

**MASTER
FINANCE**

**MASTER'S FINAL WORK
DISSERTATION**

AN ANALYSIS OF NARCISSISTIC CEO CHARACTERISTICS

MÉLANIE SÓNIA EIRAS

NOVEMBER - 2020

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**SUPERVISION:
PEDRO RINO VIEIRA**

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ABSTRACT

Chief Executive Officers (CEOs) are persons with power in decisions. Some CEOs are known as “narcissistic”, which means that they exhibit grandiose, self-admiration and obsession with power.

This dissertation studies the characteristic of a narcissistic CEO. To do that, we investigated certain characteristics of CEOs, such as age, gender, professional experience, education, marital status, income level and self-confidence. Moreover, we also investigated some characteristics of the companies that they lead, such as sales, company size and ROA.

To do that, a sample of Portuguese registered companies was used, collecting the data from an online questionnaire.

The results indicate that there are a lot of characteristics that differ narcissistic CEOs from non-narcissistic CEOs. Our studies demonstrate that narcissistic CEOs are characterized by younger CEOs, CEOs with lower experience, individuals that consider themselves as self-confident, females that are also more narcissistic than males. Moreover, narcissistic CEOs receive less than non-narcissists with an income up to 20,000€, single individuals are more narcissistic, followed by divorced persons and people with only a bachelor’s degree are the most narcissistic compared with person that have master or PhD degree. Moreover, regarding the companies, results show that high narcissism CEO tend to lead companies with lower ROA (less than 10%), smaller companies (revenues up to 2,000,000€ and employees up to 10 persons).

JEL CLASSIFICATION: C19; D22; L25; G32; M40.

KEYWORDS: CEO; CEO Characteristics; Narcissism; Narcissistic Personality Inventory.

RESUMO

Os diretores executivos (CEOs) são pessoas com poder nas decisões. Alguns CEOs são conhecidos como “narcisistas”, o que significa que exibem grandiosidade, auto-admiração e obsessão pelo poder.

Esta dissertação estuda as características de um CEO narcisista. Para isso, analisámos algumas características dos CEOs, como idade, género, experiência profissional, escolaridade, estado civil, nível de rendimento e autoconfiança. Além disso, também investigámos algumas características das empresas que os CEOs lideram, como vendas, tamanho da empresa e ROA.

Para tal, recorreu-se a uma amostra de empresas portuguesas registadas, recolhendo os dados a partir de um questionário online.

Os resultados indicam que existem muitas características que diferem CEOs narcisistas de CEOs não narcisistas. Os nossos estudos demonstram que CEOs narcisistas são caracterizados por CEOs mais jovens, CEOs com menos anos de experiência profissional, indivíduos que se consideram autoconfiantes, género feminino também é mais narcisista do que o género masculino. Além disso, os CEOs narcisistas recebem menos do que os não narcisistas com um rendimento de até 20,000€, os indivíduos solteiros são mais narcisistas, seguidos por pessoas divorciadas e pessoas com apenas uma licenciatura são as mãos narcisistas em comparação com pessoas que têm mestrado ou doutoramento. Além disso, no que se refere às empresas, os resultados mostram que CEOs com alto nível de narcisismo tendem a liderar empresas com ROA mais baixo (menos de 10%), empresas de menor porte (vendas até 2,000,000€ e funcionários até 10 pessoas).

JEL CLASSIFICATION: C19; D22; L25; G32; M40.

KEYWORDS: CEO; Firm Performance; Narcissism; Narcissistic Personality Inventory.

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GLOSSARY

APA - American Psychiatric Association

CEO - Chief Executive Officer

DSM - Diagnostic and Statistical Manual of Mental Disorders

NPD - Narcissistic Personality Disorder

NPI - Narcissistic Personality Inventory

ROA - Return on Assets

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1. INTRODUCTION

Executives play a key position in the administrative choices and ultimately the firm performance (Crossland & Hambrick, 2007; Engelen, Neumann, & Schmidt, 2016; Zhu & Chen, 2015). Actions and decisions of a CEO are highly motivated by their personalities and past knowledges (Carpenter, Geletkanycz & Sanders, 2004). Peterson et al. (Peterson, Smith, Martorana, & Owens, 2003) pronounced that the CEO personality impacts top management team, which in turn eventually affects firm strategy actions and future company performance. Further, according to Hassan, Bashir, & Abbas (2017), the success of a project is also dependent on the personal characteristics of the manager.

Narcissism is a personality dimension (Emmons, 1987; Raskin & Terry, 1988) and reflects the personality trait of self-love, self-admiration, and obsession with power (Resick et al., 2009). According to Freud's argument, narcissism is somehow part of all of us (Freud, 1957).

The narcissism is relevant in the context of the impact of the CEO personality and therefore this dissertation studies the characteristic that may predominate in a narcissistic CEO.

Results show that there are a lot of characteristics that differ narcissistic CEOs from non-narcissistic CEOs. Our studies demonstrate that narcissistic CEOs are characterized by younger CEOs, CEOs with lower experience, individuals that consider themselves as self-confident, females that are also more narcissistic than males. Moreover, narcissistic CEOs receive less than non-narcissists with an income up to 20,000€, single individuals are more narcissistic, followed by divorced persons and people with only a bachelor's degree are the most narcissistic compared with person that have master or PhD degree. Moreover, regarding the companies, results show that high narcissism CEO tend to lead companies with lower ROA (less than 10%), smaller companies (revenues up to 2,000,000€ and employees up to 10 persons).

This dissertation is divided in five chapters, organized as follows: chapter 1 is the Introduction; chapter 2 is the Literature Review; chapter 3 describes the Data and Methodology; chapter 4 contains the Results and chapter 5 presents the Conclusions and Limitations of the study.

2. LITERATURE REVIEW

2.1. Personality Disorders

CEOs are very important individuals with influence on decisions that impacts company's performance. Narcissist CEOs are persons with obsession with power, and because of that it is important to study the characteristics that may be predominate in a narcissistic CEO. Therefore, we have investigated CEOs controls and firm controls that predominate under a narcissistic CEO.

