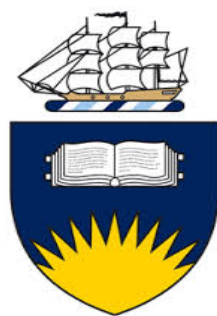


**An examination of the moral reasoning abilities  
of Cypriot Accounting students**

**MARIOS (MAZ) DEMOSTHENOUS**

A thesis submitted in partial fulfillment to obtain the Degree of  
Doctor of Education at Flinders University



**College of Education, Psychology and Social Work**

**FLINDERS UNIVERSITY OF SOUTH AUSTRALIA**

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## **Declaration**

I certify that this study does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Flinders University, September 2017

**Maz Demosthenous**

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## **Abstract**

The business world and in particular, the accounting profession's reputation has been tarnished in the media with recent corporate collapses and scandalous events involving accountants. In recent years fraudulent financial activities have increased leading to detrimental effects on economies globally. According to the Association of Certified Fraud Examiners (2016) it is estimated that fraud is costing businesses trillions of dollars. As a result of this wave of scandals and fraudulent activities there has been renewed calls for ethics education in the accounting profession and the moral judgment of accountants has been criticised (Byrne et al. 2002; Warinda 2013). The adequacy of accounting tertiary education in improving the moral reasoning and ethical behaviour of accounting students has been questioned and has become a topic of debate.

The purpose of this study is to explore/examine the moral reasoning abilities of the future accountants of Cyprus. More specifically, to investigate whether tertiary accounting and ethics education has a positive effect on the moral reasoning and development of Cypriot accounting students. The influences of gender, age and work experience on the moral reasoning levels of these students were also examined. In this study the Defining Issues Test (DIT) was used to assess the accounting students' moral reasoning. The different year levels were compared for significant differences in their P scores (moral reasoning) as measured by the DIT.

The study found that the Cypriot accounting students exhibited an exceptionally high level of moral reasoning and therefore use post conventional level reasoning in their decision making as per Kohlberg's theory (1969). Cypriot accounting students that have studied ethics used significantly higher level of moral reasoning than those students who have not studied ethics. In comparing the P scores of students from the different year levels there was a significant difference in the P scores and it was found that senior year students had significantly higher level moral reasoning than the first year students. These results suggest that tertiary accounting and ethics education has a positive effect on the moral reasoning and development of Cypriot students. It was also found that female accounting students are more ethically mature than their male counterparts as measured by the DIT and responded positively to an ethics course. Additionally, it was found that students who are employed or

have work experience achieved significant higher P scores than the students that have never worked.

This chapter provides a general discussion of the research problem. It begins with the introduction, outlines the background and research context for the study, followed by the justification and scope. Finally, the research questions and objectives are outlined.

### **Chapter 1: Introduction**

The business world and in particular, the accounting profession's reputation has been tarnished in the media with recent corporate collapses and scandalous events involving accountants. The collapses of large and powerful corporations such as Enron and WorldCom and the breakup of Arthur Andersen were the result of unethical behaviour by accountants and business leaders (Brown and Trevino, 2006). According to Brooks (2004) financial scandals involving accountants are not the result of methodological errors but instead errors in judgment. As a result of these scandals there has been renewed calls for ethics education in the accounting profession (Holland and Albrecht, 2013) and the moral judgement of accountants has been criticised (Byrne et al. 2002; Warinda 2013) and become a topic of debate.

In 2012 the Association of Certified Fraud Examiners (ACFE), investigated 1843 fraud cases and produced a report on fraud in the accounting profession. ACFE found that \$2.9 trillion were lost between 2008 and 2009 as a result of fraud and that the majority of these cases (77%) involve individuals in the areas of accounting, upper management and sales. Furthermore, an interesting fact of the report revealed that 87% of the individuals involved in these fraud cases were first time offenders which means the business environment is such that new individuals are engaging in fraudulent behaviour. Apparently fraud and other unethical behaviour does not occur randomly. According to Cressey (1950) who developed the fraud triangle theory certain factors have to be present for individuals to behave unethically and engage in fraudulent behaviour (see section 3.1 for a discussion on the fraud triangle). In order to understand the continuing unethical behaviour of accountants and managers it is important and would be useful to research the variables that may influence the moral reasoning and development of accounting students who in the near future will be employed and could be working in the above listed areas.

In addition to the high profile corporate scandals of Lehman Brothers, Enron, Worldcom, and Parmalat (Krambia-Kapardis 2016), the global financial crisis and fraudulent behaviour of



business professionals has had an impact on all economies including EU members Cyprus and Greece. In 2009-10 Greece as a nation was facing bankruptcy and as a result Cyprus was negatively impacted because of their close financial ties. In 2010 local banks of Cyprus invested €5.7 billion in Greek government bonds (GGBs) at a time when the Greek economy was on a downturn. A year later these GGBs were devalued 80% by the Eurogroup costing the Cypriot banks a loss €4.5 billion (Independent Commission on the Future of the Cyprus Banking Sector, Interim Report, June 2013, p. 26). This huge loss for the banks of Cyprus could have been avoided if those in power/the executives behaved more ethically and applied better professional judgment. In recent years the Deputy Attorney General (Psyllides 2017), the Mayor of Paphos (Anastasiou 2017) and the Governor of the Central Bank of Cyprus (Psyllides 2014) have all been charged with various corruption offences and have received prison sentences. It seems to be that unethical behaviour, poor corporate governance, lack of transparency and accountability had led to the global financial crisis and as illustrated by various Independent Commission Reports these issues also apply to the recent crisis of Cyprus and are continuing to be a problem (Independent Commission on the Future of the Cyprus Banking Sector. 2013a. Interim Report June 2013; Pikiş, G.M., Kramvis, A. and Nicolaou, E. 2013). If Cyprus is to improve its reputation and to be trusted by its stakeholders 'ethics' needs to be understood and applied by its business leaders and those that make important decisions.

Jennings (2004) and other researchers have questioned whether the tertiary education received by business leaders (accountants, auditors and managers) at universities could be a contributing factor to the lack of moral judgments and unethical decisions that were made and led to these collapses, scandals and financial losses. In fact, it has been argued that it is the poor quality accounting education that contributed to the US and other scandals globally (Low et al. 2008; Amernic and Craig 2004). Felton and Sims (2005) stated that former business students have been at the "center of the business scandals of the past few years" (p. 377). The criticism directed at the universities as being partly responsible for the failure of these individuals of not having the ethical competencies to make ethical decisions provided motivation for this study.

