If we are really interested whether and how the Age of the leader affects the perception of the leader's Wisdom level, from this model we cannot have an answer.

Therefore the Hypotheses 2 and 8 could be accepted, whereas the hypothesis concerning the strategy is again rejected.

**Table 9 Regression with Within Group estimator (FE)**

<i>W_MLQra</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>t</i>
<i>cons</i>	0.44	0.24	1.80
<i>C_MLQra</i>	0.44**	0.08	5.77
<i>S_MLQra</i>	0.10	0.10	1.03
<i>M_MLQra</i>	0.35**	0.09	3.80

\*p < .05 \*\* p < .01

F test that all  $\eta=0$  F(39,108)=1.18 Prob>F=0.25

Cor ( $\eta,X$ )= -0.0372

Another limit of this model is represented by the fact that the Within estimator used only the members' group variability (that in a panel dataset is represented by the temporal variability) as a source of variance for each observation (subordinate t). This source of variance could be limited in comparison with the between variability and the  $\hat{\beta}_{WG}$  is consequently very influenced by some measurement errors (attenuation bias).

In other words, the fixed effects methods completely ignore the between-person variation and focus only on the within-person variation (Allison, 2001). However, according to Allison (2001), "discarding the between-person variation can yield standard errors that are considerably higher than those produced by methods that utilize both within and between variation. So, why using Within group estimator? The

fact is that the between-person variation is very likely to be contaminated by unmeasured personal characteristics that are correlated with the regressors. By restricting ourselves to the within-person variation, we eliminate that contamination and are much more likely to get unbiased estimates”.

### 5.1.6 Random Effects Model

The only efficient estimator, given all the assumptions, is  $\hat{\beta}_{GLS}$  since it exploits both the within and the between variance. But strong assumptions have to be made.

Now we are going to consider the GLS estimator and this allows us to compute, afterwards, the Hausman test which is useful to understand whether the assumption A3,

$$E(\eta_i | x_i) = 0$$

is verified or not.

The decision to treat the between person variation as fixed or random effects should depend largely on (Allison, 2001):

- whether it's important to control for unmeasured characteristics of individuals;
- whether it's important to estimate the effects of stable covariates;
- whether one can tolerate the substantial loss of information that comes from discarding the between-individual variation.

In order to take into account both the within and between information on the dataset, we can adopt the Random Effects model. This model, does not control for unmeasured, stable characteristics of the individuals. The term  $\eta_i$  is included in the error term, under the hypothesis that it's orthogonal to the explicatives' vector (A3 assumption). The advantage is that the effects of stable covariates (such as race and gender) can be estimated. And because they use variation both within and between

individuals, random effects methods typically have less sampling variability than fixed effects methods (Allison, 2001).

We already saw in section 5.1.2 , that in general the OLS estimator is not efficient. This happens because given,

$$y_{i1} = x_{i1}\beta + (\eta_i + u_{i1})$$

$$y_{i2} = x_{i2}\beta + (\eta_i + u_{i2})$$

where  $i = 1, \dots, N$ ;  $t = 1, \dots, T_i$ ;  $\varepsilon_{it} = \eta_i + u_{it}$  is the error term; a not null correlation exists between the errors in successive equations because the error term  $\varepsilon_{it}$ , contains a common component ( $\eta_i$ ).

Therefore, an efficient estimator for  $\beta$  could be obtained through a transformation of the starting model. Assuming

*A4 Homoschedasticity of the permanent component*

$$E(\eta_i^2 | x_i) = \sigma_\eta^2$$

it is possible to express the error ( $\varepsilon_{it}$ ) matrix variance as:

$$\Omega_i = \begin{pmatrix} \sigma_u^2 + \sigma_\eta^2 & \cdots & \sigma_\eta^2 \\ \vdots & \ddots & \vdots \\ \sigma_\eta^2 & \cdots & \sigma_u^2 + \sigma_\eta^2 \end{pmatrix}_{T_i \times T_i}$$

The units in the sample are independent each other, and the GLS estimator could be expressed as :

$$\hat{\beta}_{GLS} = \left( \sum_{i,t} x'_{it} \Omega_i^{-1} x_{it} \right)^{-1} \left( \sum_{i,t} x'_{it} \Omega_i^{-1} y_{it} \right)$$

This estimator is unbiased, consistent and efficient, given the assumptions A1, A2, A3 and A4.

If we look at the results in Table 10, the overall fit of the model is the same of the first simple linear regression ( $R^2 = 0.73$ ). Assuming that the characteristics of the leader are uncorrelated with the perception of the leader's attitude, the perception of Wisdom is positively determined by the Age of the leader (0.02,  $p$ -value = .000), the perception of the Charisma level (0.33,  $p$ -value = .000) and the Morality level (0.42  $p$ -value = .000). The effect of the perception of the level of Strategy of the leader (0.15) is not significant ( $p$ -value 0.059). Thus like the other models' results, the hypotheses 1, 2 and 8 have been accepted and the 14th have been rejected. Moreover, from this output we can conclude that the fraction of error variance due to  $\eta_i$  ( $\rho = 0.023$ ) is quite low.

Now, these results and the fact that the test F on the absence of  $\eta_i$  brought us to accept the hypothesis that  $\eta_i = 0$ , are good points in favor to the use of OLS estimates. However, despite these results, we should test if the  $\eta_i$  are correlated with the control variables. A way to do it is by the Hausman test.

**Table 10 GLS regression (RE)**

<i>W_MLQra</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>z</i>
<i>cons</i>	-0.30	0.23	-1.27
<i>AgeLeader</i>	0.02	0.00	7.11
<i>C_MLQra</i>	0.33	0.06	5.65
<i>S_MLQra</i>	0.15	0.08	1.89
<i>M_MLQra</i>	0.42	0.07	5.85

\* $p < .05$  \*\*  $p < .01$

$\rho = 0.023$  Fraction of variance due to  $\eta$

$\text{Cor}(\eta, X) = 0$  (assumed)

### 5.1.7 Hausman Test

To reassume, in presence of a not null correlation between  $\eta_i$  and  $x_{it}$  the RE estimates are not consistent, instead the FE are still consistent. Thus, a statistically significant difference between  $\beta_{RE}$  and  $\beta_{FE}$  could be interpreted as an evidence against

RE. If, on the other hand the hypothesis A3 is valid, RE produces consistent and more efficient estimates.

Then, we should test (under the hypothesis of Strict exogeneity A1) the hypothesis A3:

$$\begin{cases} H_0: E(\eta_i|x_i) = 0 \\ H_1: E(\eta_i|x_i) \neq 0 \end{cases}$$

The Hausman test is:

$$Hausman = (\hat{\beta}_{WG} - \hat{\beta}_{GLS})' (var(\hat{\beta}_{WG}) - var(\hat{\beta}_{GLS}))^{-1} (\hat{\beta}_{WG} - \hat{\beta}_{GLS}) \sim \chi_k^2 \text{ under } H_0$$

where k is the number of covariates.

Thus under  $H_0$  the WG and GLS estimators are both consistent but GLS is more efficient. If the hypothesis A3 is not valid, only WG is consistent for the estimation of  $\beta$ . According to the results in Table 11, the test provides evidence in favor of the null hypothesis. Thus even if a little part of variance not explained by the model, is due to the presence of leader characteristics not measured ( $\rho = 0.023$ ), this does not affect the OLS estimations because  $\eta_i$  is not significantly present and it is not correlated with the regressors.

**Table 11 Hausman test**

	Coefficients			
	FE (b)	RE(B)	(b-B)	sqrt(diagV_b-V_B) s.e.
C_MLQra	0.44	0.33	0.12	0.05052
S_MLQra	0.10	0.15	-0.05	0.05474
M_MLQra	0.35	0.42	-0.07	0.05845

Test H\_0 : difference in coefficients not systematic  
chi2(3) = 5.42      Prob>chi2 = 0.1433



### 5.1.8 Conclusion & OLS regression with Robust standard errors

To conclude, Table 12 reassumes all the results of the regressions with different methods. Despite different point of views, the conclusions that have been reached by each model, are essentially the same.

We can conclude that given the selection of the items through the Multilevel Leadership Questionnaire, Inspirational Scale and basically the Cronbach’s alpha, the perception of the followers with regard to the level of Wisdom possessed by the leader, is positively related to the age of the leader, the perception of the level of Charisma and also with his or her level of Morality perceived by his or her followers, independently by the level of analysis.

The overall results and the specific test in Table 12 show that taking into consideration the leader effects  $\eta_i$  has no impact on parameter estimates of interest. Thus, it is possible to take into consideration the results from the simple OLS regression, which in absence of  $\eta_i$  results unbiased and efficient under the assumptions here stated. This result is in turn important to decide in favor of an analysis at the subordinate level.

**Table 12 Regression<sup>1</sup> results with respect of different level of analysis**

<i>Regressors</i>	<i>Regression's results with respect of different level of analysis</i>							
	<i>OLS</i>		<i>BE</i>		<i>FE</i>		<i>RE</i>	
	$B_{OLS}$	p-value	$B_{BE}$	p-value	$B_{WG}$	p-value	$B_{GLS}$	p-value
<b>Constant</b>	-0.29	0.202	-0.26	0.571	0.44	0.075	-0.29	0.203
<b>Age of the Leader</b>	0.016	0.000	0.016	0.000	dropped		0.016	0.000
<b>Charisma</b>	0.32	0.000	0.21	0.023	0.44	0.000	0.33	0.000
<b>Strategy</b>	0.15	0.055	0.23	0.104	0.098	0.307	0.15	0.059
<b>Morality</b>	0.42	0.000	0.43	0.002	0.35	0.000	0.42	0.000
	$R^2 = 0.74$		$R^2=0.73$		$R^2=0.63$		$R^2= 0.74$	

Finally, as a last robustness check about the possible presence of heteroskedasticity or correlation among the errors, we computed OLS estimation with robust standard errors. As described previously, OLS regression assumes that the errors are independent. But it could be possible that the scores within each group of subordinates may not be independent due to the same leader, and this could lead to residuals that are not independent within group. Using the cluster option in Stata, we

can indicate that the observations are clustered into groups and that the observations may be correlated within group, but would be independent between groups.

Looking at the results in Table 13, it can be noted that even though the standard errors are slightly different in this analysis with respect to the standard OLS, the three variables that were significant before, are also significant in this analysis and the Strategy is confirmed to be not significant to explain the perception of wisdom in the leader. These results enhance the OLS ones.

**Table 13 OLS regression with Robust error estimation upon 151 subordinate. Individual level of analysis**

*OLS regression with Robust error estimation - 151 subordinate - Individual level of analysis*

<i>W_MLQra</i>	<i>Coeff</i>	<i>Robust Std.Err.</i>	<i>t</i>
<i>cons</i>	-0.29	0.2669	-1.09
<i>AgeLeader</i>	0.02**	0.0024	6.51
<i>C_MLQra</i>	0.32**	0.0597	5.35
<i>S_MLQra</i>	0.15	0.0940	1.59
<i>M_MLQra</i>	0.42**	0.0646	6.54

Adj R2= 0.73

\*p < .05 \*\* p < .01

## 5.2 Analysis Leadership Outcomes

The second part of the analysis concerns the impact of the Wise Leadership, and in particular its dimensions, on the Leadership Outcomes. We tested the hypotheses stated in Chapter 3 relating Charisma, Strategy and Morality to the specific Leadership Outcomes that have been measured in this research: Leadership Satisfaction, Leadership Effectiveness, Group Performance, Organization Citizen Behavior, Job Satisfaction, Motivation and Counterproductive Behavior. However due to a low reliability of the items, Motivation and Counterproductive Behavior could not have been taken into account in the analysis.

As we showed in section 5.1.3, and confirmed by additional results not shown here, adding or not the Age of the Leader does not change the main evidence about the results of interest. Consequently we did not take it into account Age in the

specification of the final model, which aims at illustrating jointly the relationships among Wisdom and Charisma, Strategy and Morality, but more importantly the relations between Wisdom Dimensions and Leadership Outcomes.

In order to test the hypotheses concerning Leadership outcomes (reported below), we used a Structural Equation Model which combines them with the Wisdom Dimensions in a unique model.

*H3 Charismatic leadership is positively related to satisfaction with the leader*

*H4 Charisma is positively related to leader effectiveness*

*H5 Charisma is positively related to group performance*

*H7 Charisma is positively related to job satisfaction*

*H9 Leader Morality is positively related to group performance*

*H10 Leader Morality is positively related to job satisfaction*

*H11 Leader Morality is positively related to organization citizen behavior*

*H13 Leader morality is positively related to follower leader satisfaction*

*H15 Strategy is positively related to leader effectiveness*

*H16 Strategy is positively related to group performance*

### 5.2.1 Correlation analysis

As a preliminary analysis we can look at the Pearson correlation matrix in Table 14. It can be noted that basically all the dimensions chosen for this research, are highly and significantly correlated between one another. We already illustrated the relation among wisdom dimensions. Now we are going to focus the attention on the link between these dimensions and the Leadership Outcomes. The means and standard deviations are quite at the same level with respect to the different variables. In particular, it can be said that on average the followers are satisfied with the leader, they consider him or her quite effective, they are satisfied by their work, the group performance and the organization citizen behavior are quite at a high level (the mean is higher than 3.6 with a standard deviation not higher than 0.68). In the set of hypothesis that we stated, not all the dimensions concur on the explanation of all the single Leadership Outcomes. Whereas, looking at the correlation matrix it should be noted that the latter, apart from Organizational Citizen Behavior, have a positive and

significant correlation with Charisma, Strategy, Morality and also with Wisdom. Thus in the following we will test all possible relationship between Dimensions and Outcomes.