Personality disorders are linked with manners of thinking and feeling about oneself (APA, 1987) and they fall under 10 different types: 1) paranoid personality disorder, 2) schizoid personality disorder, 3) schizotypal personality disorder, 4) antisocial personality disorder, 5) borderline personality disorder, 6) histrionic personality, 7) narcissistic personality disorder, 8) avoidant personality disorder, 9) dependent personality disorder and 10) obsessive-compulsive personality disorder. These categories are comprised in three clusters based on descriptive similarities: A – “odd or eccentric”; B – “dramatic, emotional or erratic”; and C – “anxious or fearful”.

The Narcissistic Personality Disorder (NPD) is under cluster B and it is a personality disorder characterized by an exaggerated feelings of self-importance and an extreme passion for self-admiration. According to Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, page 717), narcissism is “*a pervasive pattern of grandiosity (in fantasy or behaviour), need for admiration, and lack of empathy, beginning by early adulthood and present in variety of contexts*”. Individuals who behave according with these comporments are considered as “narcissists”.

2.2. Narcissism

The origin of the term “narcissism” was first introduced to psychoanalysis by Havelock Ellis in 1898 to define people that are fascinated in self-admiration, which was inspired by Narcissus (Greek mythology), a young man that feel deeply in love with his own reflection in the water.

In 1914, narcissism was developed by Sigmund Freud who identified various specifications of narcissism. Rasking and Hall (1979) developed a method to measure narcissism: the Narcissistic Personality Inventory (NPI), a 54 items questionnaire of statements where each pair have one narcissistic and one non-narcissistic statement (e.g. I know that I am good because everybody keeps telling me so/When people compliment me I sometimes get embarrassed). However, shorter versions of this scale have been produced and currently the most famous are the NPI-40 and NPI-16.

There are two types of narcissism: a) vulnerable, which relates to individuals who are highly anxious and aggressive with low self-esteem; and b) grandiose, which concerns to persons that have high self-esteem and confidence (Miller et al., 2011). This is known as the narcissistic paradox. In order to investigate the relationship between CEO narcissism and the financial performance of a company we will focus on the grandiose narcissism. According to Krizan & Herlache (2018), narcissism is an aspect of personality characterized by a grandiose view of oneself and prioritizing of self-interests.

Narcissists are frequently connected with leadership positions (Brunell et al., 2008). As per Maccoby (2001), a crucial characteristic of CEOs is the narcissism, due to the abilities to use power, to manipulate others and to reach respect. Therefore, in average CEO will score higher on narcissism contrasted to the general population (Chatterjee & Hambrick, 2007).

2.3. CEO Narcissism

A CEO has the highest-position executive in a company, which principal responsibilities include making major corporate decisions, and ultimately influence performance of their organization (Resick et al., 2009).

A CEO recording high on the narcissistic scale has a frequent goal of external self-affirmation, hence high narcissistic CEOs desire for grandiosity (Finkelstein & Hambrick, 1996). Narcissistic CEOs attribute their victories to their own skills, while attributing their failures to external conditions (Bettman & Weitz, 1983; Staw, McKechnie & Puffer, 1983).

Lubit (2002) considers negative and positive sides of narcissism and differentiates between healthy vs. destructive narcissism, where healthy narcissist is not obsessed with power, while destructive is obsessed with it. According to Maccoby (2003), there have been various narcissistic business leaders, such as Steve Jobs (Apple Incorporations), Michael Eisner (Walt Disney), among others, as these leaders have been able to show positive results since they have a great vision and because they are able to attract followers (Braun et al., 2018).

2.4. Narcissism and CEO characteristics

Hambrick and Mason (1984) argued that younger CEOs are more narcissists compared to older CEOs, which manifests in more strategic actions. Moreover, CEOs also tend to take major strategic actions early in their tenure, which refers to the length of time a person has occupied the CEO position in the firm. This can be explained by the fact that younger CEOs have had less chances to collect knowledge.

According to Wales et al. (2013), firm size and firm age are also an important component to influence the companies' ability to reach resources and consequently firm's performance.

Firm performance can be determined by Tobin's Q and Return on Assets (ROA), which are two different methods. The Tobin's Q is a method of the market expectation and is more associated with firm valuation, being equal to the market value of assets divided by the book value of assets. While ROA indicates how much profit a company gains generated from its assets, being calculated by net income divided by total assets.

Paul (1992) and Capalbo et al. (2018) argue that ROA is the best methodology to measure firm performance.

Since ROA measures historical accounting data instead of Tobin's Q, which is related to forward-looking, ROA is therefore an appropriate variable to use in this investigation.

In this sequence, we have used some CEO controls, such as gender, age, professional experience, marital status, education, income level and self-confidence person, as independent variables. Additionally, we also have included ROA as independent variable

to study the firm's characteristics that are led by narcissistic CEOs, along with other variables related to firm, such as revenues and firm size. The following sections detail the expected impact and relevancy of age, tenure and overconfidence, which are the most referred variables related with narcissism (e.g. Ham, Seybert, & Wang, 2018, Simsek 2007, Orth, Robins, Meier, & Conger, 2015).

2.4.1. CEO Age

CEO age is deemed to be an influential indicator of CEO experience. In general, companies led by younger CEOs take more risk (Ham, Seybert, & Wang, 2018), which demonstrates in more strategic actions (Aktas, De Bodt, Bollaert, & Roll, 2016) because they have had less opportunities to gather knowledge during their lives. While older CEOs shows limited strategic actions because they have had more time to grow up, mature and solidify with their life's experience. As a result, older CEOs are less expected to take risk (Serfling, 2014).

In overall, younger CEO tend to be more narcissistic compared to older CEOs.

2.4.2. CEO Tenure

CEO tenure is also an important indicator of CEO experience. In general, longer tenured CEOs take a small number of strategic actions as their career develops, because CEOs collect power, experience, and competences to avoid pressure from other shareholders (Meyer, 1975). Simsek (2007) finds that CEO tenure is positively related to firm performance and financial performance can be affected by life-cycle learning (Rijsenbilt and Commandeur, 2012).