The questions that people are now asking are "Could these lapses in moral judgment been prevented"? Can university education provide future accountants and business leaders with

the appropriate ethics knowledge and moral reasoning abilities to make ethical decisions? (Williams 2003; Low et al. 2008; Beggs and Dean 2006). It would have been interesting to have examined the moral reasoning of the individuals that were involved in the scandals and in particular 'back in the day' when they were students but unfortunately that cannot be done. Therefore as an alternative, It would be useful and interesting to investigate the moral reasoning of accounting students who will be the accountants and managers of the future and determine whether accounting education can develop students' moral reasoning ability to make ethical decisions is the aim of this study.

This study will contribute to knowledge in that it will increase understanding of accounting students' moral judgement and moral development. This is important as these students in the future will be managing corporations, working and making ethical decisions as accountants and representing the accounting profession. The study will also expand the body of knowledge concerning the effects of accounting and ethics education on students' moral judgment, reasoning and development. As evidence appears to suggest that a university environment can develop the moral development and ethical competencies of students (Rossou 2002; Sims 2002; Thomas 2012), this study will examine the effect of tertiary accounting education on Cypriot students' moral reasoning and development. Furthermore, it will specifically examine the effects of ethics education on the moral reasoning levels and development of these students.

### **1.1 Background**

The recent corporate accounting scandals have caused many to question whether the accounting education and in particular the business ethics courses in the accounting curriculum are adequate for students to develop the necessary skills or abilities to identify and deal with ethical dilemmas in the workplace (Maddison 2002; Stape 2002; Mintzberg 2004; O'Toole 2005 and Beggs and Dean 2006). It is the belief of many that ethics education should be increased in business and in particular in the area of accounting education (Swanson 2005; Mintz 2007; Waddock 2005). To address this loss of credibility the accounting profession is attempting to improve the ethical decision making of accountants by emphasising and supporting the importance of teaching ethics to accounting students and changing the curriculum of accounting courses. The American institute of Certified Public accountants and American Accounting Association Education (2012) support the study of

ethics in tertiary studies and state that education should "build the skills of students in ethical decision making and responsible judgment" (p. 133). Accounting educators are responsible for teaching and providing their students with the necessary skills to be successful in the accounting profession (Buchholz 2012). But as result of the current 'crisis in confidence' facing the accounting profession, accounting educators are confronting greater challenges as to how to teach the new generation of accountants and business executives" (Brown-Libur and Porco 2011, p. 440). One may think that these concerns have been addressed but instead research studies on the relationship of ethics education to improving university students' moral reasoning and development is limited (Abdolmohammadi 2005). Additionally, a recent survey found that only 20% of UK business schools offered a separate course in ethics (Jennings and Marriott 2013, p. 7).

"As accounting and business evolve, the required knowledge and skills will also change and Accounting profession will require more judgment from its accounting personnel" (The American institute of Certified Public accountants and American Accounting Association Education, 2012, p. 133). Accountants' professional judgment requires more than just the application of technical accounting rules and regulations (Gaa 1994; Thoma 2010). With the application of accounting standards there is also a requirement for the accountant to apply professional judgment in a situation where there is potentially no correct technical solution. Armstrong (2002, p. 145) claims that "accounting is an art, not a science. It requires significant judgments and assumptions and 10 accountants given complex circumstances, will probably arrive at several different net income or taxable figures".

It seems that ethical behaviour and professional judgment is becoming very much part of the Accountant's responsibilities and therefore they must possess these skills if they are to fulfil their duties. Accountants are expected to apply responsible judgment in their daily work in dealing with different scenarios. Leung, Cooper and Gavin (1993, p. 11) identified a number of ethical challenges that accountants may face:

- client proposals for tax evasion and manipulation of the financial statements;
- failure to maintain technical competence in the discharge of professional duties;
- integrity in admitting mistakes made by oneself;
- fee problems;

- coping with a superior's instructions to carry out unethical acts;
- deciding which external activities will cause a significant conflict of interest with employer or client;
- maintaining an adequate degree of confidentiality of your employer or client;
- presenting financial information in the most proper manner so as to not deceive users;
- balancing one's responsibility for cost control with the necessity to treat employees fairly;
- using inside information for personal gain;
- receiving unreasonable favours, gifts and entertainment;
- unethical solicitation of professional work.

As stated by Wedlick (1993, p. 3), "accountants in all areas of the discipline are slowly coming to the realisation that ethical questions are intrinsic to their day-to-day professional lives". Accountants' professional judgment would require them on a regular basis to solve all sorts of dilemmas, including ethical dilemmas (Gaa 1994; Moizer 1995). If accountants are to deal with ethical situations appropriately they will need to acquire and develop the necessary knowledge and tools to make ethical decisions and it seems that only through education or training this may be achieved. Research has shown that accounting students that have studied ethics or have completed an ethics topic in the past seem to be more ethically aware and use higher levels of moral reasoning in dealing with dilemmas than those who have not completed an ethics topic (Demosthenous 2006; O'Leary 2009; Suryaningrum, Hastuti, and Suhartini 2013; Martinov-Bennie and Mladenovic 2015).

Ethical dilemmas are situations in which a decision has to be made but there is no correct ethical solution/answer (Ferrell et al. 2008). An ethical dilemma is a situation where ethical values/principles are sacrificed in order to select an outcome that will favour one party/entity over the other. For example, does one prioritise/select family over work or does an individual select loyalty to family to be more important than the loyalty to their boss/workplace? The outcome of a decision will be to favour one at the cost of the other party.

When preparing financial statements for any business, accountants have a responsibility to present the most truthful and accurate financial position of that business and to provide any other information that potentially the user may need in making a decision about the status of

that corporation. In doing this, accountants are behaving ethically and accomplishing the purpose of their profession - which is to meet the needs of the clients or the company they are representing and any other users of this information. In being honest and behaving ethically they are also serving the best interests of all the stakeholders who are also entitled to truthful representation of an organisation's financial status (Duska, Duska and Ragatz 2011). But the needs of the organisation may differ with that of other stakeholders and in this instance accountants are faced with an ethical dilemma and would have to make an ethical professional judgment/an ethical decision. The accountant will be faced with the dilemma and will have to make a decision as to whose needs should be met and take priority - the organisation or other users.