**Table 14 Means, Standard deviations, Correlations Among Wisdom Dimensions and Leadership Outcomes**

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
<i>C_MLQra</i>	3.68	0.55	1								
<i>M_MLQra</i>	3.83	0.38	,631**	1							
<i>S_MLQra</i>	3.89	0.41	,752**	,648**	1						
<i>W_MLQra</i>	3.79	0.47	,715**	,723**	,663**	1					
<i>LE_MLQra</i>	3.77	0.59	,810**	,558**	,740**	,568**	1				
<i>JS_MLQra</i>	3.92	0.50	,434**	,427**	,369**	,337**	,354**	1			
<i>LS_MLQra</i>	3.75	0.67	,809**	,622**	,703**	,627**	,766**	,427**	1		
<i>GP_MLQra</i>	3.66	0.57	,335**	.141	,367**	,214**	,342**	,444**	,250**	1	
<i>OCB_MLQra</i>	3.59	0.68	.105	.029	.010	.111	.006	.102	.078	,244**	1

\* $p < .05$  \*\* $p < .01$

## 5.2.2 Structural equation modeling with observed variables

### (The role of wisdom with respect to the Leadership Outcomes)

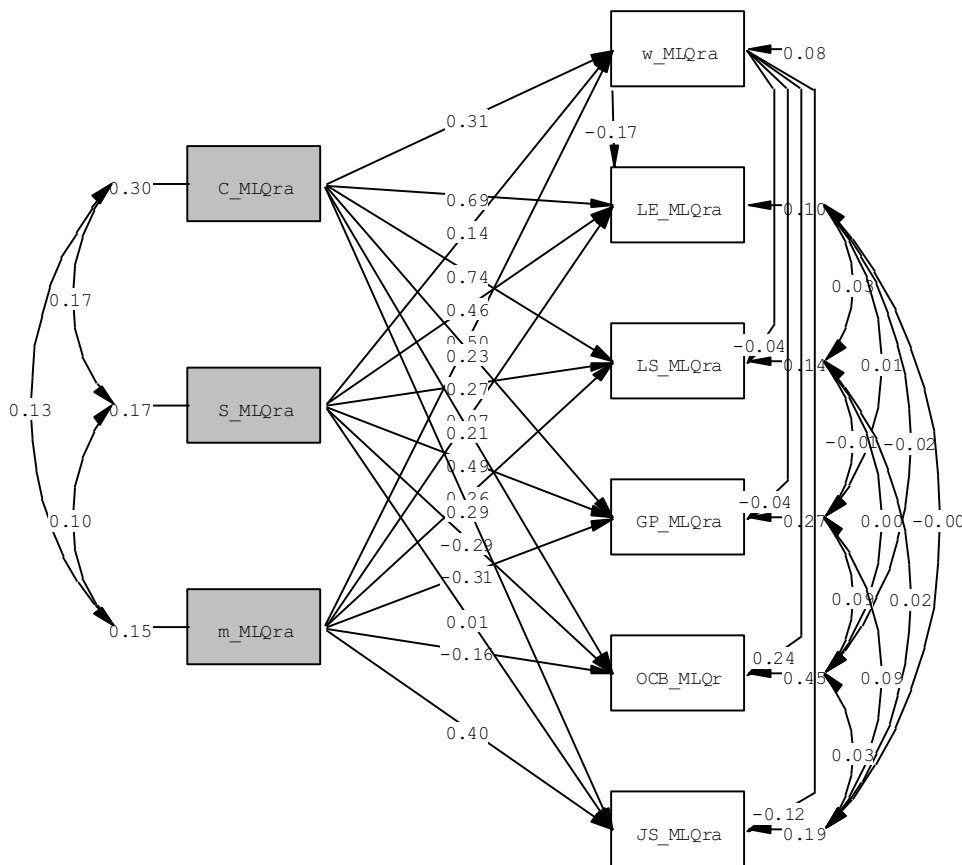
In order to specify the structure underlying these constructs we decided to use a Structural Equation Model with observed variables (for more details see Corbetta (2002), K A Bollen (1989) Kline (2010)). Ding, Velicer, Harlow (1995) note that 100-150 participants are sufficient to conduct SEM. Based on the number of respondent in this survey, this yielded a sufficiently large sample for the use of structural equation modeling only at a subordinate level.

Structural equation models go beyond ordinary regression models, to incorporate multiple independent and dependent variables as well as hypothetical latent constructs that clusters of observed variables, might represent. SEM also provide a way to test the specified set of *causal* relationships among observed and latent variables as a whole. As a result, these methods have become ubiquitous in all the social and behavioral sciences (MacCallum&Austin, 2000)

One of the other advantages in considering a Structural Model, rather than simple separate regressions is that the former allows for complex models as *path analysis* or *simultaneous equations* and tests for the overall model fit (Savalei & Angeles, 2000). Path analysis clearly has advantages over performing a series of multiple regressions, but it still possesses some disadvantages: the biggest one is represented by the fact that the reliability of the observed variables is not taken into account, since these variables are treated as perfect substitutes for the constructs they represent. However, in order to overcome this limit, we already controlled for the reliability of the items per constructs and the results are discussed in Chapter 4.2, while in Chapter 6 we will estimate a model with latent variables and multiple indicators.

Figure 1 illustrates the *path diagram* of our final SEM model, which links the Wisdom Dimensions to Leadership outcomes, including in the analysis the first model estimated for Wisdom Dimensions.

**Figure 1 Path diagram SEM MLQra dataset**



All the factors appear in boxes rather than circles because they represent observed variables rather than latent, as we will show in Chapter 6. Every single unidirectional arrow represents a causal relation, whereas the curved bidirectional ones represent a simple interaction (without causal direction). As Wright (1960) called the regression's coefficients, the *path coefficients* are allocated upon the arrows and are summarized in Table 15.

It can be noted from the arrows that we decided to link Charisma, Strategy and Morality to all the Leadership Outcomes, since the preliminary analysis suggested that there was a strong and significant correlation among them thus we wanted to investigate whether there were relations between variables that have not been stated in the set of hypotheses. Moreover, this model aims to integrate the previous one of Wisdom Dimensions in the final one. Thus together with the already specified direct paths between Dimensions and Wisdom, there are direct relations between Strategy, Charisma, Morality, Wisdom and the Leadership Outcomes. The concept of Wisdom has therefore a sort of mediator role, so that there are indirect relationships between Charisma, Strategy, Morality and the LO.

The formulation of this model could be represented by the following formula:

$$Y_{6X1} = B_{6X6}Y_{6X1} + \Gamma_{6X3}X_{3X1} + \zeta_{6X1}$$

where the Y represents the vector of endogenous observed variables:

$$Y_{6X1} = \begin{bmatrix} W\_MLQra \\ LE\_MLQra \\ LS\_MLQra \\ GP\_MLQra \\ OCB\_MLQra \\ JS\_MLQra \end{bmatrix}$$

and X the vector of exogenous observed variables:

$$X_{3X1} = \begin{bmatrix} C\_MLQra \\ S\_MLQra \\ M\_MLQra \end{bmatrix}$$

Both of them were previously computed through the average of the items belonging to each constructs. In comparison to the models with latent variables that will be discussed in Chapter 6, these are without measurement problems, since they contain

only observed variables joined together only through causal links and for this reason they are called “*causal model for observed variables*”.

The matrixes B and  $\Gamma$  represent respectively the relations among endogenous variables and the ones from exogenous variables to endogenous ones. In our case the matrix  $\Gamma$  is full and has the following structure, thus potentially every exogenous variable has a direct effect on endogenous ones:

$$\Gamma = \begin{pmatrix} \gamma_{11} & \gamma_{12} & \gamma_{13} \\ \gamma_{21} & \gamma_{22} & \gamma_{23} \\ \gamma_{31} & \gamma_{32} & \gamma_{33} \\ \gamma_{41} & \gamma_{42} & \gamma_{43} \\ \gamma_{51} & \gamma_{52} & \gamma_{53} \\ \gamma_{61} & \gamma_{62} & \gamma_{63} \end{pmatrix}$$

Whereas B has the following structure, with direct links only from wisdom to Leadership Outcomes:

$$B = \begin{pmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ \beta_{21} & 0 & 0 & 0 & 0 & 0 \\ \beta_{31} & 0 & 0 & 0 & 0 & 0 \\ \beta_{41} & 0 & 0 & 0 & 0 & 0 \\ \beta_{51} & 0 & 0 & 0 & 0 & 0 \\ \beta_{61} & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

Finally, the covariance structure of the structural error terms strictly depends on the block recursive nature of the proposed model. In order to identify the free parameters in B, the error related to Wisdom has to be uncorrelated to other errors, while all the errors among the 5 leadership outcomes are free to correlate one another. This way the overall structural model is exactly identified, thus no tests of overall fit are available, differently from what we will see in Chapter 6 with latent variables.

$$Var(\zeta) = \begin{pmatrix} \psi_{11} & 0 & 0 & 0 & 0 & 0 \\ 0 & \psi_{22} & \psi_{23} & \psi_{24} & \psi_{25} & \psi_{26} \\ 0 & \psi_{32} & \ddots & \psi_{34} & \psi_{35} & 0\psi_{36} \\ 0 & \psi_{42} & \psi_{43} & \ddots & \psi_{45} & 0\psi_{46} \\ 0 & \psi_{52} & \psi_{53} & \psi_{54} & \ddots & 0\psi_{56} \\ 0 & \psi_{62} & \psi_{63} & \psi_{64} & \psi_{65} & \psi_{66} \end{pmatrix}$$

Now we are going to look at the results in Table 15. First, it can be noted that the variance explained by the model is relevant only for Wisdom, Leadership Effectiveness and Leadership Satisfaction ( $R^2 = .640, .702, .686$  respectively), while for Group Performance, Organization Citizen Behavior and Job Satisfaction the fit of the model is not that good ( $R^2 = .169, .0032, .232$  respectively).

**Table 15 Regression's coefficients and standard errors for SEM with MLQra dataset. Direct and Indirect effects**

	<i>C_MLQra</i>	<i>S_MLQra</i>	<i>M_MLQra</i>	<i>W_MLQra</i>	R2
<i>W_MLQra</i>	0.306** (0.067) 4.592	0.140 (0.09) 1.554	0.504** (0.082) 6.138		0,640
<i>LE_MLQra</i>	0.686** (0.082) 8.326	0.463** (0.105) 4.399	0.068 (0.106) 0.635	-0.166 (0.095) -1.743	0,702
<i>LS_MLQra</i>	0.744** (0.095) 7.795	0.272** (0.122) 2.231	0.259** (0.123) 2.1	-0.039 (0.11) -0.357	0,686
<i>GP_MLQra</i>	0.23 (0.133) 1.729	0.493** (0.170) 2.910	-0.307 (0.171) -1.789	-0.037 (0.154) -0.24	0,169
<i>OCB_MLQra</i>	0.215 (0.172) 1.25	-0.285 (0.22) -1.3	-0.158 (0.222) -0.712	0.245 (0.199) 1.229	0,032
<i>JS_MLQra</i>	0.288** (0.112) 2.580	0.014 (0.143) 0.096	0.396** (0.144) 2.744	0-0.124 (0.129) -0.963	0.232

\*p < .05 \*\* p < .01

	<i>C_MLQra</i>	<i>S_MLQra</i>	<i>M_MLQra</i>
<i>LE_MLQra</i>	-0.051 (0.031) -1.630	-0.023 (0.020) -1.160	-0.084 (0.050) -1.677
<i>LS_MLQra</i>	-0.012 (0.034) -0.356	-0.006 (0.016) -0.348	-0.02 (0.056) -0.357
<i>GP_MLQra</i>	-0.011 (0.047) -0.239	-0.005 (0.022) -0.237	-0.019 (0.077) -0.239
<i>OCB_MLQra</i>	0.075 (0.063) 1.187	-0.034 (0.036) 0.964	0.123 (0.102) 1.205
<i>JS_MLQra</i>	-0.038 (0.04) -0.942	-0.017 (0.021) -0.818	-0.063 (0.066) -0.951



The results provided in Table 15, show again that Wisdom is related only to Charisma ( $\gamma_{11} = 0.306, t - test = 4.592$ ) and Morality ( $\gamma_{13} = 0.504, t - test = 6.138$ ).

The investigation sheds light on the role that wisdom has in this context. If we look at the matrix B and in particular vector  $\beta_{j1}$  (which provides evidence whether the Wisdom has an impact on the Leadership Outcomes or not) and consequently the matrix of the estimated indirect effects it can be noted that no one is significant. Consequently it can be stated that Wisdom has no impact on the Leadership Outcomes and the effect of its Dimensions is only direct.

Thus if we would have questioned for example: does the charisma of the leader positively and directly affect the perception of his or her effectiveness (H4) or, is this effect mediated by the follower perception about the leader's level of wisdom? And if this happens, which kind of effect does the wisdom have on Leadership Outcomes? We already discussed examples about why it is reasonable to think that the more a leader is perceived as charismatic, the more the follower is prone to consider him or her effective. However, we didn't wonder if this happens as long as the leader is perceived more or less wise.