CEOs are encouraged to show their skills early in their tenure, for instance, strategic actions to change the organization's policy are an example for CEOs to exercise their power and begin to apply their visions for the company.

In overall, CEOs with less experience tend to be more narcissistic compared to CEOs with higher experience.

2.4.3. CEO Overconfidence

CEOs have persuasive and powerful positions which give them a self-esteem (Orth, Robins, Meier, & Conger, 2015), and therefore CEO with a high level of narcissism are especially inclined to overconfidence.

People that have overconfidence they usually are known for overestimate their knowledge and undervalue consequences. These people have an extreme faith about having correct information because they have overconfidence in their ability to predict potential opportunities, and consequently they believe that are superior to the overall people. CEOs that extremely have self-confidence, they usually expect too much on returns on certain projects which can led to gains or losses. Williams and Williams (2017) affirmed that narcissistic CEOs could result in limited performance, and as a result, it will influence success.

Sometimes, a lot of confidence is explained by the fact that leaders attribute their successes to their own capacities and their failures on bad luck or on external factors, leading to CEOs thinking in their own skills and their capability to predict opportunities (Barberis and Thaler, 2003). Furthermore, elevated remunerations and positive feedback suggests success to a CEO, which can end in extra self-confidence (Paredes, 2005). Because of that, narcissists have a propensity to overweight the possible profits of their choices and underweight the potential failures (Brunell & Buelow, 2017).

In overall, CEOs with more self-confidence tend to be more narcissistic compared to CEOs with lower self-confidence.

Feelings of grandiosity, self-centred behaviours and a strong desire for power, along with age, professional experience and high self confidence could damage the performance of the companies. Thus, this study investigates the characteristic that may predominate in a narcissistic CEO. Based on the previous discussions I expect high narcissism CEO tend to be younger, with lower professional experience and to be self-confident.

3. DATA DESCRIPTION AND METHODOLOGY

3.1. Data Description

The data was obtained from an online questionnaire sent by e-mail provided by Informa D&B and using the Qualtrics software. The e-mails were sent only to registered Portuguese companies and to be answered by the CEO. The online questionnaire is in Annex III.

The online questionnaire is an approach that allows the collection of data in an easy way and guarantees the anonymity of the respondents. However, according to Hoonakker and Carayon (2009), there are some risks, since the e-mail could be ignored, which can lead to lower answer rates, and does not ensure that the respondent is the CEO.

Informa D&B provided the email addresses of the registered Portuguese companies: 4,098 companies. From the 4,098 emails sent, we only had 212 answers, after removing emails which were not delivered and removing incomplete surveys, leading to response rate of approximately 5.3%.

The description of the sample is in Annex I. From the 212 individuals, the average years is 42 years old, 67.5% are male, 63.7% are married, 44.8% have a bachelor's degree and the most common level of income varies from 20,000€ to 40,000€. Also, 193 CEOs consider themselves with self-confidence. Regarding the firms, the most common number of employees varies from 10-250, revenues from 2,000,000€ to 10,000,000€ and ROA from 10%-20%.

3.2. Measures and Scales

The narcissism was measured using NPI-16, a reduced scale created by Ames et al. (2006). The use of NPI-16 and not the NPI-40 is due to its shorter dimension since the study was addressed to the CEOs, which are busy people.

The NPI-16 is a scale constituted by 16 pairs of statements of which each pair is constituted by a narcissistic behaviour (e.g. I think I am a special person) followed by non-narcissistic behaviour (e.g. I am no better or worse than most people). Respondents needed to choose one of the two statements based on their way of being, thinking and

acting. In every statement, the answer with the narcissistic part was attributed with one point and to the non-narcissistic statement with zero points. The NPI-16 score is the mean of all the chosen replies, and the CEO is more narcissistic when the final value is higher. The Cronbach's alpha coefficient of the scale is 0.72, which means that the measure has good consistency (Tavakol & Dennick, 2011).

3.3. Variables

Dependent Variables: *Narcissism*

As already mentioned, the objective of this dissertation is to study the characteristic of a narcissistic CEO. To do that, we have run tests with narcissism as a dependent variable, measured by the NPI-16 scale.

Independent Variables: *CEO controls* (Gender, Age, Marital Status, Professional Experience, Education, Income Level, Self-confidence Person), *Firm controls* (Firm Size, which refers to the number of employees, Firm Revenue and ROA).

We also want to analyse CEO controls and narcissism, thus we have run tests with CEOs controls and firm controls as independent variables.

To compute the tests, we have grouped the variables in the following structure:

CEOs controls:

Age = 1 if up to 18-24 years old; 2 if 25-34 years old; 3 if 35-44 years old; 4 if 45-54 years old; 5 if 55-64 years old.

Gender = 0 if female; 1 if male.

Education Level = 1 if less than high school; 2 if high school; 3 if bachelor's degree; 4 if post-graduation; 5 if master; 6 if PhD.

Income = 1 if up to 20.000€; 2 if 20.000€-40.000€; 3 if 40.000€-60.000€; 4 if 60.000€-80.000€; 5 if 80.000€-100.000€.

Marital Status = 1 if single; 2 if married; 3 if divorced.

Professional Experience = 1 if up to 4 years; 2 if 5-9 years; 3 if 10-19 years; 4 if 20-30 years; 5 if 30 years or more.

Self-confidence Person = 0 if is not a self-confidence person; 1 if is a self-confidence person.

Firm controls:

Number of Employees = 1 if up to 10 employees; 2 if 10-250 employees; 3 if 250 employees or more.

Firm Revenues = 1 if up to 2,000,000€; 2 if 2,000,000€-10,000,000€; 3 if 10,000,000€-50,000,000€.

ROA = 1 if less than 10%; 2 if 10-20%; 3 if 20% or more.