As a result of the corporate collapses and scandalous events involving accountants (Krambia-Kapardis 2016), today's society now more than ever demands that both financial and non-financial information that is correct and truthful is provided by accountants. Financial statement fraud had seen the demise of large companies such as Enron, Arthur Anderson and World com. According to the 2016 report to the Nations on Occupational Fraud and Abuse, it was claimed that each year 5% of a company's revenue is lost due to fraud (p. 3). Transparency is becoming increasingly important and it is the way forward for accountants and the corporations they represent if they are to fulfil their social responsibility to all stakeholders and eliminate fraudulent behaviour occurring. The questions that then need to be asked is whether accountants provide more than just financial information to the public and should it be mandatory? To fulfil social responsibility does it mean that one has to behave ethically? Additionally, does that include a responsibility for accountants and the organisation/corporations they represent to provide both financial and non-financial information voluntarily? A discussion is provided in chapter three of this thesis.

## **1.2 Research Context**

This study is conducted in the context of Cyprus. Cyprus has a small population of approximately 848,000 inhabitants. It is strategically located in the Mediterranean between the Middle East and Southern Europe and as a result has endured years of occupations and invasions from many different countries. For example, Cyprus was a British colony until 1960 and there was a Turkish invasion in 1974 resulting in a 40% occupation of the northern part of the island. It joined and has been a member of the European Union (EU) since 2004 (Cyprus

in figures in 2015, p. 3). Cyprus has a low corporate tax rate of 12.5% (Tax facts and figures, Cyprus 2017) and has always attracted worldwide investors wanting to avoid paying tax in their country. In addition, Cyprus, known for its unique culture, weak corporate governance and its lacking of legislation to control the activities of those in authority and positions of power further contributes to corruption (Arsalidou and Krambia-Kapardis 2015; Krambia-Kapardis 2014). Recently, Cyprus as a nation was facing bankruptcy, and a growing trend with regards to corruption (Assiotis and Krambia-Kapardis 2014). According to the Transparency international Cyprus (TIC) survey (2013) results the majority of Cypriot people perceive or understand corruption to be something different to most western people when it comes to them behaving unethically or in a corrupt manner. In addition, they believe corruption is a major problem at both national and local level and in particular among politicians and the government sectors. Individuals are behaving unethically at all levels to benefit themselves and this leads to an epidemic level of corruption and one that cannot be controlled. This research will provide the Cypriot perspective with a related topic examining the ethical reasoning and judgment abilities of future accountants/professionals. Furthermore, the perspective of accounting students from a society that has redefined the term Corruption and understand it to mean something different to most Western societies, is investigated.

Notwithstanding the comments above, Cyprus does not rank highly when compared with the developed countries in terms of corruption in the report of Transparency international (TI). In 2016 in a review of 179 countries TI ranks Cyprus in 47nd position, (a fall from a ranking of 32nd in 2015) with a corruption perception index of 55. According to TI a score of 100 denotes perceptions of a society free of corruption and a score of zero, a highly corrupt one. This decline in ranking indicates that corruption in Cyprus is perceived to be a continuing problem and one that is getting worse. Nearly two thirds of respondents of the TIC survey (2011) were university graduates and it would have been interesting to know whether they had ethics training and, if not, if their perception of corruption would have been different if they had.

### 1.2.1 Cypriot Culture and ethical decision making

For many years Culture and regions of the world has been used as the basis for explaining differences in social systems (Hofstede 1980). Hofstede (1991, p. 112) defines culture “as a set of likely reactions of citizens with a common mental programming... reactions need not be found within the same persons, but only statistically more often in the same society”. Thus

it would be reasonable to assume and argue that culture may well affect one's ethical reasoning and behaviour and therefore a discussion on the culture of Cyprus is warranted and provided below so one can understand the unique cultural situation in Cyprus.

In recent times in Cyprus it has been identified that Corruption is a nationwide problem. Poor corporate governance, lack of transparency, a culture of nepotism, deference and irresponsible behaviour by those in power/executives led to the Cyprus financial crisis (Arsalidou and Krambia-Kapardis 2015). These practices that have characterised the Cypriot culture and in particular in the corporate world, have resulted in business leaders and other professionals behaving unethically.

Geert Hofstede is perhaps the most well-known and cited researcher in the area of Culture. His research is one of the most extensive cross-cultural studies ever conducted surveying the values of employees of a multinational corporation located in more than 50 countries (Hofstede 2001).

From the initial results, Hofstede (2001) developed a model that identifies and describes four societal value dimensions. They can be summarised as follows:

- Individualism versus Collectivism (IDV) is the degree of independence or group orientation in a society. In an individual environment the rights of individuals are more important than those of the group and those of the group and individuals are supposed to look after themselves. In these societies wealth, materialism and status is more important than relationships as opposed to collective societies. In a collective environment, individuals can expect their relatives or other in-group to look after them. Strong loyalties to extended families or communities prevail. This dimension relates to people's "I" or "We" (Hofstede et al, 2010, p. 91).
- Large versus Small Power distance (PDI) - Power Distance is "the extent to which the less powerful members' of institutions and organisations within a country expect and accept that power is distributed unequally" (Hofstede et al, 2010, p. 61). People from high power distance cultures accept top-down control and prefer little consultation between those power and lower level employees. In contrast to this, low power distance cultures greater equality and empowerment is what people strive for and individuals prefer greater

consultation by leaders. This dimension addresses the issue of how a society handles inequality of power amongst its people.

- Strong versus weak uncertainty avoidance (UAI) – “Uncertainty avoidance is the extent to which the members of culture feel threatened by ambiguous or unknown situations” (Hofstede et al, 2010, p. 191). Strong uncertainty avoidance societies maintain a need for written and unwritten rules to be followed and look for structure that makes events more interpretable and predictable. In weak uncertainty avoidance societies, people are more relaxed and tolerant of differences in ideas and feel that rules can be changed and are open to interpretation (Hofstede et al, 2010, p. 223).
- Masculinity versus femininity (MAS) describes a task versus relationship orientation. Masculine societies strive for a performance society and emphasise money and things and have a preference for achievement and heroism. Feminine societies, on the other hand, strive for a welfare society and are concerned about relationships, nurturing, quality of life and caring for the weaker group. In a feminine society rewards are based on equality and in a masculine one the rewards are based on equity (Hofstede et al 2010, p. 170-171).