We also computed an additional test with restricted models which supports the conclusions made till now. In particular, a combined test for the nullity of  $\beta$  coefficients has been calculated and the result provide evidence that wisdom does not have any effect (Chi2 with 5 df= 5.35, p=0.375).

On the other hand, Wisdom dimensions have some significant *direct causal* effect upon the Outcomes. Looking at the t-test for the significance of the coefficients' estimates, the following hypotheses have been accepted:

*H4 Charisma is positively related to leader effectiveness* ( $\gamma_{21} = 0.686, t - test = 8.326$ )

*H15 Strategy is positively related to leader effectiveness* ( $\gamma_{22} = 0.463, t - test = 4.399$ )

*H16 Strategy is positively related to group performance* ( $\gamma_{42} = 0.493, t - test = 2.910$ )

*H3 Charismatic leadership is positively related to leader satisfaction*

( $\gamma_{31} = 0.744, t - test = 7.795$ )

*H13 Leader morality is positively related to follower leader satisfaction*

( $\gamma_{33} = 0.259, t - test = 2.1$ )

*H10 Leader Morality is positively related to job satisfaction* ( $\gamma_{63} = 0.396, t - test = 2.744$ )

*H7 Charisma is positively related to job satisfaction* ( $\gamma_{61} = 0.288, t - test = 2.580$ )

On the other hand, some hypotheses have been rejected:

*H5 Charisma is positively related to group performance* ( $\gamma_{41} = 0.230, t - test = 1.729$ )

*H9 Leader Morality is positively related to group performance*

( $\gamma_{43} = -0.307, t - test = -1.789$ )

*H11 Leader Morality is positively related to organization citizen behavior*

( $\gamma_{21} = -0.158, t - test = -0.712$ )

Thus, among the other results, it has been demonstrated that only the Strategy contributes to the Group Performance. The fact that Morality has not a significant effect on the Organization citizen behavior, could depend on the fact that this outcome, may not depend on the leadership characteristics (at least the ones that we take into account) but rather, on the characteristics of the follower itself and also on the attitude of the others around him or her.

One more interesting result has been reached with this analysis: whereas in the hypotheses we stated that only Charisma and Morality were positively related to the satisfaction with the Leader, it can be added the fact that also the perceived level of the Leader's Strategy affects how much followers are satisfied about the leadership ( $\gamma_{32} = 0.272, t - test = 2.231$ ). Thus for a leader, in order to make their subordinates satisfied about his or her way of leading, it is not only important to be viewed as a role model, to create a dynamic and energetic work environment, to listen to what the employee have to say, to discuss with the others before making decisions, thus being charismatic and moral. But it is also important, being organized, adjusting scheduling when is necessary, setting clear goals, checking whether the decisions have been understood by the others, and all the typical attitudes that belong to a strategic style of Leadership.

## 6. Robustness analysis with Latent Variables

Differently from other studies, in this specific survey the eleven constructs (Wisdom Dimensions and Leadership Outcomes) have been assessed through different sets of items that were *a priori* associated to the variables. Before any investigation in fact, every single item have been classified since they have been already used and tested in previous experiments. However, construct validation is necessary to help researchers to establish that the items actually measure the constructs they were supposed to measure within the survey.

There are several methods used to measure the Internal Consistency: as explained in Chapter 4, Cronbach's alpha is one of them. Although it represents a widely used instrument to assess the validity of constructs, it has its weaknesses. It has been suggested that it represents the lower bound of the reliability coefficient, because it assumes that all individual items measure the true score of the variable equally well (Bollen, 1989) (Crocker&Algina, 1986). In particular, it is assumed that each item is an equally accurate indicator of the same true score, and that the separate item errors are uncorrelated and have different variances. This is quite restrictive, and tends to be biased in estimating reliability because items in a scale do not all perform equally well in measuring the same true score. Therefore, a realistic measurement model was required to estimate the reliability of the instrument (Yang, Watkins, & Marsick, 2004).

Still, according to Novick & Lewis (1967), the customary index of reliability in Marketing, underestimates the reliability of a multidimensional measure. The reliability of a measure should be assessed after unidimensionality has been demonstrated. Anderson Gerbing (1988) have stressed the need for unidimensionality in structural equation analysis models in order to separate measurement issues (i.e., the relationship between a construct and its observed variables or indicators) from model structural issues (i.e., the relationships or paths among constructs).

Separating measurement issues from model structural issues in structural equation analysis avoids interpretational confounding (Burt, 1973) the interaction of measurement and structure in structural equation models.

For this reason we decided to check for valid constructs, using other methods in order to make the results reached in Chapter 5 even more robust. In particular, Exploratory and Confirmatory Factor Analysis for the measurement phase and the Structural equation modeling with Latent Variables, have been taken into account.

### **6.1 Measurement model: cross Factor Analysis**

Factor analysis is most often associated with securing construct validity (Turocy, 2003).

Construct validity provides evidence that the items in the survey actually measure the constructs they are proposed to represent (Burton & Mazerolle, 2011). Thus the items grouped by the theory, should be unidimensional measures of the construct of reference, in the sense that they have to represent one underlying construct. Whereas looking at the information between these groups of variables, they have to explain different separated concepts. Here the point of attention is represented by the fact that we want to develop a parsimonious survey that will best explain the constructs under investigation.

Exploratory Factor Analysis is an important tool for instrument development, because it allows researchers to develop a survey that contains the minimum number of items needed to understand the constructs. So that the remaining items can best explain the constructs under investigation. Researchers use factor analysis to “examine empirically the interrelationships among the items and to identify clusters of items that share sufficient variation to justify their existence as a factor or construct to be measured by the instrument” (Gable, 1993).

Looking at the meaning of the single items used in the questionnaire, it could be noted that the differences among the ones that belong to a construct rather than another one, are not always clear. It is also true that the variables taken into consideration in this study, may overlap in meaning depending on the perspective on which each factor is seen. Therefore, even though the group of items has been assessed as reliable with respect to the measure that it provides, it may be possible that some of them, overlap in meaning with others belonging to another factor. For

example: item A7 “My leader is open for discussion” which belongs to Strategy, may also measure the level of Morality of the leader, especially because all these constructs have been assessed by the perception that followers have about their leaders concerning these aspects. The fact that the leader is open to discuss with their subordinates could represent on one hand, a strategic approach to face the work, and on the other hand it could be also an index about how much the leader is moral in his leadership, listening to what employees have to say.

According to Arnold, Gansneder, Perrin (2005), researchers should write items in such a way that each item assesses a distinct aspect of the factor it represents. Items worded too closely will not improve the content validity of the instrument even though closely worded items can yield higher inter-item correlations (correlations computed between each pair of such items) and an increased coefficient alpha (reliability). That’s why we prefer to conduct also this kind of robustness analysis.

Regardless any worldwide tested scale, we decided to compute an Exploratory Factor Analysis (EFA) upon all the items, investigating whether the items used in the questionnaire, and also in the previous analysis, have provided a correct measurement of each factor. If for example, the item  $A_i$  belonging to the factor  $X_1$ , load more in reality on the factor  $X_2$ , we decided to delete it since it does not properly explain only that construct. However, before looking at the criteria used to make this new selection of items, we are going to explain the methods implemented to conduct the Factor Analysis.

### **6.1.1 The four perspectives of Exploratory Factor Analysis**

It is true that some items belong to worldwide tested questionnaire (Brown and Trevino *Ethical Leadership Scale* for Morality and *MLQ -Inspirational Scale* for Charisma), however since the full tested scales are not present in this questionnaire and consequently, the reliability of the items used could be compromised, we decided to involve all the 66 items of Wisdom Dimensions (WD) in the factor analysis independently if they are worldwide tested or not. All the item of Leadership Outcomes (LO) have been analyzed the same way.

As in Chapter 5.1, we aim to reach a result which is robust to the different levels of analysis. In this case, the results should be robust to different perspectives rather than level of analysis. In this Exploratory Factor Analysis, we are going to put in doubt the measurement model through which we create the dataset MLQra. Basically, we rather prefer to be more rigid with respect to the items selection: we selected only those items that were conjointly valid with respect to the different perspectives of factor analysis, working at the *subordinate level*, which we concluded to be convenient in our main analysis. Concerning the minimum sample size in Factor Analysis, we referred to the subjects-to-variables ratio ( $\rho$ ) which should not be no lower than 5 (Bryant & Yarnorl, 1995) (Everitt, 1975)(Gorsuch, 1983). In this case  $\rho = 151/9 \cong 17$ .

A large percentage of researchers report factor analysis using relatively small samples: Costello and Osborne (2005), summarizes practices in sample size with EFA in the literature. They collected a set of articles, reporting either principal components or exploratory factor analysis, or both, listing the number of subjects and the number of items analyzed. What they found is that, for example, 26% of these study research report a factor analysis with a Subject-to-item ratio ( $\tau$ ) between 2 and 5. Taking into account the STI ratio for the Wisdom Dimensions  $\tau = 151/66 \cong 2.3$ , whereas for the Leadership Outcomes  $\tau = 151/30 \cong 5$ . Thus we could go forward with the Factor Analysis even if results have to be taken with caution and we use this method just as a robustness check.

Back to the criteria used in this section, differently from the analysis' approach that we had in the previous Chapter, where it has been demonstrated only *ex post*, that the results were basically the same regardless the different methods; here we decided *a priori* to take into account only those items that were conjointly valid, with respect to the different perspectives listed below. It should be remembered that this phase wants to represent only a coarse analysis stage that allows us to select only "the more important items" to specify a final measurement model, with a *confirmatory analysis* to confirm the choices made.

In order to make the selection as strict as possible, we decided to consider four different perspectives of Factor Analysis:

1. Factor analysis with the extraction of **4 factors**

*Extraction methods:* **Maximum Likelihood**

*Rotation methods:* **Promax**

2. The same above with **3+1 factors (Wisdom separately)**

*Extraction methods:* Maximum Likelihood

*Rotation methods:* Promax

3. Factor Analysis with the extraction of **4 factors**

*Extraction methods:* **Principal Component**

*Rotation methods:* **Varimax**

4. Factor Analysis with the extraction of **3+1 factors (Wisdom separately)**

*Extraction methods:* Principal Component

*Rotation methods:* Varimax

Exploratory Factor Analysis is a complex procedure with few absolute guidelines and many options (Costello & Osborne, 2005). Some argue for severely restricted use of PCA in favor of a FA (Bentler & Kano, 1990) (Floyd & Widaman, 1995)(Widman, 1990) whereas others point out either that there is almost no difference between PCA and FA or that PCA is preferable (Schonemann, 1990)(Steiger, 1990)(Velicer & Jackson, 1990). Thus we opted to use both of them.

The choice to extract 4 rather than 3+1 factors (which means a factor analysis upon Charisma, Strategy, Morality and Wisdom together, or the first three separated by the last one) is due to the fact that firstly, we wanted to keep the Wisdom's items all together, without putting in doubt that some of them could be overlapped with the other factors. However, from a more statistical point of view, we rather prefer to investigate also whether these items overlap in meaning with the ones of Charisma, Strategy and Morality.

Rotational methods (orthogonal or oblique) are tools used within EFA to help make factors in the instrument easier to interpret (Netemeyer, Bearden 2003). The overall goal for instrument development is for the instrument to have a simple structure. A simple structure indicates that each item in the survey helps to explain one and only one particular construct.

Varimax rotation is the most common choice. It's an orthogonal method which produces uncorrelated factors. Conventional researchers advice to use it because it allows more easily interpretable results (Costello & Osborne, 2005). However, in social sciences we generally expect some correlation among factors, since behavior is rarely partitioned into nearly packaged units that function independently of one another; therefore using orthogonal rotation results in a loss of valuable information if the factors are correlated, and oblique rotation such as Promax should theoretically render a more accurate, and perhaps more reproducible solution (Costello & Osborne, 2005). According to Gable (1993) researchers should use both rotational methods to determine the most meaningful solution.

Both Wisdom dimensions and Leadership Outcomes items have been selected through some general criteria explained below. In order to have a better understanding about the application of these criteria, we are going give some examples with respect FA with the extraction of 4 factors, Extraction methods: Principal Component Analysis, Rotation methods: Varimax. In the Appendix A4 is provided the output of this kind of Factor Analysis. The criteria are:

1. The original classification of the items has not been modified in terms of category. For example, if in the questionnaire's elaboration phase, the item A8 "My leader projects a strong, dynamic, and forceful presence" has been classified as a Charisma item, its classification has been conserved. Basically, this factor analysis helped us from one hand, to simply keep the most important item per variable and, on the other hand, to delete the ones that were not reliable enough to take into account.
2. They have been taken into account those items that load  $>0.5$  in the right category. It should be said that one of the characteristics of Factor Analysis is that it does not provide the name of the categories (factors) that it extracts. Thus the researchers has to understand it by themselves. In order to understand to which factor extracted might correspond Strategy, Morality and Charisma, we firstly highlight all the loadings higher than a threshold that was considered suitable looking at the loads' values. Suitable in the sense that, since all the items had a average  $\mu=.249$  with a  $SD=.209$ , a threshold of .4 has been considered quite high with respect to all loadings.



Having already an *a priori* classification of the items assigned in the phase of questionnaire creation, we were able to distinguish the 4 factors, looking at how many items (with a load higher than .4) were present in each specific factor. For example, looking at the Table in the Appendix A4 the factor number one extracted, represents the Charisma, since the majority of the items with a load higher than .4 present in this column, belonged to Charisma. The same has been made for the other factors. Therefore the second factor extracted has been identified as Strategy, the third as Morality and the fourth as Wisdom.