4. RESULTS

4.1. Descriptive Statistics

The description of the independent variables is in Annex I. Annex II shows the descriptive statistics regarding narcissism. For narcissism, each statement with an “n” are the narcissistic ones. The pair of sentences “People always seem to recognize my authority/Being an authority does not mean that much to me” has the higher score with a mean of 0.51 and the pair “I am more capable than other people/There is a lot that I can learn from other people” has the lower score with a mean of 0.08. The first line represents the final NPI-16 score with a mean of 4.04, being the sum of the mean of all the chosen replies.

4.2. Statistical Analysis

To study if there are significant differences in the level of narcissism between the groups of variables, we used ANOVA tests and Kruskal-Wallis tests in order to make the tests more robust.

ANOVA can be used for 2 or more independent groups, which is the case (people more or less narcissists) along with categorical or ordinal variables (Hair et al. 2018). Nevertheless, we also used another test, Kruskal-Wallis, in order to become the tests more robust. However, this test was only used for ordinal variables, namely income level, professional experience, ROA and revenues, since the test of Kruskal-Wallis is designed for ordinal variables.

Table I shows the results of ANOVA tests to all the CEOs and firm variables, table II shows the results of Kruskal-Wallis tests related to the ordinal controls of the CEOs and firm. The Annex III shows the test Post Hoc.

Table I – ANOVA tests of the variables related to the CEO and Firm

Panel A - Age

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1269.250	4	3.007	94.546	0.000
Within Groups	694.731	207	3.356		
Total	71.222	211			

	N	Mean Rank
18-24 years old	2	9.500
25-34 years old	36	8.444
35-44 years old	109	4.122
45-54 years old	49	1.373
55-64 years old	16	1.000
Total	212	4.009

Panel B – Tenure

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1139.285	4	284.821	71.491	0.000
Within Groups	824.697	207	3.984		
Total	1963.981	211			

	N	Mean Rank
up to 4 years	2	9.500
5-9 years	31	8.516
10-19 years	122	4.073
20-30 years	54	1.180
30 years or more	3	1.000
Total	212	4.009

Panel C – Self-Confidence

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45.908	1	45.908	5.026	0.026
Within Groups	1918.074	210	9.134		
Total	1963.981	211			

	N	Mean Rank
not self-confidence	19	2.526
self-confidence	193	4.150
Total	212	4.009

Panel D – Gender

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	75.680	1	75.680	8.416	0.004
Within Groups	1888.302	210	8.992		
Total	1963.981	211			

	N	Mean Rank
Male	69	4.860
Female	143	3.590
Total	212	4.009

Panel E – Income Level

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1369.559	4	342.390	119.233	0.000
Within Groups	594.422	207	2.872		
Total	1963.981	211			

	N	Mean Rank
if up to 20.000€	89	6.989
20.000€ – 40.000€	113	1.929
40.000€ – 60.000€	5	1.000
60.000€ – 80.000€	3	1.000
80.000€ – 100.000€	2	1.000
Total	212	4.009

Panel F – Education

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1327.627	3	442.542	144.650	0.000
Within Groups	636.354	208	3.059		
Total	1963.981	211			

	N	Mean Rank
Bachelor's degree	95	6.747
Post-graduation	70	2.265
Master	42	1.136
PhD	5	1.000
Total	212	4.009

Panel G – Marital Status

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1389.409	2	694.704	252.698	0.000
Within Groups	574.573	209	2.749		
Total	1963.981	211			

	N	Mean Rank
Single	56	8.054
Married	135	2.178
Divorced	21	5.000
Total	212	4.009

Panel H – Firm Size

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	294.769	2	147.384	18.454	0.000
Within Groups	1669.212	209	7.987		
Total	1963.981	211			

	N	Mean Rank
up to 10 employees	47	5.914
10-250 employees	148	3.696
250 employees or more	17	1.471
Total	212	4.009

Panel I – Firm Revenues

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59.428	2	29.714	3.261	0.040
Within Groups	1904.553	209	9.113		
Total	1963.981	211			

	N	Mean Rank
up to 2,000,000€	56	5.914
2,000,000€-10,000,000€	131	3.696
10,000,000€-50,000,000€	25	1.471
Total	212	4.009

Panel J – ROA

ANOVA

NPI16	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59.428	2	29.714	3.261	0.040
Within Groups	1904.553	209	9.113		
Total	1963.981	211			

	N	Mean Rank
les than 10%	98	4.117
10%-20%	109	4.053
more than 20%	5	1.000
Total	212	4.009

Table II – Kruskal-Wallis tests of the ordinal variables

Panel A – Age

Ranks

	Age	N	Mean Rank
NPI16	18-24 years old	2	204.50
	25-34 years old	36	181.83
	35-44 years old	109	121.35
	45-54 years old	49	44.06
	55-64 years old	16	24.50
	Total	212	

Test Statistics^{a,b}

	NPI16
Kruskal-Wallis H	152.867
df	4
Asymp. Sig.	0.000

- a. Kruskal Wallis Test
b. Grouping Variable: Age

Panel B – Tenure

Ranks

	Tenure	N	Mean Rank
NPI16	up to 4 years	2	204.50
	5-9 years	31	183.34
	10-19 years	122	118.61
	20-30 years	54	34.41
	30 years or more	3	24.50
	Total	212	

Test Statistics^{a,b}

	NPI16
Kruskal-Wallis H	142.479
df	4
Asymp. Sig.	0.000

- a. Kruskal Wallis Test
b. Grouping Variable: Tenure

Panel C – Income Level

Ranks			
Income		N	Mean Rank
NPI16	up to 20.000€	89	165.49
	20.000€ - 40.000€	113	67.29
	40.000€ - 60.000€	5	24.50
	60.000€ - 80.000€	3	24.50
	80.000€ - 100.000€	2	24.50
	Total	212	

Test Statistics^{a,b}	
	NPI16
Kruskal-Wallis H	152.088
df	4
Asymp. Sig.	0.000

a. Kruskal Wallis Test
b. Grouping Variable: Income

Panel D – Firm Size

Ranks			
Number of Employees		N	Mean Rank
NPI16	up to 10 employees	47	143.85
	10-250 employees	148	101.50
	250 employees or more	17	46.74
	Total	212	