Hofstede’s analysis of culture has never been conducted specifically on the Greek people of Cyprus. However, this study will be using the Hofstede’s analysis of Greece as a replacement for Cyprus for the reason that Cyprus is the only country in the world that the official language and culture is the same as that of Greece. Cyprus nearly became part of Greece as late as the 1950's (William and Mallinson, 2005). Greece and Cyprus are the same in that they are both located in the Mediterranean Sea, Modern Greek is the official national language, the Greek population in both countries follow the Greek orthodox religion and both countries share the same rich Greek culture. In addition, Cyprus has had very close financial ties with Greece which led to the banking crisis of recent.

For Individualism (IDV) Greece achieved a relatively low score of 35 which would rate Greece as a more of a collective society, which would mean strong loyalties to extended families or communities prevail. Generally, family is also very important to Cypriot people and loyalty to their community does prevail. For example, many parents build another floor above their family home so as to keep their children close by and assist them with cooking and child



minding duties. Overall, Cypriot people can be considered to be a collective society given their preference for family, extended family and loyalty to their community.

With regards to Power Distance (PDI) Greece is rated with an index of 55 meaning they would more likely to accept unequal distribution of power and less consultation between superiors and subordinates. Arsalidou and Krambia-Kapardis (2015) claim Cyprus to have a culture of deference and submissiveness. Furthermore, they state that lower level employees generally select to or avoid voicing their views, particularly if, in doing so, they might appear to be questioning those in authority (p. 362). If this is the case in Cyprus it can be said that Cypriot society would rate similarly to Greece in terms of Power distance.

Hofstede (2010) claims that any country with more than 50% of its population practising the Greek orthodox religion, is found to be in the Uncertainty Avoidance quadrant with low tolerance on ambiguity. This claim is supported by Hofstede's analysis of Greece of whose Uncertainty avoidance (UAI) index score was a very high 112. Although there is no formal Hofstede analysis on Cyprus, Droussiotis (2003) attempted to describe the characteristics of Cypriot employees (p. 423), and notes that Cypriot employees rate high on accepting unequal power between managers and employees, and this possibly equated to high power distance (Hofstede, 1994) and being risk averse possibly equates to high uncertainty avoidance.

When it comes to gender equality Cyprus does not perform well. In 2015 the World Economic Forum annual report ranked Cyprus 100 globally out of 145 countries and was second lowest ranked country of all EU members. It was reported that women on average earn two thirds of men's earnings and there are very few women in executive positions and even less in politics. For example, in 2015 there was only one female minister and 14 per cent of the members of parliament were women (Chrysostomou 2015). The low ranking of Cyprus in terms of gender equality could indicate that Cyprus would rank high in terms of Masculinity. On the Masculinity (MAS) dimension Greece scored an index score of 57, just above the world average of 50.

In support of a link between culture and ethics, Husted (1999) reports a relationship to exist between levels of societal corruption and power distance, uncertainty avoidance and masculinity (p. 339). Similarly, Getz and Volkema (2001) found a link between levels of corruption and power distance and uncertainty avoidance. In Cyprus at the moment there is

a nationwide problem of corruption and poor corporate governance (Arsalidou and Krambia-Kapardis 2015) and it seems that the Cypriot people have a different understanding as to what is corruption when compared to most western societies.

According to a recent study conducted by Transparency International Cyprus (TIC) (2013) investigating Cypriot's perception regarding corruption in Cyprus found that corruption (in line with the previous 2010 and 2011 reports) is widespread throughout the country. Apparently it is in politics, the society, and throughout the public and private sector (Assiotis and Krambia-Kapardis 2014). The TIC (2013) study included a sample of 953 men and women from private sector, semi government organisations and the public sector. Ninety one percent of the respondents of this survey consider corruption a major issue in Cyprus and sixty percent claim to have been affected by corruption directly. Seventy nine percent of respondents of this survey have lost all hope and appear to believe corruption is inevitable and will increase in the future.

In addition, it is evident from the TIC (2013) study that the Cypriot people do not trust those in authority to behave ethically or do the right thing. Almost all interviewees of this study (ninety three percent) believe that the police are corrupted and (ninety six percent of respondents) that the politicians are the most corrupt and abuse their position and power for their personal gain. In order to combat corruption in Cyprus a number of measures were suggested including for more political accountability. Amongst other measures TI Cyprus (2013) suggested that legislation must be enacted regarding whistleblowing, lobbying political parties and asset declaration by Member of Parliament (Krambia-Kapardis 2013, p. 8). At present there is no legislation to audit the actions of the police force in particular the more senior officers. Only recently the Justice Minister Ionas Nicolaou in the fight against corruption in particular in the police force, has been involved in the development of legislation to give authority to an internal audit service to investigate information or complaints related to corruption issues (Christou, 2016). Given the lack of governance/regulation of the police force it is not surprising that the Cypriot public do not trust the police and generally have lost all hope in the fight to combat corruption). It is alarming to think that no legislation or an appropriate governance system has been in place to regulate the activities of politicians, the police force and other individuals in positions of power.

It is evident from the findings of the TIC surveys that the Cypriot people have redefined corruption in their minds and bribing individuals with authority to bend the rules or to break the law is not considered to be a corrupt act. For example, the TIC (2011) survey revealed that forty percent of the respondents indicated that receiving a degree or driver's license in exchange for money is not corruption.

An explanation for the results of this survey could also be that the Cypriot people have become a victim of 'socialization rationalization'. They rationalize and justify their corrupt actions because they take the view that corrupt acts are justified because others around them are behaving in a corrupt manner (Anand, Ashforth and Mahendra, 2005, p. 9). They are behaving just like the people around them. It seems that with all the corruption issues and the banking crisis of recent times in Cyprus has presented the right environment or factors for the Cypriot people to engage in fraudulent behaviour. According to the fraud triangle model (Cressey, 1953) the three factors are pressure and/or incentive to commit fraud, an opportunity has to present itself and the fraudster has to rationalise to themselves or others as to why they engaged in fraud and therefore make themselves feel better about behaving unethically. A discussion will be provided in chapter three.

Another interesting fact of the TIC survey is that thirty percent of the respondents considered giving money to reduce taxes and did not consider this to be corruption. If this is the case this could make life difficult for ethical accountants and those working in taxation services if clients are offering bribes to reduce their tax debts and do not see this to be a problem or a corrupt act. Accountants would be faced with the ethical dilemma of whether to accept or refuse a bribe from their client and therefore will have to apply ethical judgment to make a decision and resolve this ethical dilemma. An ethical accountant with integrity would be expected to refuse the request but then would be faced with a further dilemma of potentially losing these clients and related fees to other less ethical accountants who would be willing to accept a bribe to reduce their clients' tax debt. In this instance, an ethical accountant's morals and strength of character would be tested and would have to apply higher level of moral judgment to refuse the bribe from clients.