Now, back to the criteria an example that can be made is the following: the item A4 belonging to Charisma “My leader is hesitant at work”, has been included in the selection by this method of Factor Analysis since it has a load  $l = .534$  in the first Factor, which has been classified as the Charisma construct. It should be noted that this specific charisma’s item (which is identified in the Table in the Appendix A4 with a light green) does not belong to the worldwide tested questionnaire MLQ or Inspirational Scale. However, as we said before, we computed the selection regardless any worldwide tested questionnaire. Here we had a “demonstration” that some items do not belong to these kind of scales and have been included in the analysis as well. On the contrary, there are also some worldwide tested items that have been deleted, since they load less than the threshold in their specific category. One example is the Charisma item A58 “My leader communicates a clear vision of the future”, which belongs to the Multilevel Leadership Questionnaire and registered a load of  $l = .508$  in the Strategy factor. Thus, even though it belonged to a worldwide questionnaire, it has been deleted since it does not properly measure the same construct than the other Charisma’s items (with a load higher than .5) actually measure.

It has to be taken into account that in general, due to the restrict criteria used to make the final selection, one item that has been considered “valid” by for example three kinds of factor analysis, rather than four, has been deleted since it was not included by all the four perspectives conjointly.

3. Having made these first selections according to this first criteria, we collected the selection’s results from the four perspectives of Factor

Analysis. Another criteria was used to select specifically other four items (A11, A18, A29 and A34) since in these specific cases, these items were “rejected” by only one of the perspective but in reality the loading of these values in their category were lower but close to .5 and so we decided to include them as well.

One example is the Morality Item A18 “My leader always tells the truth” which registered in the Principal Component Analysis (4 components extracted with Varimax rotation) only a load of  $l = .468$  in the Morality Factor and so according to criteria 2, it should not have been taken into account since it has a load lower than .5. However all the other methods of FA provide evidence that this specific item has a big load in its category. Moreover, we check that the loadings that this item has on the other category were not so big. In fact since it has a load of  $l = .276$  in Charisma and only  $l = .098$  and  $l = .241$  in Strategy and Wisdom respectively, it has been made an exception and it has been included in the final selection.

In order to test the Sampling adequacy to the Factor Analysis, Kaiser-Meyer-Olkin (KMO) index has been used. A value of 0.6 or 0.7 is a suggested minimum (Netemeyer, Bearden, 2003). All the Factor Analysis computed, produced a KMO higher than this threshold. Thus we could have moved forward with the factor analysis.

Afterwards, a reliability analysis has been conducted upon the items selected this way, which form the CrossFA dataset (in the Appendix A2 the list of those items, classified per variables is provided). In Table 16 there are reassumed all the Cronbach’s alpha with regard to the starting dataset, the MLQra and the CrossFA ones.

**Table 16 Cronbach's alpha Starting dataset, MLQra, CrossFA**

<b>Cronbach Alpha</b>						
	Starting dataset 66+30items		Dataset MLQra 56+19items		Dataset CrossFA 21+19 items	
	Number of items	$\alpha$	Number of items	$\alpha$	Number of items	$\alpha$
<b>Wisdom Dimensions</b>						
Wisdom (W)	10	0.825	10	0.825	4	0,758
Charisma (C)	19	0.93	12	0.901	6	0,857
Strategy (S)	20	0.884	19	0.888	6	0,754
Morality (M)	17	0.751	15	0.808	5	0,682
<b>Leadership Outcomes</b>						
Leadership Effectiveness (LE)	4	0.749	4	0.749	4	0.749
Leadership Satisfaction (LS)	3	0.817	3	0.817	3	0.817
Job Satisfaction (JS)	5	0.721	5	0.721	5	0.721
Group Performance (GP)	4	0.766	4	0.766	4	0.766
Organization Citizen Behavior(OCB)	4	0.68	3	0.764	3	0.764
Counterproductive Behavior(CB)	4	0.569	not included		not included	
Motivation(MO)	6	0.463	not included		not included	

It can be noted that whereas the Leadership Outcomes' items preserved their structure and no item have been deleted, lots of the Wisdom dimensions' ones have been dropped: Wisdom passed from being measured by 10 items to 4, Charisma from 19 to 6, Strategy from 20 to 6 and Morality from 17 to 5. In the Appendix A2, the details of the single items included or not in the CrossFA dataset.

Looking at Table16, the overall reliability of the CrossFA constructs is lower than the reliability of both the starting dataset and MLQra one. Nevertheless, the CrossFA dataset should guarantee that the items which belong to different variables are not overlapped between each other. It is supposed that choosing this limited set of items, allows us to measure more correctly each construct thus, the correlation between variables might be the real one and should not be affected by some overlapping concepts.

### 6.1.2 Confirmatory Factor Analysis

Afterwards, a Confirmatory Factor Analysis has been conducted. SEM is an applied method to test the consistency of a “structural” theory through data and for this reason it is largely “confirmatory” rather than “exploratory” technique (Faggin & Lux, 2009). Thus we used SEM to have a confirmation that the constructs which belong to both the Wisdom Dimensions and Leadership Outcomes, were measured with the right items. In the Figures 2 and 3 the two path diagrams are provided. We had a confirmation that the items selected through this kind of Cross Factor Analysis were good enough to measure the different variables. In particular, two main components of models are distinguished in SEM: the *structural model* showing potential causal dependencies between endogenous and exogenous variables, and the *measurement model* showing the relations between latent variables and their indicators. In Figures 2 and 3 there are the measurement models for Wisdom Dimensions together with Wisdom and Leadership Outcomes. Their representation in terms of matrices will be presented in section 6.3. See Bollen (1989) for more details about identification and estimation methods

The results suggest that both the models had a close fit to the data. The tests for goodness-of-fit index conformed to the criterion suggested by researchers: because the chi-square test is sensitive to sample size, the ratio of the model chi-square to degrees of freedom was used as another fit index. The following fit indices were also used

- *RMSEA* (Root Mean Square Error of Approximation) which tells us how well the model would fit the populations covariance matrix (Bryrne, 1998). It has been considered one of the most informative fit index due to its sensitivity to the number of estimated parameters in the model (Diamantopoulos, A. and Sinuaw, 2000). The threshold of RMSEA are <.05 optimum fit and <.08 good fit. This model provides a good fit RMSEA = 0.53 for WD and RMSEA =0.63 for LO.
- The *ratio of the model chi-square to degrees of freedom* with the threshold of about 2 (  $\chi^2 /df <2$  good fit). The ratio values in this case are  $\chi^2 /df = 1.43$  for WD and 1.59 for LO.

- CFI (Comparative Fit Index) that is revised from the Normative Fit Index (NFI) which takes into account sample size (Bryrne, 1998). Like the NFI, this statistic assumes that all latent variables are uncorrelated (null/independence model) and compares the sample covariance matrix with this null model. It has been shown that a value greater than .9 is presently recognized as indicative of good fit (Hu, L.T. and Bentler, 1999). This model provide a CFI higher than 0.9 for both the SEM models.

To conclude, the number of items used in this analysis decreased from 66 in the starting dataset, to only 21. However, the reliability is still above the threshold established ( $\alpha > 0.6$ ). Moreover, now we are quite confident that the results are not affected by the fact that some items could not represent a right measurement for its constructs.

**Figure 2 Confirmatory Factor Analysis Wisdom Dimensions CrossFA dataset**

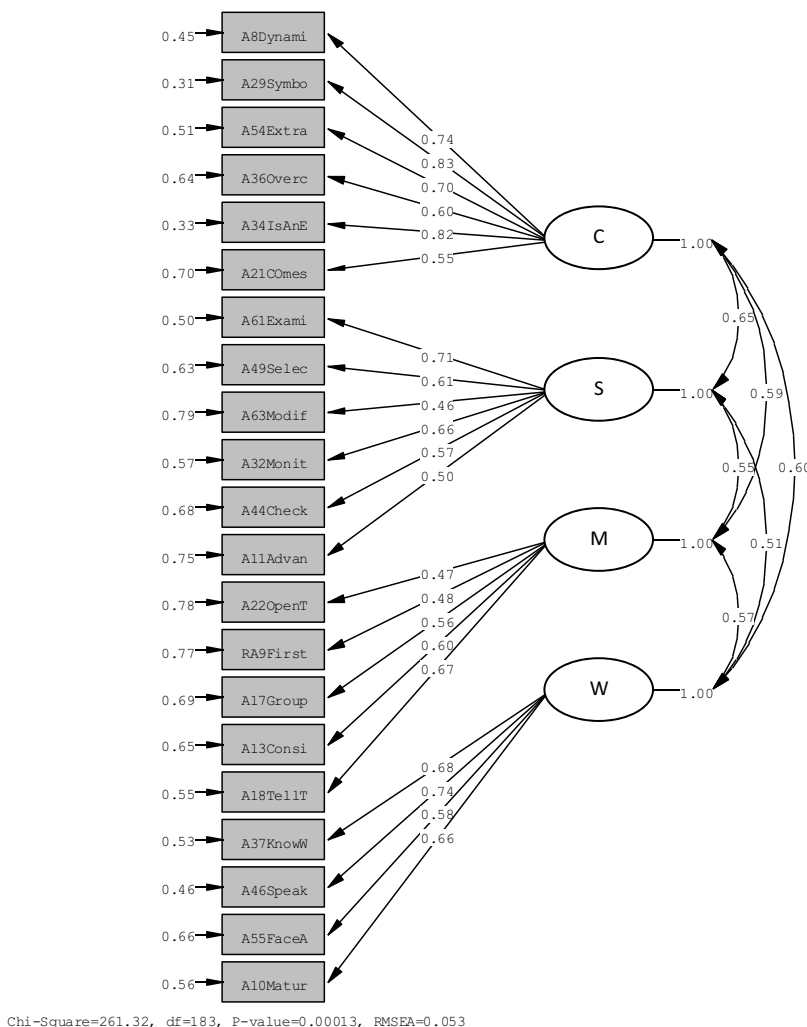
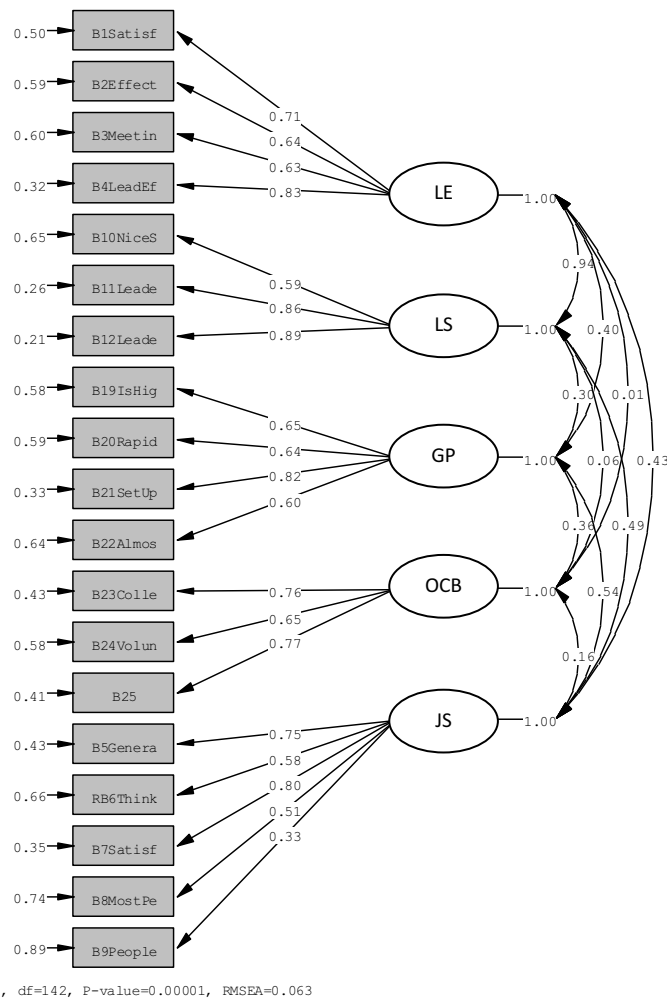


Figure 3 Confirmatory Factor Analysis Leadership Outcomes CrossFA dataset



## 6.2 Correlation analysis

In order to understand the correlation between the Wise Leadership and the factors that should concur to explain it with this new dataset, the matrix of Pearson correlation coefficients has been computed. Looking at the correlation matrix in Table 17, in comparison to the one with the MLQra dataset, here the values are still significant but lower. However, these results contribute to make a support to our hypothesis as well.

**Table 17 Mean Standard Deviation and correlations between Wisdom Dimensions and Leadership Outcomes CrossFA dataset**

	Mean	SD	1	2	3	4	5	6	7	8	9	10
<i>AgeLeader</i>	44,11	9,233	1									
<i>C_crossFA</i>	3,6545	,64553	,056	1								
<i>M_crossFA</i>	3,8623	,50289	,092	,426**	1							
<i>S_crossFA</i>	3,8371	,47072	,064	,528**	,381**	1						
<i>W_crossFA</i>	3,6604	,52920	,496**	,476**	,418**	,403**	1					
<i>LE_crossFA</i>	3,7666	,59137	,012	,752**	,456**	,660**	,432**	1				
<i>JS_crossFA</i>	3,9211	,49879	-,012	,370**	,363**	,288**	,281**	,354**	1			
<i>LS_crossFA</i>	3,7506	,66691	-,051	,735**	,528**	,609**	,429**	,766**	,427**	1		
<i>GP_crossFA</i>	3,6627	,57035	,094	,296**	,055	,346**	,192*	,342**	,444**	,250**	1	
<i>OCB_crossFA</i>	3,5938	,68410	,100	,087	,070	-,028	,060	,006	,102	,078	,244**	1

\*p< .05 \*\*p<.01

### 6.3 Structural model: SEM with Latent Variables

Once assessed and explained the steps needed to build the final dataset CrossFA and computed the preliminary analysis, we computed the *structural model with latent variables*.