Test Statistics^{a,b}	
	NPI16
Kruskal-Wallis H	35.898
df	2
Asymp. Sig.	0.000

a. Kruskal Wallis Test
b. Grouping Variable:
Number of Employees

Panel E – Firm Revenues

Ranks			
Revenues		N	Mean Rank
NPI16	up to 2,000,000€	56	126.62
	2,000,000€ - 10,000,000€	131	108.95
	10,000,000€ - 50,000,000€	25	48.60
	Total	212	

Test Statistics^{a,b}	
	NPI16
Kruskal-Wallis H	29.622
df	2
Asymp. Sig.	0.000

a. Kruskal Wallis Test
b. Grouping Variable:
Revenues

Panel F - ROA

Ranks			
ROA		N	Mean Rank
NPI16	less than 10%	98	108.78
	10-20%	109	108.23
	more than 20%	5	24.50
	Total	212	

Test Statistics^{a,b}	
	NPI16
Kruskal-Wallis H	9.513
df	2
Asymp. Sig.	0.009

a. Kruskal Wallis Test
b. Grouping Variable: ROA

According to table I, panel A, younger CEO tend to be more narcissistic compared to older CEOs, with a mean rank higher between 18-24 years old, followed by 25-34 years old. This is also proved in the Kruskal-Wallis test, table II panel A, with $(K-W(4) = 152.867; p = 0.009)$. Moreover, according to table I, panel B, the mean rank is higher in people that have less experience (up to 4 years), meaning that this group represents more level of narcissism, while people with more experience has less level of narcissism. The differences are statistically significant $(F(4) = 71.491; p = 0.000)$ and being also shown in the Kruskal-Wallis test, table II, panel B. Individuals that consider themselves as self-confident also tend to be more narcissistic persons as per table I, panel C. Post hoc test was not performed for NPI16 and self-confidence because there are fewer than three groups, in this case, we only have self-confidence and not confidence persons.

The obtained results are in accordance with the literature, highly narcissistic CEOs for being younger, with lower professional experience and considered as self-confidence, meaning that the hypothesis in study is accepted.

Moreover, as per table I, panel D, females are more narcissistic than males. Again, post hoc test was not performed for NPI16 and gender because there are fewer than three groups, in this case, we only have female and male. In respects of income the difference remains, narcissistic CEOs receive less than non-narcissists with an income up to 20,000€. This is proved in table I, panel E, and table II, panel C. Additionally, according to table I, panel F, people with only a bachelor's degree are the most narcissistic compared with person that have master or PhD degree. As per table, I, panel G, marital status also influences the level of narcissism, being the individuals that are single more narcissistic, followed by divorced persons. Married persons appear to be less narcissistic.

Regarding the firm variables, firm size is also related with narcissism, in this case, smaller companies (up to 10 employees) are led by narcissistic CEOs as per table I, panel H, and table II, panel D. Furthermore, according to table I, panel I, and table II, panel E, companies with lower revenues (up to 2,000,000€) are led by CEOs more narcissistic than companies that generate higher revenues. In addition, results show that companies with lower ROA (less than 10%) are led by narcissist CEOs. As per table I, panel J, the mean rank is higher in lower companies with ROA (less than 10%) compared to companies that have higher ROA. However, they are almost similar compared to

companies with ROA between 10%-20%. The differences are statistically significant ($F(2) = 3.261$; $p=0,04$). In table II, panel F, the Kruskal-Wallis test shows the same result, since the results show that companies with lower ROA (less than 10%) are led by narcissist CEOs. The differences are statistically significant ($K-W(2) = 9.513$; $p = 0.009$). The mean rank of companies with lower ROA (less than 10%) is also very similar compared to companies with ROA between 10%-20%.

Moreover, in annex III it is possible to see the groups that differ statistically from each other, being marked with one *. According to this annex, it is possible to see that, for example, the first row of results involves the following comparisons: companies with ROA less than 10% vs. companies with ROA between 10%-20% and companies with ROA less than 10% vs. companies with ROA more than 20%. Results show that companies with ROA less than 10% vs. companies with ROA between 10%-20% are not significantly different as the significant level is 0.0468, which is greater or equal than 0.05. Applying this same procedure to companies with ROA more than 20% vs. companies with ROA less than 10% and companies with ROA more than 20% vs. companies with ROA between 10%-20%, results show that companies with ROA more than 20% are significantly different from each other.

5. CONCLUSION

5.1. *Final Conclusions*

This dissertation studies the characteristic of a narcissistic CEO. To do that, we investigated certain characteristics of CEOs, such as age, gender, professional experience, education, marital status, income level and self-confidence. Moreover, we also investigated some characteristics of the companies that they lead, such as sales, company size and ROA.

The results indicate there are a lot of characteristics that differ narcissistic CEOs from non-narcissistic CEOs. Younger CEOs are more narcissistic than older CEOs, and CEOs with lower experience are more narcissistic as well. As predictable, if younger CEOs represents more level of narcissism it is usual that they still do not have much experience as CEOs, thus less professional experience is also associated with narcissism.

Age and tenure are somehow connected. Individuals that consider themselves as self-confident also tend to be more narcissistic persons.

Moreover, females are more narcissistic than males. In respects of income level, narcissistic CEOs receive less than non-narcissists with an income up to 20,000€. Marital status also influences the level of narcissism, being the individuals that are single more narcissistic, followed by divorced persons. Additionally, people with only a bachelor's degree are the most narcissistic compared with person that have master or PhD degree.

In addition, regarding the companies, results show that high narcissism CEO tend to lead companies with lower ROA (less than 10%), smaller companies (revenues up to 2,000,000€ and employees up to 10 persons).

To do the tests we have used Kruskal-Wallis tests, ANOVA tests and Post Hoc tests for the variables. As expected, both Kruskal-Wallis tests and ANOVA tests have the same results. We have also run Post Hoc tests for the variables that the differences are statistically significant. Results shows that all independent variables identified in the literature review are significantly different.