At the same time, this survey revealed that sixty one percent believe that not enough is being done to fight corruption and in the cases that something was done it was not enough. Seventy

five percent of the respondents of the survey blame the government, sixty seven percent the police, and fifty eight the prosecutors and judges for the problem of corruption in Cyprus (Assiotis and Krambia-Kapardis 2014, p. 260).

Sadly, it seems that in Cyprus Corruption has become so ingrained in the culture that the people of Cyprus are not sure as to 'what constitutes a corrupt action' or have a different explanation or definition as to 'what is Corruption'. It seems in Cyprus that (bribery) giving money to break the rules or the law has become an acceptable behavior and by many people it is not classified to be a corrupt act.

There is an obvious lack of transparency and good governance in Cyprus. Lack of transparency and accountability has led to unethical behaviour by those in government and in positions of power including misallocating company resources and government money (Arsalidou and Krambia-Kapardis, 2015, p. 371). It is evident from the ITC studies that urgent law reform needs to take place if the corruption problem in Cyprus is to be addressed and eliminated. Additionally, Individuals/professionals will need to behave ethically in the workplace to decrease corruption. To encourage ethical behaviour and assist individuals with their moral judgment, they need to be educated on ethics and understand the importance of it before they can apply ethical principles and make ethical decisions.

Given the tarnished reputation of the accounting profession and the results of the above studies indicating a national corruption problem in Cyprus, it would be both interesting and useful to explore for the first time and examine the moral reasoning abilities/judgments of the future accountants of Cyprus who are part of this society and in the near future will be holding positions of trust and power.

Ethics/morals are a personal issue that is learned from those around us. One's approach and attitude in solving an ethical dilemma is a result of their upbringing, experiences and amongst other factors their level of education. It will be useful to examine whether education has an effect on the moral reasoning and development of these new generation of accountants who will be responsible for providing truthful financial and nonfinancial information and making financial and ethical decisions regarding their clients. If accountants (present and future) are to maintain the highest ethical and technical standards expected of the profession, the Universities around the world and the Accounting professional associations must provide the

appropriate education for students to progress in their moral reasoning and thus improve in their ethical behaviour.

This study on University accounting students is significant in that no previous study has been carried out in Cyprus examining the moral reasoning development of students and more specifically accounting students. Unlike most studies that test the moral reasoning levels of students of one group at one point of their education, this study is unique in that it examines the moral reasoning and development of accounting students of different year levels by constructing a portrayal of moral growth during their university years. Investigating moral development throughout the degree program will be achieved by obtaining student test scores as measured by the Defining Issues Test (DIT) for each year level of the degree program. The study then compares the results of the different year levels and identifies when moral development occurs in their studies and if other external factors such as gender and ethics education and work experience has an effect. It therefore assesses the effects of accounting students' moral reasoning and development at two levels, the overall degree program and ethics subject level.

### **1.3 Justification for the study**

As outlined above continuing empirical research in accounting education and, more specifically, ethics in accounting is vital because university education may contribute in developing students' ability to apply professional judgment and behave ethically when entering the business world. Since the publicised collapses of Enron, WorldCom and the resulting demise of the international accounting firm Arthur Anderson, the effectiveness of current pedagogical methods and the accounting curriculum on the effects of accounting students' moral reasoning and ethical judgment have been an issue of debate. Conducting research on the moral reasoning and development of accounting students is very important both to the accounting profession in understanding the moral reasoning abilities of future accountants and extending the limited academic literature (Abdolmohammadi 2005) in this area that has provided mixed results. According to Dellaportas et al. (2005) "The study of moral reasoning in accounting is important because the level of moral development will directly influence how accountants will consider and resolve dilemmas" (p. 47). In addition, "By understanding the moral reasoning ability and ethical position of accounting students, ethics education can be better incorporated within the accounting programs" (O'Leary and

Pangemanan 2007 p. 216) and be tailored to provide for students' individual needs if required.

This study is significant in that no previous study has been carried out in Cyprus examining the effects of accounting/ethics education on the moral reasoning development of accounting students. In addition, given the bad publicity of accountants (Ferrell, Fraedrich, and Ferrell 2008, p. 75) involved in scandalous events and the corruption problem of Cyprus, it is important to examine the moral reasoning competencies of Cypriot accounting students and identify if tertiary education is influencing the new generation of accountants and business leaders in becoming more ethically mature. The findings of this study may be used to influence or change the global public opinion about the new generation of accountants and the accounting profession. Additionally, Cyprus is like many countries in the EU (Spain, Italy and Greece) that have corruption and is an emerging economy, thus the findings of these study could be of use to those countries too. Empirical research in the area of accounting and ethics, must therefore continue, to understand the variables that influence the future accountants and business leaders' moral reasoning and development.

Investigating the moral reasoning abilities of accounting students will provide prospective employers the moral judgment capacities of these students before entering the workforce and the variables that may have an effect on their moral reasoning and development. This information may be useful to Business school academics preparing new course material for business and accounting programs. Such information might also be useful in assisting accounting firms when developing, organising and providing appropriate training programs for their new graduates. It will provide information on the moral reasoning abilities of new accountants and assist those responsible for mentoring new graduates as to what is required with regards to ethical decision making. Since moral reasoning has been linked to ethical decision-making, it appears that improved moral reasoning skills could lead to accountants behaving more ethically and thus improving the reputation of the accounting profession.

The existing accounting ethics literature is mainly of North American accountants and accounting students (Ponemon, 1990, 1992, 1993; Clarke et al. 1996; Thorne 1999; Cohen, Pant and Sharp 2001; Desplaces et al. 2007), or other developed countries such as Australia (Dellaportas 2006; Demosthenous 2006; O'Leary and Pangemanan 2007; Cooper, Leung,

Dellaportas, Jackling, and Wong 2008; O’Leary 2009) who have very individualistic societies. An investigation of accounting students from different cultures and institutional settings and in a society where corruption is a problem nationally would add to the current understanding of accountants’ moral reasoning (Fleming et al. 2009). Thus, this study examining the moral reasoning development of Cypriot accounting students will first fill this gap and provide a perspective of a developing country whose national culture is more of a collective one. Secondly, the findings of this study add to the literature and debate as to whether tertiary accounting education improves moral reasoning. Thirdly, this study provides information for comparison purposes to determine if future accountants around the world reason at the same levels. Finally, by identifying and understanding accounting students’ moral reasoning, it can assist the accounting profession and tertiary institutions who develop tertiary accounting programs to better tailor the ethical needs of future accountants.