Before looking at the results, it is useful to have an overview upon the model from an algebraic point of view. Differently from the approach in Chapter 5, here we used latent constructs.

The formulation of this model could be represented by the following formula:

The measurement models :

$$Y_{(19+4)X1} = \Lambda_{Y(19+4)X6} \eta_{6X1} + \varepsilon_{(19+4)X1} \quad \text{with} \quad \text{Var}(\varepsilon) = \Theta_{\varepsilon}$$

$$X_{17X1} = \Lambda_{X17X3} \xi_{3X1} + \delta_{17X1} \quad \text{and} \quad \text{Var}(\delta) = \Theta_{\delta}$$

for the 6 observed endogenous variables (Wisdom, and Leadership Outcomes) and for the 3 observed exogenous ones (Charisma, Strategy and Morality).

The structural model:

$$\eta_{6X1} = \beta_{6X6}\eta_{6X1} + \Gamma_{6X3}\xi_{3X1} + \zeta_{6X1}$$

$\beta$  and  $\Gamma$  have the same structure described in Chapter 5.2.2.

The kind of investigation upon this new dataset is equal to the ones in Chapter 5. Therefore, we want to investigate whether Charisma, Strategy and Morality are the Wisdom Dimensions and whether they have an impact that they have on Leadership Outcomes.

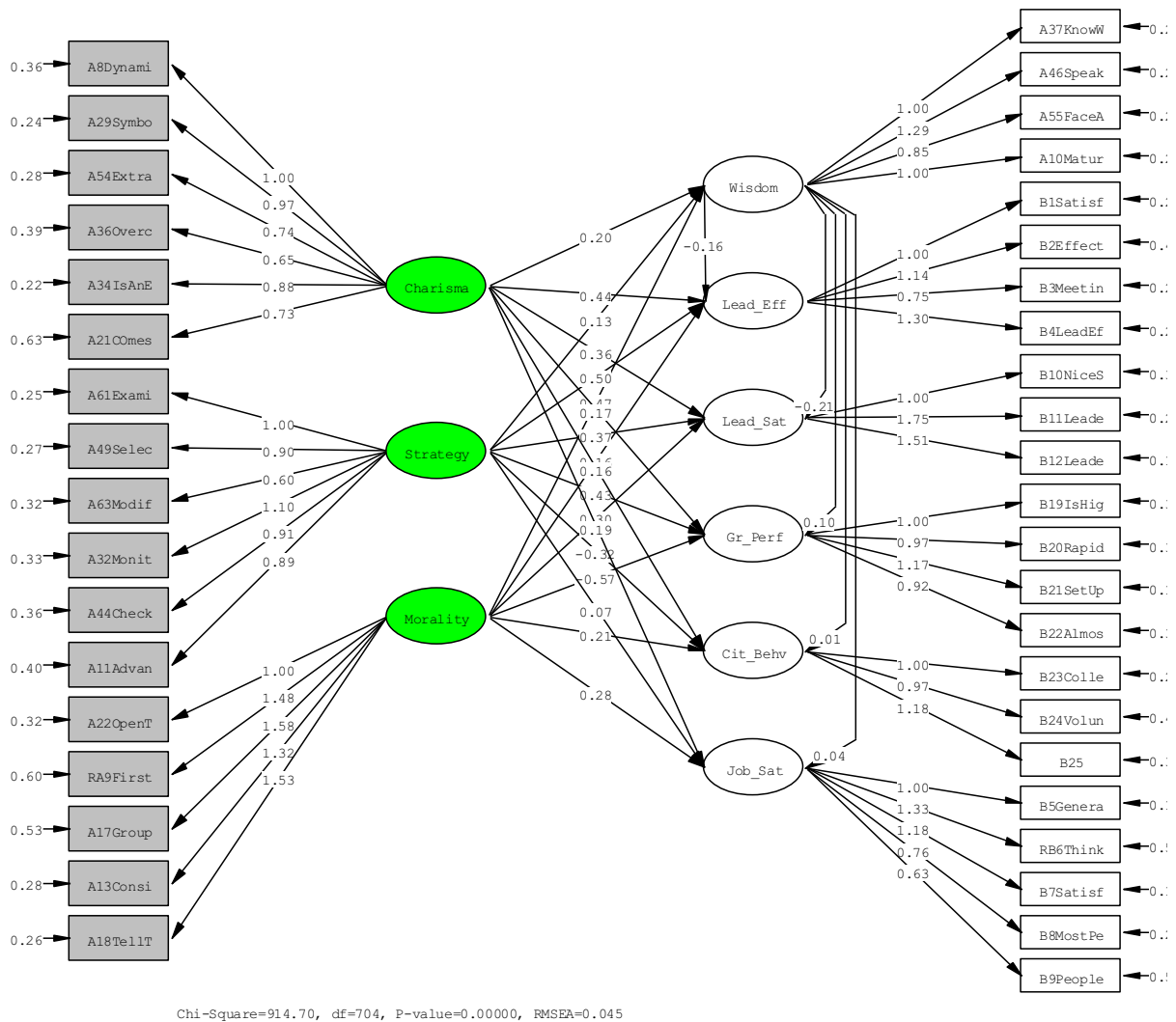
The main differences are that the dataset is more restricted than the other one (MLQra) in terms of number of items and we are working with latent rather than observed variables.

In the Figure 4 it is reported the path diagram. It can be noted that the latent variables are distinguished by a circle rather than a square for the observed ones (in this case the items). As in the model with the MLQra dataset, the regressors have been considered associated between each other, even if these relations are not in the figure.

The model for Wisdom Dimensions and for Leadership Outcomes conjointly provide a very good fit (RMSEA = .045 and ratio chi-squared to degree of freedom = 1.3). Thus the results gained with this model could be considered “reliable”.



Figure 4 SEM with Latent variables



Looking at the coefficients reported in Table 18, in general all the results gained in Chapter 5 are substantially the same apart from some small differences in term of significativity but, no conflicting results have been registered.

Charisma and Morality are still important predictors of Wisdom ( $\gamma_{11} = 0.280, t - test = 2.266$  and  $\gamma_{13} = 0.449, t - test = 2.128$  respectively), Strategy is confirmed not significant ( $t - test = 0.987$ ) and again this model provides evidence that Wisdom does not have an impact on Leadership Outcomes: looking at Table 18, the vector  $\beta_{j1}$ , provides no significant coefficients and the indirect effects estimated are all not significant at 5%. Consequently, as stated in Chapter 5, Wisdom has no impact on the Leadership Outcomes and the effect of its Dimensions is only direct.

Looking at the Leadership Outcomes, these results do not change so much with respect to the analysis with the other measurement model and observed variables,

since Leadership Effectiveness is still positively explained by the level of Charisma and Strategy ( $\gamma_{21} = 0.571, t - test = 5.427$  and  $\gamma_{22} = 0.470, t - test = 4.125$ ). Charisma and Morality are still significant and they positively explain the Satisfaction with the Leader ( $\gamma_{31} = 0.476, t - test = 4.980$  and  $\gamma_{32} = 0.347, t - test = 3.598$ ). However, the satisfaction about the job, is no more explained by both to the perceived level of Morality and Charisma but only by the last one  $\gamma_{61} = 0.314, t - test = 2.147$ .

Moreover, the hypothesis concerning Morality and Group Performance, is still rejected because the relation hypothesized positive is instead negative and significant ( $\gamma_{43} = -0.473, t - test = -2$ ). Trying to find an explanation why this happened, it can be argued that if the leader may be too much condescending (too much moral), could in fact affect negatively the performance of the group that does not feel under pressure and consequently followers feel more relaxed and less productive. Group performance is thus positively explained only by the perceived level of leader's Strategy ( $\gamma_{61} = 0.2467, t - test = 3.598$ ) and negatively by the perceived level of Morality.

**Table 18** Output regression SEM model with latent variable

	<i>C_MLQra</i>	<i>S_MLQra</i>	<i>M_MLQra</i>	R2	<i>W_MLQra</i>
<i>W_MLQra</i>	0.306** (0.067) 4.592	0.140 (0.09) 1.554	0.504** (0.082) 6.138	0.640	
<i>LE_MLQra</i>	0.686** (0.082) 8.326	0.463** (0.105) 4.399	0.068 (0.106) 0.635	0.702	-0.166 (0.095) -1.743
<i>LS_MLQra</i>	0.744** (0.095) 7.795	0.272** (0.122) 2.231	0.259** (0.123) 2.1	0.686	-0.039 (0.11) -0.357
<i>GP_MLQra</i>	0.23 (0.133) 1.729	0.493** (0.170) 2.910	-0.307 (0.171) -1.789	0.169	-0.037 (0.154) -0.24
<i>OCB_MLQra</i>	0.215 (0.172) 1.25	-0.285 (0.22) -1.3	-0.158 (0.222) -0.712	0.032	0.245 (0.199) 1.229
<i>JS_MLQra</i>	0.288** (0.112) 2.580	0.014 (0.143) 0.096	0.396** (0.144) 2.744	0.232	0-0.124 (0.129) -0.963

\*p < .05 \*\* p < .01

Estimation for the indirect effects

	C_MLQra	S_MLQra	M_MLQra
LE_MLQra	-0.051 (0.031) -1.630	-0.023 (0.020) -1.160	-0.084 (0.050) -1.677
LS_MLQra	-0.012 (0.034) -0.356	-0.006 (0.016) -0.348	-0.02 (0.056) -0.357
GP_MLQra	-0.011 (0.047) -0.239	-0.005 (0.022) -0.237	-0.019 (0.077) -0.239
OCB_MLQra	0.075 (0.063) 1.187	-0.034 (0.036) 0.964	0.123 (0.102) 1.205
JS_MLQra	-0.038 (0.04) -0.942	-0.017 (0.021) -0.818	-0.063 (0.066) -0.951

\*p < .05 \*\* p < .01

Even in this analysis, the additional result gained in the Chapter 5, is confirmed. Despite the different method of analysis and the kind of variables used (observed rather than latent), if the followers consider the leader as highly Strategic, then they are also satisfied with his or her leadership. Thus the latent construct that measures Strategy is positively related to the latent construct of Leadership Satisfaction ( $\gamma = 0.347, t - test = 3.598$ )

To conclude, it can be said that concerning the assessment of the Wisdom Dimensions, using the measurement model that selected the items through worldwide tested questionnaire and reliability analysis, rather than the other one which imply an exploratory and confirmatory factor analysis, is not influent.

Whereas concerning the analysis upon Leadership Outcomes, it should be taken into account that a different selection of the items and the fact that the variables are observed or latent could affect, even slightly, some results: in the first case, Job Satisfaction is explained by the Charisma and Morality of the Leader; in the second one it is only the perceived level of Leader's Charisma which affect the satisfaction with the Job.

## **7. Limits and future development**

### **Sample size**

The primary limitation of this study stems from the small sample size.

Small studies can provide results quickly, but it will be difficult to find significant relationships from the data, as statistical tests normally require a larger sample size which would yield reliable or precise estimates, giving a representative distribution of the population and to be also considered representative of groups of people to whom results will be generalized or transferred. The main problem is interpretation of results, in particular confidence intervals and p-values. However, there is nothing wrong with conducting well-designed small studies as long as they are carefully interpreted. Also for this reason we decided to use different perspective of analysis. Even though the leader is the focus of the issue, using only 40 observations to study the wisdom construct and the impact that its dimensions have on the Leadership Outcomes, could be really a dangerous choice (since it would be not robust).

Moreover, due to this small sample size it has not been possible for instance to include the Gender of the Leader which could have affect the perception that the follower would have with respect to the level of Wisdom, Strategy, Morality and Charisma. In this research only four out of 40 leader were women thus also comparative analysis was not feasible.

### **Response bias**

Even if the survey research with questionnaires is by far the most common method used to study the relationship between leadership behavior and various antecedents (e.g. leader traits, attitudes) or outcomes of this behavior (e.g. Group performance, Job Satisfaction,...), it is often difficult to interpret the meaning of the result in these survey studies (Yukl, 1994). One reason is the Response Bias. This could happen when some respondents answer each item much the same way, despite real differences in the leader's behavior, because the respondent likes (or dislike) the leader (Schriesheim, Kinicki, & Schriesheim, 1979). Responses may also be distorted by stereotypes and implicit theories about what behaviors are relevant and

desirable. Respondents may attribute desirable behavior to a leader who is perceived to be effective, even though the behavior was not actually observed (Green & Mitchell, 1979).