Results could be explained by the fact that our sample is mostly composed by young CEOs, and consequently less years of professional experience. Thus, firm performance could be impact demonstrating lower ROA. Moreover, being the majority young CEOs, it is also typical receiving less than non-narcissistic CEOs and these having only a bachelor's or master's degree.

Moreover, single individuals are characterized for being more narcissistic because, maybe, they still are more dependent from other people, for instance, parents, compared with married individuals, and therefore they have less to lose. Females could be explained by the fact that, now the females tend to have more leading position over the years.

The study is in line with the literature. Based on the previous analysis of the socio-demographic variables, the hypothesis in study is accepted.

5.2. Limitations and Future Research

Example of a few of the limitations regarding this dissertation are related to the method used for collecting the data. There are a lot of people that do not answer, thus we only had a response rate of approximately 5.3%. Moreover, people that are not CEOs can answer to the online questionnaire, which is something that is not possible to control. Additionally, the respondents also can reply to the questionnaire in a randomly way.

For future research, might be interesting to add more firm controls as independent variables, such as equity, debt, liquidity, along with narcissism. Also, it could be noteworthy to analyse companies from the same sector/industry as lower ROA in different industries do not have the same significance.

Finally, results presented that female has more tendencies to narcissism, and it might be interesting to understand the CEO's narcissism impact on firm performance on the female gender.

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APPENDICES

Annex

Annex I - Sample Description

		Frequency	Percentage
Age	18-24 years old	2	1
	25-34 years old	36	17
	35-44 years old	109	51,4
	45-54 years old	49	23,1
	55-64 years old	16	7,5
	More than 65 years old	0	0
	Total	212	100
Gender	Female	69	32,5
	Male	143	67,5
	Total	212	100
Professional Experience	4 year or less	2	0,9
	5 – 9 years	31	14,6
	10 – 19 years	122	57,5
	20 – 30 years	54	25,5
	More than 30 years	3	1,4
	Total	212	100
Education Level	Less than High School	0	0
	High School	0	0
	Bachelor's Degree	95	44,8
	Post – Graduation	70	33
	Master's Degree	42	19,8
	PhD	5	2,4
	Total	212	100

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Income Level	20,000€ or less	89	42
	20,000€ - 40,000€	113	53,3
	40,000€ - 60,000€	5	2,4
	60,000€ - 80,000€	3	1,4
	80,000€ - 100,000€	2	0,9
	100,000€ or more	0	0
	Total	212	100
Marital Status	Married	135	63,7
	Single	56	26,4
	Divorced	21	9,9
	Widowed	0	0
	Total	212	100
Self-confidence Person	Yes	193	91
	No	19	9
	Total	212	100
Number of Employees	Less than 10 people	47	2,2
	10 – 250 people	148	69,8
	More than 250 people	17	0,8
	Total	212	100
Firm Revenues	Less than 2,000,000€	56	26,4
	2,000,000€ - 10,000,000€	131	61,8
	10,000,000€ - 50,000,000€	25	11,8
	More than 50,000,000€	0	0
	Total	212	100
ROA	Less than 10%	98	0,46
	10-20%	109	0,51
	More than 20%	5	0,024
	Total	212	100

Annex II - Descriptive Statistics of Narcissism

	Min.	Max.	Mean	SD	α
NPI-16 score	0	16	4,04	3,04	0,72
1. I know that I am good because everybody keeps telling me so. (n) When people compliment me sometimes get embarrassed.	0	1	0,21	0,41	
2. I like to be the center of attention. (n) I prefer to blend in with the crowd.	0	1	0,33	0,47	
3. I think I am a special person. (n) I am no better or worse than most people.	0	1	0,21	0,41	
4. I like having authority over people. (n) I do not mind following orders.	0	1	0,47	0,50	
5. I find it easy to manipulate people. (n) I do not like it when I find myself manipulating people.	0	1	0,22	0,42	
6. I insist upon getting the respect that is due to me. (n) I usually get the respect that I deserve.	0	1	0,22	0,41	
7. I am apt to show off if I get the chance. (n) I try not to be a show off.	0	1	0,17	0,38	
8. I always know what I am doing. (n) Sometimes I am not sure of what I am doing.	0	1	0,24	0,43	
9. Everybody likes to hear my stories. (n) Sometimes I tell good stories.	0	1	0,29	0,45	
10. I expect a great deal from other people. (n) I like to do things for other people.	0	1	0,28	0,45	
11. I really like to be the center of attention. (n) It makes me uncomfortable to be the center of attention.	0	1	0,25	0,44	
12. People always seem to recognize my authority. (n) Being an authority does not mean that much to me.	0	1	0,51	0,50	
13. I am going to be a great person. (n) I hope I am going to be successful.	0	1	0,27	0,44	
14. I can make anybody believe anything I want them to. (n) People sometimes believe what I tell them.	0	1	0,28	0,45	
15. I am more capable than other people. (n) There is a lot that I can learn from other people.	0	1	0,08	0,27	
16. I am an extraordinary person. (n) I am much like everybody else.	0	1	0,21	0,41	

Note: Min. is the minimum; Max. is the maximum; SD is the standard deviation; α is the Cronbach's alpha. Narcissist responses identified with (n)

Annex III - Test Post Hoc

Panel A – ROA

Multiple Comparisons

Dependent Variable: NPI16

Games-Howell

(I) ROA	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
less than 10%	10-20%	0.503	0.427	0.468	-0.505	1.511
	more than 20%	3.34694*	0.326	0.000	2.570	4.124
10-20%	less than 10%	-0.503	0.427	0.468	-1.511	0.505
	more than 20%	2.84404*	0.275	0.000	2.190	3.498
more than 20%	less than 10%	-3.34694*	0.326	0.000	-4.124	-2.570
	10-20%	-2.84404*	0.275	0.000	-3.498	-2.190

*. The mean difference is significant at the 0.05 level.