#### **1.4 Research questions and objectives**

As noted above, the aim of this thesis is to determine whether accounting (business) education can develop students’ moral reasoning ability to make ethical decisions. In order to address this aim, three research questions are developed:

**RQ1. What impact, if any, does a university accounting degree program have on students’ moral reasoning and development?**

**RQ2. What is the effect, if any, of ethics education in the accounting curriculum on students’ moral reasoning and development?**

**RQ3. What is the effect of demographic variables, such as gender, age and work experience, on students’ moral reasoning?**

In order to answer the research questions, a series of research objectives is addressed. Some of these objectives will be examined in detail through the development of specific hypotheses as outlined in the next chapter.

##### **1.4.1 Study objectives**

- To review the theories of moral development and their applicability to this study.
- To identify and measure the moral reasoning of Cypriot tertiary students. The DIT is used to measure the moral reasoning abilities of students.

- To examine a number of demographic factors that may influence the moral reasoning of students.
- To identify and describe the effect if any, of accounting and ethics education on the moral reasoning of accounting students.
- To compare the findings with studies of students from other developed countries such as USA, UK and Australia.

### **1.5 Thesis structure**

This thesis investigates the effects that tertiary accounting and ethics education may have on the moral reasoning and development of accounting students in Cyprus. Other demographic variables that may influence the moral reasoning of accounting students such as age, gender and work experience are also examined.

Chapter 1 begins with an introduction to the research and describes the background, the research context and justification of the study. The research questions and objectives and thesis structure are also included.

Chapter 2 contains a review of the literature on accounting ethics. More specifically it reviews the literature on moral reasoning and development of accounting students and accountants. Previous studies examining the demographic factors gender, age and work experience are also reviewed and discussed.

Chapter 3 describes the theoretical framework for the study. It includes a discussion on the various models and ethical theories. The chapter begins with an explanation of the Fraud triangle model. The main ethical theories namely Deontological, Teleological and Virtue ethics are discussed and in how they can be used in accounting to evaluate the conduct of accountants and corporations. The chapter concludes with a discussion on whether Accountants have an ethical responsibility to provide more than just financial information and thus fulfilling their social responsibility.

Chapter 4 outlines the research methods and instruments used to conduct the analysis. It begins by outlining the research design and sample, then briefly discusses Piaget's theory of cognitive reasoning followed by the development of Kohlberg theory of moral reasoning development. The application of Kohlberg's theory in relation to this study is followed by



Rest's four component model is also included. Chapter 4 includes a discussion on the survey instrument and the type of research used in this study. The defining issues test (DIT) was chosen as the survey instrument to test the moral reasoning levels of the sample of this study. A discussion on the scoring, validity and reliability of the DIT is also included. Finally a description of the statistical modelling used is provided.

Chapter 5 presents the results of the analysis of the data and the limitations of the study. The results of the questionnaire and the demographic data of the respondents are presented in table form, and the research questions are answered.

In the final chapter (Chapter 6) a discussion of the results is provided, followed by the conclusion to the thesis. Possible implications for future research and for the profession are also included.

## **Chapter 2: Literature review**

This chapter begins with a review of the literature in accounting ethics and discusses the results of previous relevant studies. Continuing from this is the development of a number of hypothesis to be used in this study. Also included is a discussion of the variables that are to be examined for any influence on the moral reasoning abilities of the Cypriot accounting students.

### **2.1 Ethical reasoning of accounting and business students and Accountants**

Reviewing the literature for studies on business and accounting students (Armstrong 1987; Arnold and Ponemon 1991; Lampe and Finn 1992; Ponemon 1990, 1992; Shaub 1994; Eynon et al. 1997; Carlson and Burke, 1998; Thorne 1999; Cohen et al. 2001; Paolillo and Vitell, 2002; Kracher et al. 2002; D'Aquila et al 2004; Leitsch, 2004; Venezia 2005; Ritter 2006; Massey and Thorne 2006; Burks and Sellani 2008; Krambia-kapardis and Zopiatis 2008a; Zopiatis and Krambia-Kapardis 2008; Mayhew and Murphy, 2009; Shawver 2009; O'Leary 2009; Brown-Liburd and Porco, 2011; Martinov-Bennie and Mladenovic 2015), it is evident that much research has been conducted on students' moral reasoning, ethical judgement, decision making and the effects of ethics education, but most of this has been conducted in countries where the society is considered to be a Western one and ranks very high in terms of individualism such as Australia, the United States of America (US) and the United Kingdom (UK). In Cyprus very little research on accounting/business students' moral judgment/ ethical decision making has been conducted and therefore little is known of the Cypriot context. This study will add to the literature and fill this void in Cyprus. In addition, reviewing the accounting ethics literature has revealed mixed results in relation to accounting students' moral judgement and development.

For example, Jeffrey (1993) and Bernardi (1995) found accounting students to have higher moral development than students of other disciplines, whilst other researchers (Armstrong 1987; Eynon et al. 1996; Bernardi et al. 2002; Massey and Thorne 2006; Demosthenous 2006; Abdolmohammadi and Ariail 2007) found in their studies that accounting student's moral reasoning levels to be low overall and much lower in particular when compared with other students from different disciplines and the general adult population.

O'Leary and Radich (2001) in their study found that "25% of Australian accounting students appeared willing to accept a bribe to defraud the taxation office and 20% to defraud shareholders" (p. 241). These are alarming results if they are the next generation of accountants representing the accounting profession who will be expected to behave ethically in the business world but instead are willing to participate in unethical behaviour and possess low levels of moral reasoning.

O' Leary (2009) found that ethics education had a positive impact on accounting students and claims that it is beneficial to have in the accounting curriculum. Shawver's (2009) exploratory study assessing an Ethics course in an advanced Accounting course found that the study of ethics shows increases to Accounting student's level of moral reasoning. Additionally, Shawver (2009) argues for an "increased exposure of ethical dilemmas in the accounting curriculum to educate students of the possible ethical dilemmas they may face as accounting professionals" (p. 13).