Thus, the response bias could represent a big limit with respect to our results. Therefore, we thought about a solution that could overcome this limit: since due to the response bias, the answers that a given follower gave in regard to the Wisdom Dimensions could be related to the ones about the Outcomes, splitting the sample could represent a reasonable solution. Every single group of subordinates (40 were the leaders thus 40 in overall are the groups of followers) should be splitted in two random sub-sample. The responses from one sub-sample should be taken into account to computed the dependent variables to assess the Leadership Outcomes from that specific leader, the other one to compute the independent variables to assess the perception that followers have about the perceived leader's attitude. However, in this specific case, the number of observation used to computed exogenous and endogenous variables, halved. Since some groups have even only two subordinate, this means that the different constructs would be measured through one observation and the results obtained using this data would be really weak.

In fact, due to the small sample size (151 subordinate belonging to leaders' groups composed by a minimum of 2 to a maximum of 9 persons), we retain that this approach could not be feasible.

Results not reported here show that the main evidence is the same obtained at a subordinate level, with Wisdom Dimensions significantly linked to Wisdom but the latter having no effect on Leadership Outcomes. The same is true by using all data at an aggregate leader level, but also in this case a sample size of 40 is too small to obtain meaningful estimates for the single parameters of interest.

### **Method used to collect the data**

The way in which data have been collected in this research may have had an impact upon results. As stated in Chapter 4.1, in this research, packages with questionnaires were distributed to contact persons, such as human resources management managers, who were centrally located in the organization.

The contact person distributed the questionnaires to the leaders which, according to the instruction provided, should have distributed the questionnaires randomly to their

subordinates. However, this procedure could not be verified. This represent one of the limit of this study research since, for example, the leader could have given the questionnaire only to his or her favorite subordinates in order to gain positive feedback.

Moreover, when the filled questionnaire have been collected, the modality through which they have been brought back has is unknown: it is not known if the questionnaire have been passed through the leader itself before going back to the contact person. If this would have happened, the leader could have selected only those questionnaire where the followers ranked his or her behavior positively.

In general, the modality through which data have been collected by the researchers, may inhibited the ability to conduct a thorough analysis of the results. Thus, in future research we suggest as a solution to send through email the questionnaire to each subordinate and these would be for sure selected randomly by the researchers themselves.

### **Subjectivity perception**

It should be taken into account that the measurement of the constructs, both Wisdom Dimensions and Leadership Outcomes, are based on perceptual data. This means that the level of Wisdom, Charisma, Strategy and Morality are filtered through the perception that the followers have of these concepts and through the sensitivity that they have to capture these aspects.

### **Inadequate explanatory processes**

According to Yukl (1994) the theories usually involve one or more predictor variables (in such case leader's attitude, traits) and more criterion variables (in such case the Leadership Outcomes). However, the weakest link in most leadership theories is the absence of clear mediating variables that are necessary to explain leadership influence on individuals or group processes. In our study we only investigated whether Wisdom represents the mediator effect. But, it could have been useful to include situational moderator variables for example. A moderator variable refers to the one which "affects the direction and/or strength of the relation between an

independent or criterion variable” (Baron, & Kenny, 1986). Including or not the moderators, alters the strength or the direction of a relationship between an independent and dependent variable (Antonakis et al., 2003).

For example, the importance of favorable exchanges with outside parties and efficient internal processes is found in most theories of organizational effectiveness and strategic management (Yukl, 1994).

Moreover, also some important variables could have been omitted in order to explain the constructs of Wisdom and the Leadership Outcomes, and these may include for example variables as the gender of the leader and the gender of the followers. As stated before, using these variables in the study for instance, may be meaningful: the gender of the leader could affect the perception that employees have on the Leader. Leader behaviors may vary systematically as a function of leader gender or follower gender because of gender-role expectations and other factors. Webster (2003) for instance, showed that gender is positively correlated with wisdom (i.e. women score higher). Due to the sample size, the proportion of male and female in the sample (only 4 out of 40 leader were women) and missing values in the gender of the subordinate, we decide not to take into account these important factors. We suggest for future research to collect a more balanced sample which allows to conduct also this kind of investigation.

### **Context**

The context in which leadership is enacted has not received much attentions. Further calls have been made to integrate context into the study of leadership (Lowe & Gardner, 2000). Situations could be conceived as range restrictors of the types of independent variables that emerge. The context should be considered in order to “understand how phenomena like leadership emerge and not only the extent to which or how the context may affect the strength of relations between independent and dependent variables” (Shamir & Howell, 1999).

The emergence and enactment of a behavior may vary by context. Although the survey has been conducted in four different kinds of organizations in order to ameliorate potential context effects that may occur from using respondents from a single company and a single site, a multi-group or stratified analysis by component

however, would not be feasible due again to the small sample size. Thus the analysis, in a certain sense, has not been developed through the lens of the context. It would be interesting for future research, to examine whether one theoretical perspective may be more important than the other, under different conditions; whether the different wisdom dimensions could impact on the perception that followers have about the leader's level of wisdom with respect to different organization environment.

Another important aspect that should be taken into account with respect to the context is the fact that the organizations that participated to the survey are all Dutch. Some leader behaviors and their enactment may be universal or may also vary systemically as a function of national culture (Brodbeck, Frese, Akerblom, Audia, Bakacsi, Bendova, 2000). However, it may be possible that the results could be to a certain degree transferable to other cultures as well. Nevertheless, we suggest for future research to extend the analysis to other Countries, in order to investigate the impact that the geographic position of the business has on the Leadership style.



## Conclusions

This study is a response to calls to investigate a conceptual and empirical framework which aims to reach two main objectives: the first one is to identify and demonstrate which are the dimensions that constitute the construct of Wisdom in Leadership, the second one is to link these dimensions to the Leadership Outcomes considered in this research, trying to understand which could be the role of Wisdom in Leadership.

Our research has been triggered by some statements concerning Wisdom in Leadership such as “Wisdom enables leaders to approach dynamic organizational environments with cautious confidence and the willingness to improvise in response to situational factors” (Jones, 2005) or “wisdom represents the major resources for the Leadership”(McKenna & Rooney, 2009). Thus we firstly questioned what Wisdom means, which kind of factors contribute to the explanation of it and lastly the kinds of effects of these Dimensions on some Leadership Outcomes.

The first part of the study reported that Wisdom, as applied to Leadership, is the result of a coalition of two main sources, that has a positive effect. The two factors that contribute to explain the Leader’s level of Wisdom perceived by the followers, correspond to the Leader’s traits of Morality and Charisma, which positively affect such construct. On the contrary the perceived level of Strategy, that was hypothesized as another potential dimension with Charisma and Morality, does not affect the perception upon the construct of reference. Thus, according to these results, the perception that the follower has in regard to the construct of Wisdom, is that it represents the Leader trait that makes him or her perceived as a role model by the followers, who feel proud to work under his or her control and often they identify on him or her. A Wise Leader communicates a clear vision of the future, talks about the future with optimism projecting a strong dynamic and forceful presence, involving the followers in the discussions; the Wise Leader subordinates his or her interests to those of the group, listens to what employees have to say, he or she always takes responsibility for his/her actions discussing the business ethics and values with others. Moreover being really trustworthy is also a fundamental aspects in order to be considered wise. The atmosphere created by this kind of leader, leads among the followers to a sense of energy, dynamism, fairness, pride to work for the leader in the

organization. It seems that whether for example, the Leader sets clear goals, knows how to engender support for his or her plans or, approaches to the work in a goal oriented fashions and all the typical tasks that characterized a strategic Leader, do not affect the perception that followers have in regard to the level of Wisdom possessed by him or her. Moreover, it has been demonstrated that also the age of the Leader contributes positively to the perception of Wisdom. The older one is, the more he or she is perceived as Wise.

In order to compute the variables, the Cronbach's alpha criterion has been chosen to select only those items that were as much reliable as possible. This selection method has been applied on the Charisma's item only after a first selection, which takes into account only those items belonging to the worldwide tested scales. Afterwards the simple mean of the items has been computed in order to create the variables.

Since a fallacy of the wrong level of analysis, could bring to an erroneous conclusion, the relationship among these variables have been assessed in this first part under different levels of analysis, in order to gain results as much robust as possible. What we demonstrated in the first part of Chapter 5, is that regardless the perspective of analysis the results reached are substantially the same. The primary analysis conducted, was a simple OLS linear regression that has been computed upon the 151 observations, in order to take advantage of the main information from the data. Than the analysis has been conducted at the aggregate level, considering the Leader as the statistical unit, computing the coefficient estimations through the Between estimator. Even though the focus of the analysis was the Leader, the weak point of this second approach, was the fact that followers' reports in the same group, could vary so widely that the use of the group average to represent the leadership would create "a fictitious average or middle range score which the leader never displays" (Scherriesheim, House & Kerr, 1976). Therefore, since the results reached were the same independently on the model, the OLS regression has been considered preferable. Moreover, we provide evidence that including or not the Age of the Leader would not affect so much the results as regards the relations between Wisdom and its components.

Afterwards, we wonder whether some Leader's characteristic which have not been measured or that were not observable, may have affected the previous results. If this

would have happened, the OLS regression would have lead to inconsistent and biased results.

Using panel data theory we applied the Fixed Effect estimator to the 151 observations to control for all stable characteristics of the individual in the study. In this way, the potential variable erroneously not taken into account previously, have been deleted thanks to the model construction. In order to assess the presence of these unmeasured characteristics and whether these were significantly correlated with the other regressors, the estimation of the coefficients through the Random Effects model and the Hausman test, were necessarily computed. We also controlled if the estimation would have changed if an OLS regression with Robust standard errors. But still, the conclusions were substantially the same.

We concluded that there were not unmeasured variables, and so the results obtained with the simple OLS, were correct consistent and unbiased: the perceived Leader's level of Wisdom is affected by the perceived level of Charisma and Morality. According to McKenna and David Rooney (2009), it is true that wisdom requires knowledge but not necessary a great accumulation of it. Wisdom is critically dependent on insight (which could depend on the level of Charisma that a leader has) and ethics (which is connected to the level of Morality). Wisdom concerned less with how much we know and more with what we do and how we act.

In the second part, we investigated how the three hypothesized Wise Leadership dimensions affect the selected Leadership Outcomes by using a Structural Equation Model. Two out of seven variable, have been considered not reliable according to the Cronbach's alpha criterion and thus have not been included in the analysis: Motivation and Counterproductive Behavior. Regarding to the others, the analysis showed that the followers are satisfied about their leader if they perceived him of her as Charismatic, Moral and Strategic. Thus all the Dimensions contribute to a good impression that the subordinates have with respect to their leader. However the fact that the Leader is Strategic or not does not have an impact on the perception that the followers have on the Leadership Effectiveness. This results could depend on the way these Outcomes has been measured which does not stress the strategic and organizational part of such construct. Only if the person who is leading is able to inspire followers to enthusiastically accept and pursue challenging goals, mission or vision of the future, and only if he or she leads with ethic values, considering the

group's interests first (thus is Charismatic and Moral), he or she would be perceived as effective.

As regards the Group Performance, it has been surprisingly demonstrated that this outcomes seems to be affected only by the perceived Strategic level of the leader. Thus, it seems not important both the fact that the leader leads demonstrating a normatively appropriate conduct through personal actions and interpersonal relationships and the fact that he or she is seen as a role model by his or her subordinates. But rather, the Group Performance, is affected by how much the leader is able to manage the group activities, taking the right decisions, setting clear goals, anticipating and planning for potential future problems and all the tasks that a Strategic leader should do.

In contrast to this Outcome, Job Satisfaction seems to be explained not by the perceived level of Strategy, but instead by the Charisma and Morality of the Leader. The more the Leaders are perceived as Charismatic and Moral, the more their subordinates are satisfied about their work. The first Leader's trait instills a dynamic and energetic atmosphere that makes them feel proud to work under the control of him or her, and the second provides norm, values, mental models which characterize the organization's spirit which makes the follower feel wholly integrated, thus more useful for the business and consequently more satisfied.

Lastly the Organizational Citizen Behavior, is not affected by these dimensions. Maybe because this Outcome depends more on the Followers behavior themselves.

A Structural equation model with latent variables was also computed. In fact, in Chapter 6 we decided to put in doubt the validity of the measurement model from the previous analysis, therefore a "cross Factor Analysis" has been applied to data in order to make a more strict selection of the items. The SEM model with latent variables created from this new set of items, provided the same results of the previous analysis with the only exception that Job Satisfaction was not explained by both Morality and Charisma, rather only by the last one. A part from this result, the main conclusions are substantially the same. This could let us conclude that the analysis made are robust to the level of analysis and to the measurement model.

To conclude another result gained with this research, independently from the measurement and structural model, concerns the fact that we provide evidence that

Wisdom itself, does not affect the Leadership Outcomes, once its components are considered in the model.

The construct of Wisdom only represents an overarching factor explained by the perceived level of Charisma and Morality, which in turn affect the Leadership Outcomes together with Strategy. The findings reached with this study, could be useful for the organizations in general to understand how Leadership Outcomes could be controlled and managed, working on the attitude of the leaders. It should be remembered that how followers perceive a leader, has important implications for the leader, and for the organization as a whole. The leaders themselves could adjust their own behavior, according to the Outcomes that should be reached by the group that they are leading.