Panel B – Age

Multiple Comparisons

Dependent Variable: NPI16

Games-Howell

(I) Age	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-24 years old	25-34 years old	1.0556	0.5194	0.5396	-8.4603	10.5714
	35-44 years old	5.3785	0.5549	0.0620	-0.8368	11.5938
	45-54 years old	8.1275	0.5047	0.0752	-3.9267	20.1816
	55-64 years old	8.5000	0.5000	0.0770	-4.6103	21.6103
25-34 years old	18-24 years old	-1.0556	0.5194	0.5396	-10.5714	8.4603
	35-44 years old	4.32295*	0.2788	0.0000	3.5526	5.0933
	45-54 years old	7.07190*	0.1563	0.0000	6.6301	7.5137
	55-64 years old	7.44444*	0.1405	0.0000	7.0404	7.8485
35-44 years old	18-24 years old	-5.3785	0.5549	0.0620	-11.5938	0.8368
	25-34 years old	-4.32295*	0.2788	0.0000	-5.0933	-3.5526
	45-54 years old	2.74895*	0.2503	0.0000	2.0559	3.4420
	55-64 years old	3.12150*	0.2408	0.0000	2.4533	3.7897
45-54 years old	18-24 years old	-8.1275	0.5047	0.0752	-20.1816	3.9267
	25-34 years old	-7.07190*	0.1563	0.0000	-7.5137	-6.6301
	35-44 years old	-2.74895*	0.2503	0.0000	-3.4420	-2.0559
	55-64 years old	.37255*	0.0684	0.0000	0.1791	0.5660
55-64 years old	18-24 years old	-8.5000	0.5000	0.0770	-21.6103	4.6103
	25-34 years old	-7.44444*	0.1405	0.0000	-7.8485	-7.0404
	35-44 years old	-3.12150*	0.2408	0.0000	-3.7897	-2.4533
	45-54 years old	-.37255*	0.0684	0.0000	-0.5660	-0.1791

*. The mean difference is significant at the 0.05 level.

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Panel C - Tenure

Multiple Comparisons

Dependent Variable: NPI16

Games-Howell

(I) Tenure	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
up to 4 years	5-9 years	0.9839	0.5229	0.5715	-8.0690	10.0368
	10-19 years	5.4268	0.5504	0.0649	-1.0735	11.9272
	20-30 years	8.3113	0.5029	0.0754	-4.1156	20.7383
	30 years or more	8.5000	0.5000	0.0770	-4.6103	21.6103
5-9 years	up to 4 years	-0.9839	0.5229	0.5715	-10.0368	8.0690
	10-19 years	4.44296*	0.2762	0.0000	3.6796	5.2063
	20-30 years	7.32745*	0.1622	0.0000	6.8628	7.7921
	30 years or more	7.51613*	0.1529	0.0000	7.0726	7.9596
10-19 years	up to 4 years	-5.4268	0.5504	0.0649	-11.9272	1.0735
	5-9 years	-4.44296*	0.2762	0.0000	-5.2063	-3.6796
	20-30 years	2.88449*	0.2364	0.0000	2.2309	3.5381
	30 years or more	3.07317*	0.2301	0.0000	2.4361	3.7103
20-30 years	up to 4 years	-8.3113	0.5029	0.0754	-20.7383	4.1156
	5-9 years	-7.32745*	0.1622	0.0000	-7.7921	-6.8628
	10-19 years	-2.88449*	0.2364	0.0000	-3.5381	-2.2309
	30 years or more	.18868*	0.0543	0.0088	0.0354	0.3420
30 years or more	up to 4 years	-8.5000	0.5000	0.0770	-21.6103	4.6103
	5-9 years	-7.51613*	0.1529	0.0000	-7.9596	-7.0726
	10-19 years	-3.07317*	0.2301	0.0000	-3.7103	-2.4361
	20-30 years	-.18868*	0.0543	0.0088	-0.3420	-0.0354

*. The mean difference is significant at the 0.05 level.

Panel D – Education

Multiple Comparisons

Dependent Variable: NPI16

Games-Howell

(I) Education	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Bachelor's degree	Post-graduation	4.48266'	0.2826	0.000	3.7481	5.2173
	Master	5.61100'	0.2527	0.000	4.9509	6.2711
	PhD	5.74737'	0.2473	0.000	5.1007	6.3941
Post-graduation	Bachelor's degree	-4.48266'	0.2826	0.000	-5.2173	-3.7481
	Master	1.12834'	0.1464	0.000	0.7446	1.5121
	PhD	1.26471'	0.1368	0.000	0.9043	1.6251
Master	Bachelor's degree	-5.61100'	0.2527	0.000	-6.2711	-4.9509
	Post-graduation	-1.12834'	0.1464	0.000	-1.5121	-0.7446
	PhD	0.136363636	0.0523	0.0584	-0.0035	0.2762
PhD	Bachelor's degree	-5.74737'	0.2473	0.000	-6.3941	-5.1007
	Post-graduation	-1.26471'	0.1368	0.000	-1.6251	-0.9043
	Master	-0.136363636	0.0523	0.058	-0.2762	0.0035

*. The mean difference is significant at the 0.05 level.