Krambia-kapardis and Zopiatis (2008a) investigated the correlates of ethical behaviour and attitudes of working individuals or pursuing a business-related graduate degree in Cyprus. They found that the majority of the respondents had a concept of 'ethical behaviour', consider ethics as being important, and hold attitudes that are conducive to ethical behaviour in business (p. 138).

Martinov-Bennie and Mladenovic (2015) investigated the impact of an ethical framework and an integrated ethics education on the ethical sensitivity and judgment of accounting students. The results of this study indicated that an integrated ethics education does improve the accounting student's ethical sensitivity and judgment.

In Cyprus, Zopiatis and Krambia-Kapardis (2008) investigated the ethical judgements of tertiary education students'. This study addressed issues on violation of school regulations, selfishness, academic cheating and computer ethics. It was found that "significant gender differences exist in the ethical factors of computer ethics and selfishness with women being less tolerant on issues related with such eventualities" (p. 657). Demosthenous and Krambia-Kapardis (2010) investigated the moral reasoning of business students and they found significant gender differences and the overall moral reasoning levels of business students are much lower when compared to students from other disciplines.

Globally accountants are expected to abide by the international code of ethics for accountants and behave professionally at all times, so therefore, undertaking ethics courses may benefit them in improving their ethical judgement and moral reasoning levels.

In the past it has been suggested that the accounting profession may have attracted individuals with a strong rule-orientation (Ponemon and Gabbart 1994; Lampe and Finne 1992; Williams 2004). Given the nature of accounting being very rule based and students being taught to be conservative in calculating and reporting accounting figures, the accounting education has been partly blamed for not developing graduates with the moral judgement abilities and hence the low moral reasoning P scores (see methods section for explanation of DIT P-score) achieved by accountants and accounting students in some previous research studies (Lampe and Finn 1992; Ponemon 1993; Eynon et al. 1996; Thorne 1999; Massey and Thorne 2006; Abdolmohammadi and Ariail 2007). 'Rule based reasoning has become so ingrained in accountants' mindsets that they appear to be stuck at stage 4 of Kohlberg's theory and unable to develop to higher stages of moral reasoning. This is unfortunate, because principled reasoning as tested by the DIT is what is required for autonomous judgment" (Dellaportas et al. 2005 p. 48). Similarly Billiot et al. (2012) support that the teaching of rules in the lower years may inhibit moral reasoning capabilities and propose that additional research needs to be conducted to examine the moral reasoning levels of these students. Accounting students need to further develop their moral reasoning through their tertiary studies if they are to apply the appropriate level of judgment that is required to make good decisions when they become qualified accountants.

## **2.2 Hypothesis development**

Variables such as gender, education, age and work experience may also influence one's ethical judgment and therefore accounting empirical research must also investigate and understand these variables. Albaum and Peterson (2006) claim "From a practical perspective, college students constitute the next generation of business leaders, and by studying the ethical attitudes of present undergraduate business (accounting) students, it may be possible to predict the future ethical behaviour of business leaders and perhaps even influence that behaviour through appropriate business education" (p. 301). Thus, studying the moral reasoning of accounting students and investigating/examining the variables that may influence the moral reasoning and development of accounting students is important. Such

research may assist in understanding the moral judgment and potentially predicting the ethical decision making of future accountants and managers.

### 2.2.1 Education/ethics education

If future accountants are to be competent in their positions and apply professional judgment appropriately in different situations they must not only possess the necessary accounting knowledge but also an understanding of ethics and ethical reasoning in business. Educators (Albaum and Peterson 2006; Cooper et al. 2008; O'Leary 2009) and the profession (IFAC 2008) support the view that developing accounting students' moral judgment will lead to ethical decision making and therefore eliminating future judgment errors in the accounting and business world.

Lawrence Kohlberg's research on moral reasoning led him to believe that an individual's moral reasoning could be developed through education (Kohlberg 1981). Supporting Kohlberg's view Sweeney states that, "a primary focus of colleges and universities is to provide an environment for intellectual, cultural, and ethical development" (Maddocks et al. 1994, p. 68). Wright (1995) also believes that education is the best means to develop ethical behaviour. Similarly, Howard (1986) maintained that one of the goals of universities should be to "produce a virtuous populace, one that is morally mature and spiritually grounded" (p. 318). Hogness (1986) stated that "morality...learning from right and wrong...is the essence of education" (p. 562). Cooper et al. (2008), developed a toolkit approach to ethics and similarly are of the view that ethics education should be designed to promote ethical awareness and judgments.

Business schools globally should teach and develop their students' business skills and ethics knowledge if they are to behave ethically when they enter the business world. In support of teaching ethics to students Weisul and Merritt (2002) claim that it is important to get young people to "stop and think about ethics and the decisions they're making, otherwise, today's students may be tomorrow's criminals" (p. 8). Ethics and issues such as corruption should be taught to students from primary school age so they grow up learning about what is right and wrong and therefore are able to identify corruption and the resulting negative effects. This is particularly important in Cyprus where people have redefined the term "Corruption" and as a national culture view 'paying for things to get done' as being an acceptable and not

unethical. In 2016 the first corruption seminar on "Corruption, Transparency and Education" was held on May 28, 2016 at the Pedagogical Institute of Cyprus by Transparency International-Cyprus (TI-C). The aim of the program for the future is to 'raise awareness for grade 5 and 6 pupils on topics such as integrity, objectivity, nepotism, corruption, bribery, transparency (Educate the educators, 2016).

If business leaders are responsible for developing ethical cultures within organisations they must be knowledgeable about ethics and lead by example and behave ethically.

Bean and Bernardi (2007) assert that "It is essential that those entering the accounting profession have a basic understanding of ethics and ethical reasoning" (p. 69). Procario-Foley and McLaughlin (2003) state that "not having the ethical values and ethical reasoning before entering the business world is destructive both for those making the decisions and those whom the decisions affect" (p. 280). Cohen and Bennie (2006, p. 1) state "accounting decision makers need to possess ethical expertise in order to be able to exercise appropriate professional judgment". Waddock (2005) states that "if business schools do not teach future managers and accountants about the relationships that exist between corporations and societies, we cannot expect CEOs to understand them" (p. 146). The curriculum need to cover all the issues related to business, that is, the economy and society. If business schools have an ethical conscience they need to develop both their student's technical and ethical knowledge. Technical knowledge is not enough and business schools need to instil values in their students (Fuerman 2004). Ethics education is required if students are to mature in their moral reasoning and move away from the simplistic rules of right and wrong that were learned in childhood (Bean and Bernardi (2007) and move to the principled approach to decision making.