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# Appendix

## A1 Research setting and Data Collection



Universiteit van Tilburg

Faculteit Sociale Wetenschappen

Departement Sociale Psychologie

Onderzoek naar leiderschap

**- MEDEWERKER -**

Beste meneer/mevrouw,

Dit onderzoek gaat over leiderschap. De vragenlijst bestaat uit 96 stellingen en bestaat uit onderdeel A en onderdeel B. In onderdeel A beoordeelt u uw leidinggevende. U geeft aan in welke mate u het eens bent met de stelling. Onderdeel B is een werkevaluatie en bestaat uit een aantal korte vragenlijsten. Ook hier geeft u aan in welke mate u het eens bent met de stelling en bij de laatste twee vragenlijsten geeft u aan hoe vaak bepaald gedrag voorkomt. U kunt uw keuze duidelijk maken door het bijbehorende cijfer te omcirkelen. Als u een fout maakt, geef dan met een pijltje de juiste keuze aan. Vult u alstublieft op deze voorpagina uw leeftijd en geslacht en hoe lang u al werkzaam bent voor uw leidinggevende in. Vul de vragenlijsten zo eerlijk mogelijk in. Er zijn geen goede of foute antwoorden. Uw antwoorden worden vertrouwelijk behandeld. Het invullen van deze vragenlijsten zal ongeveer 5-10 minuten duren.

Alvast vriendelijk bedankt voor uw medewerking.

Stagebegeleider: dr. Caroline Dusschooten – de Maat

Leeftijd	_____
Geslacht (m/v)	_____
Aantal jaren werkzaam	_____

**Onderdeel A: Beoordeling van uw leidinggevende**

1 = helemaal mee oneens, 2 = oneens, 3 = neutraal, 4 = eens, 5 = helemaal mee eens

***Mijn leidinggevende***

1. heeft mijn volle vertrouwen.	1	2	3	4	5
2. leidt zijn/haar privéleven op een ethisch verantwoorde manier.	1	2	3	4	5
3. wordt gekenmerkt door een weloverwogen, rustige besluitvorming.	1	2	3	4	5
4. is snel onzeker op het werk.	1	2	3	4	5
5. gaat ad hoc te werk.	1	2	3	4	5
6. spreekt optimistisch over de toekomst.	1	2	3	4	5
7. staat open voor overleg.	1	2	3	4	5
8. heeft een sterke, dynamische persoonlijkheid en een krachtige uitstraling.	1	2	3	4	5
9. denkt in de eerste plaats aan het eigen belang.	1	2	3	4	5
10. heeft een rijpe levensvisie.	1	2	3	4	5
11. anticipeert op mogelijke problemen in de toekomst.	1	2	3	4	5
12. neemt altijd zijn/haar verantwoordelijkheid.	1	2	3	4	5
13. houdt rekening met de belangen van verschillende mensen.	1	2	3	4	5
14. betreft lange termijn doelen bij het nemen van een besluit.	1	2	3	4	5
15. heeft een aantrekkingskracht op mij.	1	2	3	4	5
16. is iemand bij wie ik te rade zou gaan als ik problemen heb.	1	2	3	4	5
17. maakt zijn/haar eigen belang ondergeschikt aan dat van de groep.	1	2	3	4	5
18. vertelt altijd de waarheid.	1	2	3	4	5
19. staat open voor ideeën van anderen.	1	2	3	4	5
20. stelt duidelijke doelen.	1	2	3	4	5
21. is een grijze muis.	1	2	3	4	5
22. geeft het goede voorbeeld in ethisch opzicht.	1	2	3	4	5
23. weet draagvlak te creëren voor zijn plannen.	1	2	3	4	5

1 = helemaal mee oneens, 2 = oneens, 3 = neutraal, 4 = eens, 5 = helemaal mee eens

**Mijn leidinggevende**

24. bezit veel wijsheid.	1	2	3	4	5
25. heeft moeite zijn/haar ideeën te verkopen.	1	2	3	4	5
26. spreekt medewerkers aan die zich niet aan ethische normen houden.	1	2	3	4	5
27. toont in woord en daad een imago van bekwaamheid.	1	2	3	4	5
28. vraagt zich voortdurend af "wat is het juiste om te doen?"	1	2	3	4	5
29. is voor mij een symbool van succes.	1	2	3	4	5
30. zoekt de grenzen op van de gestelde normen.	1	2	3	4	5
31. straalt rust uit.	1	2	3	4	5
32. ziet toe op de uitvoering van besluiten.	1	2	3	4	5
33. kijkt naar het grotere geheel bij het nemen van besluiten.	1	2	3	4	5
34. fungeert voor mij als een voorbeeld.	1	2	3	4	5
35. discussieert met medewerkers over zakelijke ethiek en waarden.	1	2	3	4	5
36. kan elke hindernis nemen.	1	2	3	4	5
37. weet wat belangrijk is in het leven.	1	2	3	4	5
38. maakt dat ik trots ben om met hem/haar samen te werken.	1	2	3	4	5
39. blijkt vaak de goede beslissingen te hebben genomen.	1	2	3	4	5
40. bepaalt zijn/haar succes niet alleen op grond van resultaten, maar ook op de manier waarop deze zijn verkregen.	1	2	3	4	5
41. introduceert nieuwe projecten en uitdagingen.	1	2	3	4	5
42. maakt mij bewust van belangrijke gemeenschappelijke waarden, idealen en aspiraties.	1	2	3	4	5
43. kan een goede, persoonlijke begeleiding geven.	1	2	3	4	5

1 = helemaal mee oneens, 2 = oneens, 3 = neutraal, 4 = eens, 5 = helemaal mee eens

**Mijn leidinggevende**

44. checkt of de genomen besluiten door de groep zijn begrepen.	1	2	3	4	5
45. heeft duidelijke eigen normen en waarden.	1	2	3	4	5
46. spreekt uit levenservaring	1	2	3	4	5
47. treedt met veel zelfvertrouwen naar buiten.	1	2	3	4	5
48. is zich bewust van de gevolgen van onethisch gedrag.	1	2	3	4	5
49. selecteert en analyseert de juiste informatie om tot een goed besluit te komen.	1	2	3	4	5
50. blijft zichzelf, ook als anderen het hem/haar moeilijk maken.	1	2	3	4	5
51. creëert een gemeenschappelijk gevoel aan een belangrijke opdracht/missie te werken.	1	2	3	4	5
52. heeft bij het nemen van belangrijke besluiten een plan B.	1	2	3	4	5
53. is bereid om op grond van advies van anderen zijn/haar mening aan te passen.	1	2	3	4	5
54. toont een buitengewone bekwaamheid bij alles wat hij/zij onderneemt.	1	2	3	4	5
55. kan goed ingaan op belangrijke levensvragen.	1	2	3	4	5
56. is volledig te vertrouwen.	1	2	3	4	5
57. gaat doelgericht te werk.	1	2	3	4	5
58. draagt een duidelijke visie op mogelijkheden in de toekomst uit.	1	2	3	4	5
59. raadpleegt anderen bij het nemen van een besluit.	1	2	3	4	5
60. staat voor waar hij/zij in gelooft.	1	2	3	4	5
61. onderzoekt de haalbaarheid van besluiten.	1	2	3	4	5
62. kan mensen helpen als zij problemen hebben.	1	2	3	4	5
63. past de planning aan als dat nodig is.	1	2	3	4	5
64. past zijn/haar normen aan die van anderen aan.	1	2	3	4	5
65. weet goed om te gaan met complexe en onzekere situaties.	1	2	3	4	5
66. neemt te grote risico's.	1	2	3	4	5

**Onderdeel B: Werkevaluatie**

1 = helemaal mee oneens, 2 = oneens, 3 = neutraal, 4 = eens, 5 = helemaal mee eens

**Mijn leidinggevende**

1. is effectief in het tegemoet komen van de werkgerelateerde behoeften van collega's.	1	2	3	4	5
2. is effectief in het vertegenwoordigen van mijn groep bij hogere autoriteit.	1	2	3	4	5
3. is effectief in het voldoen aan de eisen die de organisatie stelt.	1	2	3	4	5
4. leidt het team effectief.	1	2	3	4	5

---

5. Over het algemeen gesproken ben ik erg tevreden met mijn werkzaamheden.	1	2	3	4	5
6. Regelmatig denk ik erover om deze baan op te zeggen.	1	2	3	4	5
7. Over het algemeen ben ik tevreden met het soort werk dat ik doe.	1	2	3	4	5
8. De meeste mensen met dit werk zijn tevreden over hun werk.	1	2	3	4	5
9. Mensen met dit werk denken er vaak aan om hun baan op te zeggen.	1	2	3	4	5

---

10. Het voelt goed om bij mijn leidinggevende in de buurt te zijn.	1	2	3	4	5
11. Ik vind zijn/haar leiderschapsstijl de juiste is om ons groepswerk te voltooien.	1	2	3	4	5
12. Ik ben tevreden met zijn/haar leiderschap.	1	2	3	4	5

---

13. Als ik mijn werk goed doe, ga ik beter over mezelf denken.	1	2	3	4	5
14. Het doet mij goed als ik mijn werk naar behoren uitvoer.	1	2	3	4	5
15. Ik vind het erg vervelend als ik merk dat ik mijn werk slecht gedaan heb.	1	2	3	4	5

1 = helemaal mee oneens, 2 = oneens, 3 = neutraal, 4 = eens, 5 = helemaal mee eens

16. Of ik mijn werk goed of slecht uitvoer, beïnvloedt mijn humeur niet.	1	2	3	4	5
--	---	---	---	---	---

17. De meeste mensen met dit werk voelen zich erg tevreden als zij hun werk goed doen.	1	2	3	4	5
18. De meeste mensen met dit werk voelen zich rot als ze slecht gepresteerd hebben.	1	2	3	4	5

---

19. Het prestatieniveau ligt bij ons hoog.	1	2	3	4	5
20. De meeste van onze taken worden snel en efficiënt uitgevoerd.	1	2	3	4	5
21. We stellen altijd hoge eisen aan onze prestaties.	1	2	3	4	5
22. We behalen bijna altijd onze doelen.	1	2	3	4	5

---

*1 = nooit, 2 = zelden, 3 = regelmatig, 4 = vaak, 5 = altijd*

23. Ik help collega's die kampen met een hoge werkdruk.	1	2	3	4	5
24. Ik vervul vrijwillig taken voor het algemeen belang van de afdeling.	1	2	3	4	5
25. Ik neem taken waar voor collega's die afwezig of met pauze zijn.	1	2	3	4	5
26. Ik ben aanwezig bij niet-verplichte belangrijke vergaderingen, cursussen en presentaties.	1	2	3	4	5

---

27. Ik kom vaak zonder toestemming later op het werk.	1	2	3	4	5
28. Ik neem vaak goederen op voorraad of kantoorartikelen mee naar huis zonder toestemming.	1	2	3	4	5
29. Ik negeer vaak een collega.	1	2	3	4	5
30. Ik neem vaak langer pauze dan is toegestaan.	1	2	3	4	5

## A2 Measurement and Validation of Constructs

### A2.1 Wisdom dimensions

Charisma items				
		MLQra	CrossFA	My leader...
A1	TU	ni	ni	Has my full confidence
A4	TU	ni	ni	Is hesitant at work
A6	MLQ	i	ni	Talks about the future with optimism
A8	MLQ	i	i	Projects a strong, dynamic, and forceful presence.
A15	TU	ni	ni	Has an attraction to me
A21	TU	i	i	Comes across as meek
A25	TU	i	ni	has difficulty in his / her ideas to sell.
A27	MLQ	i	ni	Exudes his/her competence in both words and actions.
A29	ILS	i	i	for me a symbol of success
A34	ILS	i	i	Is someone I see as a role model.
A36	MLQ	i	i	Gives employees the feeling that he/she can overcome any obstacle
A38	MLQ	i	ni	Is someone with whom I feel proud to work
A41	MLQ	i	ni	Provides new projects and challenge in my work
A42	MLQ	i	ni	Makes me aware of important values, ideals, and goals that are common to the organization as a whole
A47	TU	ni	ni	acts with confidence to the outside
A51	MLQ	i	ni	Mobilizes a collective sense of mission when working on important company projects
A54	MLQ	i	i	Displays an unusual degree of competence in everything he/she undertakes.
A58	MLQ	i	ni	Communicates a clear vision of the future
A60	TU	ni	ni	Demonstrates a strong conviction in his/her beliefs and values

ILS = Inspirational Leadership Scale TU = Tilburg University MLQ = Multilevel Leadership Questionnaire  
i = included item ni = not included item



Morality items				
		MLQra	CrossFA	My leader...
A2	ELS	i	ni	Conducts his/her private life in an ethically responsible manner.
A9	TU	i	i	Considers his/her own personal interests first
A12	TU	i	ni	Always takes responsibility for his/her actions
A13	ELS	i	i	Listens to what employees have to say
A17	TU	i	i	Subordinates his/her interests to those of the group
A18	TU	i	i	Always tells the truth
A19	ELS	i	ni	Sets an example in how to be ethical
A22	ELS	i	i	Disciplines employees who violate ethical standards
A26	ELS	i	ni	When making decisions, asks "what is the right way to handle this?"
A28	TU	i	ni	looks at the limits of the standards.
A30	ELS	ni	ni	Discusses business ethics and values with employees
A35	ELS	i	ni	Defines success n just by the results achieved, but also by how they were obtained
A40	TU	i	ni	Has clearly defined personal norms and values
A45	TU	i	ni	is aware of the consequences of unethical behavior
A48	ELS	i	ni	Is completely trustworthy
A56	TU	i	ni	adjusts his / her standards to those of others.
A64	TU	ni	ni	Takes too much risk

ELS = Ethical Leadership Scale (Brown& Trevino) TU = Tilburg University  
 i = included item ni= not included item

Wisdom items				
		MLQra	CrossFA	My leader...
A10	TU	i	i	Has a mature outlook on life
A16	TU	i	ni	Is someone to whom I would go if I had a problem
A24	TU	i	ni	Is a storehouse of wisdom
A31	TU	i	ni	Is always composed
A37	TU	i	i	Knows what's important in life
A43	TU	i	ni	Provides good and personalized leadership
A46	TU	i	i	Speaks from his/her personal life experience
A50	TU	i	ni	Remains true to him/herself, even when others purposely create obstacles and difficulties
A55	TU	i	i	Can properly address important life issues
A62	TU	i	ni	Is able to help people when they have problems.