Panel E – Income Level

Multiple Comparisons

Dependent Variable: NPI16
Games-Howell

(I) Income Level	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
if up to 20.000€	20.000 – 40.000€	5.05956 [*]	0.2636	0.0000	4.3293	5.7898
	40.000€ – 60.000€	5.98876 [*]	0.2431	0.0000	5.3116	6.6659
	60.000€ – 80.000€	5.98876 [*]	0.2431	0.0000	5.3116	6.6659
	80.000€ – 100.000€	5.98876 [*]	0.2431	0.0000	5.3116	6.6659
20.000€ – 40.000€	if up to 20.000€	-5.05956 [*]	0.2636	0.0000	-5.7898	-4.3293
	40.000€ – 60.000€	.92920 [*]	0.1019	0.0000	0.6466	1.2118
	60.000€ – 80.000€	.92920 [*]	0.1019	0.0000	0.6466	1.2118
	80.000€ – 100.000€	.92920 [*]	0.1019	0.0000	0.6466	1.2118
40.000€ – 60.000€	if up to 20.000€	-5.98876 [*]	0.2431	0.0000	-6.6659	-5.3116
	20.000 – 40.000€	-.92920 [*]	0.1019	0.0000	-1.2118	-0.6466
	60.000€ – 80.000€	0.0000	0.0000		0.0000	0.0000
	80.000€ – 100.000€	0.0000	0.0000		0.0000	0.0000
60.000€ – 80.000€	if up to 20.000€	-5.98876 [*]	0.2431	0.0000	-6.6659	-5.3116
	20.000 – 40.000€	-.92920 [*]	0.1019	0.0000	-1.2118	-0.6466
	40.000€ – 60.000€	0.0000	0.0000		0.0000	0.0000
	80.000€ – 100.000€	0.0000	0.0000		0.0000	0.0000
80.000€ – 100.000€	if up to 20.000€	-5.98876 [*]	0.2431	0.0000	-6.6659	-5.3116
	20.000 – 40.000€	-.92920 [*]	0.1019	0.0000	-1.2118	-0.6466
	40.000€ – 60.000€	0.0000	0.0000		0.0000	0.0000
	60.000€ – 80.000€	0.0000	0.0000		0.0000	0.0000

*. The mean difference is significant at the 0.05 level.

Panel F – Marital Status

Multiple Comparisons

Dependent Variable: NPI16
Games-Howell

(I) Marital Status	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Single	Married	5.87579 [*]	0.225	0.000	5.340	6.411
	Divorced	3.05357 [*]	0.674	0.000	1.369	4.739
Married	Single	-5.87579 [*]	0.225	0.000	-6.411	-5.340
	Divorced	-2.82222 [*]	0.660	0.001	-4.482	-1.163
Divorced	Single	-3.05357 [*]	0.674	0.000	-4.739	-1.369
	Married	2.82222 [*]	0.660	0.001	1.163	4.482

*. The mean difference is significant at the 0.05 level.

Panel G – Firm Size

Multiple Comparisons

Dependent Variable: NPI16
Games-Howell

(I) Firm Size	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
up to 10 employees	10-250 employees	2.21895*	0.526	0.000	0.959	3.479
	250 employees or more	4.44431*	0.517	0.000	3.200	5.688
10-250 employees	up to 10 employees	-2.21895*	0.526	0.000	-3.479	-0.959
	250 employees or more	2.22536*	0.315	0.000	1.471	2.980
250 employees or more	up to 10 employees	-4.44431*	0.517	0.000	-5.688	-3.200
	10-250 employees	-2.22536*	0.315	0.000	-2.980	-1.471

*. The mean difference is significant at the 0.05 level.

Panel H – Firm Revenues

Multiple Comparisons

Dependent Variable: NPI16
Games-Howell

(I) Revenues	(J) NPI16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
up to 2,000,000€	2,000,000€-10,000,000€	1.29321*	0.529	0.043	0.031	2.555
	10,000,000€-50,000,000€	3.59214*	0.535	0.000	2.313	4.871
2,000,000€-10,000,000€	up to 2,000,000€	-1.29321*	0.529	0.043	-2.555	-0.031
	10,000,000€-50,000,000€	2.29893*	0.355	0.000	1.449	3.148
10,000,000€-50,000,000€	up to 2,000,000€	-3.59214*	0.535	0.000	-4.871	-2.313
	2,000,000€-10,000,000€	-2.29893*	0.355	0.000	-3.148	-1.449

*. The mean difference is significant at the 0.05 level.

Annex IV - Questionnaire

1. How old are you?

_____ years old

2. What is your gender?

- Male
- Female

3. What is your marital status?

- Single
- Married
- Divorced
- Widowed

4. How many years of experience do you have as leader (CEO, team leader, etc.)?

- 4 year or less
- 5 – 9 years
- 10 – 19 years
- 20 – 30 years
- More than 30 years

5. What is your education level?

- Less than High School
- High School
- Bachelor's Degree
- Post – Graduation
- Master's Degree
- PhD

6. What is your annual income level?

- 20,000€ or less
- 20,000€ - 40,000€
- 40,000€ - 60,000€
- 60,000€ - 80,000€
- 80,000€ - 100,000€

100,000€ or more

7. Do you consider yourself as a confidence person?

- Yes
 No

8. How many employees have the company that you are responsible?

- Less than 10 people
 10 – 250 people
 More than 250 people

9. What is the value that the company that you are responsible have generated in sales? (most recent values: 2019, 2020)

- Less than 2,000,000€
 2,000,000€ - 10,000,000€
 10,000,000€ - 50,000,000€
 More than 50,000,000€

10. What is the ROA of the company that for are responsible? (most recent values: 2019, 2020)

_____ %

In the following questions, please choose only one response, according to your way of being and thinking.

1.

- I know that I am good because everybody keeps telling me so.
 When people compliment me sometimes get embarrassed.

2.

- I like to be the center of attention.
 I prefer to blend in with the crowd.

3.

- I think I am a special person.
 I am no better or worse than most people.

4.

- I like having authority over people.
 I do not mind following orders.

5.

- I find it easy to manipulate people.
- I do not like it when I find myself manipulating people.

6.

- I insist upon getting the respect that is due to me.
- I usually get the respect that I deserve.

7.

- I am apt to show off if I get the chance.
- I try not to be a show off.

8.

- I always know what I am doing.
- Sometimes I am not sure of what I am doing.

9.

- Everybody likes to hear my stories.
- Sometimes I tell good stories.

10.

- I expect a great deal from other people.
- I like to do things for other people.

11.

- I really like to be the center of attention.
- It makes me uncomfortable to be the center of attention.

12.

- People always seem to recognize my authority.
- Being an authority does not mean that much to me.

13.

- I am going to be a great person.
- I hope I am going to be successful.

14.

- I can make anybody believe anything I want them to.
- People sometimes believe what I tell them.

15.

- I am more capable than other people.
- There is a lot that I can learn from other people.

16.

- I am an extraordinary person.
- I am much like everybody else.