TU = Tilburg University  
 i = included item ni= not included item

Strategy items				
		MLQra	CrossFA	My leader...
A3	TU	i	ni	Is known as someone who is calm and who thinks through a decision
A5	TU	ni	ni	Goes about his/her work in an ad hoc way
A7	TU	i	ni	Is open for discussion
A11	TU	i	i	Anticipates and plans for potential future problems
A14	TU	i	ni	Considers long-term goals already in place when making a decision
A19	TU	i	ni	Is open to discussing ideas with others
A20	TU	i	ni	Sets clear goals
A23	TU	i	ni	Knows to how to engender support for his/her plans
A32	TU	i	i	Monitors how well decisions have been implemented
A33	TU	i	ni	Considers the big picture when making decisions
A39	TU	i	ni	Frequently appears to have made the right decisions
A44	TU	i	i	Checks whether decisions have been understood by the group
A49	TU	i	i	Makes decisions based on information that has been carefully selected and analyzed
A52	TU	i	ni	Has backup plans (a plan B) when making decisions
A53	TU	i	ni	Is willing to adjust his/her opinion on the advice of others
A57	TU	i	ni	Approaches work in goal oriented fashion
A59	TU	i	ni	consult others when making a decision
A61	TU	i	i	Considers whether decisions can be achieved realistically
A63	TU	i	i	Adjusts scheduling when necessary
A65	TU	i	ni	Is adept at handling complex and uncertain situations

TU = Tilburg University  
i = included item    ni = not included item

## A2.2 Leadership Outcomes

Leadership effectiveness items		
	MLQra&CrossFA	My leader ...
B1	i	is effective in meeting the needs of work-related colleagues
B2	i	is effective in representing my group at higher authority
B3	i	is effective in meeting the requirements set by the organization
B4	i	leads the team effectively

Job Satisfaction items		
	MLQra&CrossF A	
B5	i	Generally speaking I am very satisfied with my work
B6	i	I think regularly about quitting the job
B7	i	Overall I am satisfied with the kind of work I do
B8	i	Most of the people are satisfied with their work
B9	i	People with this job often think about terminating their employment or contract.

i = included item    ni = not included item

<b>Satisfaction with the Leader items</b>		
	<u>MLQra&amp;Cross FA</u>	
B10	i	I feel good when my manager is in the neighborhood
B11	i	I find his / her leadership style is right for our group work
B12	i	I am satisfied with his / her leadership.
i = included item    ni= not included item		

<b>Motivation items</b>		
	<u>MLQra&amp;CrossFA</u>	
B13	ni	When I did my job well, I think better about myself.
B14	ni	It makes me good when I implement my job properly
B15	ni	I find it very annoying when I find that my job is badly done
B16	ni	whether I perform in a good or bad manner, does not influence my mood.
B17	ni	Most people with this work feel very happy when they do their job well
B18	ni	Most people with this work feel bad when they have underperformed
i = included item    ni= not included item		

<b>Group Performance items</b>		
	<u>MLQra&amp;CrossFA</u>	
B19	i	It is our highest performance level
B20	i	Most of our tasks are done quickly and efficiently
B21	i	We always set high standards for our performance
B22	i	We almost always achieve our goals
i = included item    ni= not included item		

<b>Organization Citizen Behavior items</b>		
	<u>MLQra&amp;CrossFA</u>	
B23	i	I help colleagues who face a high workload
B24	i	I voluntarily fulfilling tasks for the common good of the department
B25	i	I take the tasks of colleagues when they are absent or in break.
B26	ni	I have attended non-compulsory important meetings, courses and presentations
i = included item    ni= not included item		

Counterproductive behavior items		
MLQra&CrossFA		
B27	ni	I often turn up late at work without permission.
B28	ni	I often take goods in stock to my home or in my office without permission
B29	ni	I often ignore a colleague
B30	ni	I often take longer breaks than allowed
i = included item    ni= not included item		

### A3 Different Level of Analysis

#### Subordinate-level-analysis: simple linear regression OLS estimator

Variable		Mean	Std. Dev.	Min	Max
C_MLWra	Overall	3.67702	.546738	1.67	4.92
	Between		.3459648	3.01	4.415
	within		.4312172	1.799242	5.16702
M_MLQra	Overall	3.833576	.3840058	2.73	4.8
	Between		.2021381	3.43	4.3
	within		.3284548	2.919132	4.989132
S_MLQra	Overall	3.886027	.4107474	2.63	5
	Between		.2260359	3.4875	4.485
	within		.3453548	2.938527	5.001582
W_MLQra	Overall	3.789139	.4651794	2.7	5
	Between		.2910641	3.075	4.5
	within		.3722446	2.644695	5.389139
LE_MLQra	Overall	3.766556	.5913747	2	5
	Between		.3772798	3.45	4.55
	within		.4588507	2.187726	4.87106
JS_MLQra	Overall	3.92106	.4988148	1.67	5
	Between		.2581596	2.9175	4.5825
	within		.4334683	1.938639	5.420861
LS_MLQra	Overall	3.750861	.6671861	2	5
	Between		.4165372	2.9375	4.1875
	within		.5285268	2.287649	4.787649
GP_MLQra	Overall	3.662649	.5702861	2	5
	Between		.3321429	2.9375	4.1875
	within		.4665968	2.287649	4.787649
OCB_MLQra	Overall	3.59351	.6843296	2	5
	Between		.355562	2.5825	4.5825
	within		.5745293	2.34101	4.92601

## A4 The four perspectives of Exploratory Factor Analysis

**FA with the extraction of 4 factors, Extraction methods: Principal Component Analysis, Rotation methods: Varimax**

**Legend**

- ILS = Inspirational Leadership Scale
- TU = Tilburg University
- MLQ = Multilevel Leadership Questionnaire
- ELS = Ethical Leadership Scale (Brown& Trevino)

i = included item    ni= not included item

item Charisma Tilburg University
item Charisma MLQ/inspirational scale
item Strategy
item Morality NOT TESTED
item Morality Brown&Trevino
item Wisdom

		Component				
		1	2	3	4	
A1MyFullConfidence Charisma	TU	.488	.259	.473	.092	ni
A2eTUchLife Morality	ELS	.040	.089	.237	.380	ni
A3calmDecision Strategy	TU	.001	.425	.475	.072	ni
A4HesitantWork Charisma	TU	.534	.358	-.108	.021	i
A5WOrkAdHoc Strategy	TU	.034	.342	.289	-.142	ni
A6opTUMisTUcFuture Charisma	MLQ	.414	-.022	.271	.008	ni
A7OpenToDiscussion Strategy	TU	.100	.067	.554	.215	ni
A8DynamicStrenghtPosiTUon Charisma	MLQ	.736	.222	.011	.152	i
RA9FirstOwnInterest Morality	TU	.127	.092	.545	.026	i
A10MatureSightLife Wisdom	TU	.310	.104	.259	.514	i
A11AdvanceFutureProbl Strategy	TU	.219	.501	.132	.112	i
A12FaceUpOwnResponsab Morality	TU	.311	.267	.274	.378	ni
A13ConsideraTUonDifferentPersonInterest Morality	ELS	.325	.034	.512	.072	i
A14DecisionLongPeriodView Strategy	TU	.254	.534	.234	.064	i
A15AttractMyAttenTUon Charisma	TU	.650	.114	.283	.107	i
A16ConsultIfProblem Wisdom	TU	.582	.043	.462	.154	ni
A17GroupInterestFirst Morality	TU	.204	.025	.525	.158	i
A18TellTruth Morality	TU	.276	.098	.468	.241	ni
A19OpenToOthersIdeas Strategy	TU	-.021	.156	.476	.317	ni
A20SetUpClearObjecTUves Strategy	TU	.346	.639	-.075	-.053	i
A21COmesAcrossAsMeek Charisma	TU	.591	.236	.009	.101	i
A22OpenThePathInEthicTerm Morality	ELS	.012	-.029	.499	.381	i

A23SupportThePlans Strategy	TU	.405	.446	.385	.116	ni
A24IsWise Wisdom	TU	.423	.246	.270	.357	ni
A25HasDifficultyToSellideas Charisma	TU	.517	.382	.053	-.025	i
A26SpeakToPeopleWithoutEthicStandards Morality	ELS	.059	.245	.014	.582	ni
A27DemonstrateCompetenceImage Charisma	MLQ	.447	.402	.281	.299	ni
A28AskRightThingsToDo Morality	ELS	.015	-.006	.400	.129	ni
A29SymbolOfSuccess Charisma	ILS	.713	.129	.262	.225	i
A30LookAtTheLimitsOfTheStandards Morality	TU	-.461	-.235	.027	-.030	ni
A31Calm Wisdom	TU	.004	.146	.522	.103	ni
A32MonitorDecisionImplementaTUon Strategy	TU	.150	.556	.074	.324	i
A33LookAtBigFrameDuringDecision Strategy	TU	.153	.481	.161	.365	ni
A34IsAnExample Charisma	ILS	.653	.227	.311	.244	i
A35DiscussWithEmployeeFirmEthic Morality	ELS	.150	.134	.089	.418	ni
A36OvercomeObstacle Charisma	MLQ	.669	.129	-.138	.278	i
A37KnowWhatImportantLife Wisdom	TU	.180	-.061	.181	.718	i
A38MakeMeProudToWorkWith Charisma	MLQ	.619	.205	.418	.291	i
A39OftenSeamsRightDecision Strategy	TU	.448	.405	.247	.262	ni
A40SuccessForFactAndWay Morality	ELS	.213	.358	.463	.057	ni
A41IntroduceNewProjectChallenge Charisma	MLQ	.300	.464	.174	-.005	ni
A42MakeMeAwareIdealValuesAspiraTUon Charisma	MLQ	.409	.180	.391	.251	ni
A43PersonalCoaching Wisdom	TU	.381	.150	.497	.100	ni
A44CheckUnderstandDecision Strategy	TU	.101	.509	.150	.232	i
A45HasDisTunctValues Morality	TU	-.010	.089	.090	.529	ni
A46SpeakFromExperience Wisdom	TU	.277	.006	.139	.655	i
A47ActConfidentToOutside Charisma	TU	.731	.329	-.017	.101	i
A48ConsciousEffectNonEthicBehaviour Morality	TU	-.095	.273	.257	.512	ni
A49SelecTUonRightTUnformaTUonToRightDecision Strategy	TU	.196	.628	.199	.106	i
A50ReamainItself Wisdom	TU	.294	.241	.264	.255	ni
A51SenseOfMission Charisma	MLQ	.466	.374	.400	.087	ni
A52PlanB Strategy	TU	.237	.394	-.024	.261	ni
A53AdjustOwnOpinionWithOthersOpinion Strategy	TU	.014	.424	.438	.258	ni
A54ExtraordinaryAbilityEverywhere Charisma	MLQ	.642	.341	.069	.134	i
A55FaceAdequatelyLifeMatters Wisdom	TU	.334	-.034	.182	.510	i
A56Reliable Morality	ELS	.501	.169	.542	.185	i
A57GoalOriented Strategy	TU	.425	.543	-.072	.072	i
A58VisionFuturePossibility Charisma	MLQ	.434	.508	.236	-.009	ni
A59ConsultOthers Strategy	TU	-.053	.195	.629	.071	ni
A60StrongConvinTUonOwnOpinion Charisma	TU	.336	.338	.165	.479	ni
A61ExamineFeasibilityDecision Strategy	TU	.224	.637	.219	.185	i
A62HelpPeople Wisdom	TU	.481	.206	.353	.167	ni
A63ModifyProgramIfNecessary Strategy	TU	.099	.449	.110	.191	ni
A64AdjustHisStanrdToOthers Morality	TU	-.101	-.120	-.168	.051	ni
A65KnowHowFaceComplexUncertainSit Strategy	TU	.507	.511	-.052	.053	i
RA66RiskTaking Morality	TU	-.075	.025	.397	.186	ni

# Acknowledgement

*"[...]non c'è alcuna ragione per non seguire il vostro cuore.*

*Il vostro tempo è limitato, per cui non lo sprecate vivendo la vita di qualcun altro. Non fatevi intrappolare dai dogmi – cioè non vivete con i risultati del pensiero di altre persone. Non lasciate che il rumore delle opinioni altrui offuschi la vostra voce interiore.*

*E, cosa più importante, abbiate il coraggio di seguire il vostro cuore e la vostra intuizione.*

*In qualche modo loro sanno che cosa volete realmente diventare.*

*Tutto il resto è secondario.[...] "*

Era il Giugno 2005 quando Steve Jobs pronunciò queste Sagge parole, alla cerimonia di consegna diplomi presso l'Università di Stanford.

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*Raggiungere i propri obiettivi e sentirsi Realizzati,  
ecco cosa per me conta di più nella vita.*

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