Some have criticized the university education as being inadequate for preparing the future accountants with the appropriate moral reasoning abilities to identify and deal with ethical dilemmas, and that education had no impact on moral or ethical reasoning (Martin 1982; Wynd and Mager 1989; Ritter 2006). In contrast, others claim a strong positive association between university education and moral reasoning and development (Rest 1986; Shaub 1994; Wu 2003; Desplace et al. 2007; Mayhew and Murphy 2009; Thomas 2012). Reviewing the

literature on accounting ethics research provides mixed evidence regarding the moral reasoning development of accounting students and accountants.

A number of studies have shown that accountants and accounting students are deficient in their moral reasoning abilities and in particular when compared with other professionals and disciplines (Armstrong 1987; Arnold and Ponemon 1991; Lampe and Finn 1992; Ponemon 1990, 1992; Shaub 1994 and Lagrone et al. 1996).

Shenkir (1990) notes that proponents of ethics education look to “psychological research which indicates that the development of character does, in fact, continue through an individual’s entire education experience” (p. 30). Luoma (1989, p. 14) also argues that values develop early, but are reshaped by those around us. Kerr and Smith (1995) found that students are seeking ethical direction and consider a lack of ethic to be damaging to the profession and society at large (p. 988). Loeb (1988) found that many accountants believed learning about accounting ethics may provide individuals with the appropriate skills to better deal with ethical dilemmas in the workplace. Rest (1986) suggests that, “ethics learning in college may be an important factor in the development of students’ and accounting practitioners’ moral reasoning” (p. 204). So a study of ethics could, in fact, increase the ethical skills of students in analysing ethical dilemmas and assist in developing their moral reasoning abilities. Armstrong (1993) found in her study that accounting students who elected to take an ethics course had a higher DIT P score than those who did not, and these students developed significantly higher DIT P scores by the end of the course. Thomas (2012) found that accounting education may have a beneficial effect on deliberative reasoning and when senior accounting students used only post-conventional modes of deliberative reasoning (moral equity, utilitarianism, and contractualism), significantly more students made more ethical than unethical decisions (p. 411). Thus, accounting and ethics education can form an important catalyst for ethical behaviour in the accounting profession and in the business world globally.

Opponents of education argue that an individual’s moral standards have been fully developed by the time these students get to university and would suggest that ethics cannot be taught or change with education (Baxter and Rarick 1997). Oddo (1997) adds to this argument and also believes that “ethics and /or morals are learned early in life and that by the time students

reach college they are either honest or not" (p. 297). Bishop (1992), Hosmer (1988) and Henderson and Sifonis (1988) tend to agree and argue that a person's value system is formed early in life and it is questionable as to whether moral standards of students can be changed, in particular through education.

Proponents of education would argue that individual's character continues to develop throughout their educational experience and therefore would consider ethics to be essential to the development of individuals' moral character (Shaub 1994; Eynon et al. 1997; Procario-Foley and McLaughlin 2003; Wu 2003; O'Leary 2009; Shawver 2009).

Shaub (1994) and Eynon et al. (1997) found that accounting professionals after completing an ethics course possessed a higher level of moral reasoning ability as measured by the DIT. Wu (2003) also found that the values of Taiwanese students, their ability to recognise ethical issues and ethical decision making skills were improved by studying ethics. Waples et al. (2009) in their study investigated the effects of business ethics on the moral reasoning abilities of students and found a positive association.

Kish-Gephart et al. (2010) found an inverse relationship between moral reasoning and unethical choice in the workplace. They claim that individuals with higher moral reasoning capacities are uncomfortable with making unethical choices. Thus it can be said that the findings indicate that as levels of moral reasoning increase (as measured by the DIT) individuals may behave more ethically.

Maeda et al. (2009) compared the moral reasoning abilities of students from different disciplines at different education levels and found a significant relationship. The mean P scores of students increased with university education levels. In the study of Jeffrey (1993) the DIT was administered to 252 senior students in the business, accounting and liberal arts disciplines and 251 lower division students at a large state university in the US. It was found that, the students' DIT P scores increased with education. This study, therefore, supports the positive effects of tertiary education on moral development as suggested by Rest (1979).

Reviewing the literature on the effects of accounting/ethics education on the moral reasoning and development of students has provided mixed results and the debate on ethics education and its effect on the moral reasoning abilities of individuals is ongoing. However, on balance



the literature suggests a positive relationship, therefore the following hypotheses are tested in this study:

- H1. The moral reasoning levels (as measured by the DIT) of Cypriot accounting students in year 1 will be lower than the upper year level students?
- H2. The DIT P-scores of accounting students is positively associated with the number of years in university.
- H3. Accounting students who have undertaken an ethics topic in the accounting curriculum will have a significantly different P-score to those students who have not studied ethics.

### 2.2.2 Gender

As the business environment becomes less male dominated and the accounting profession becomes more global (homogenous), it is important to research the moral reasoning of the future accountants (accounting students) in order to understand their decision making process. Historically, the business environment and in particular the accounting profession has been male dominated and very often research has examined the influence of gender and the issue of glass ceiling (Demosthenous, 2006; Burgess and Tharenou, 2002; Krambia-Kapardis and Zopiatis 2008b). In recent times, there has been an increased participation of women in the work force particularly in professional positions and in traditionally male dominated occupations such as accounting (Cyprus labour statistics 2011). This trend and the debate that women are different to men in their abilities to make ethical decisions has generated research interest on the relationship between the individual's gender and ethical judgement.

Carol Gilligan, a Harvard psychologist, who is a critic of Kohlberg's cognitive model, has claimed that men and women differ in how they solve moral dilemmas and therefore use different moral approaches in deciding as what is and what is not ethical. She argues that men are more likely to consider moral issues in terms of justice, rules and individual rights, whereas women tend to consider such issues in terms of relationships, caring and compassion (Gilligan, 1982, p. 172). In her bestselling book *In a Different Voice* (1982), Gilligan explains that:

“When one begins with the study of women and derives developmental constructs from their lives, the outline of a moral conception different from that of [men] begins to emerge and informs a different description of development. In this conception, the moral problem arises from conflicting responsibilities rather than from competing rights and requires for its resolution a mode of thinking that is contextual and narrative rather than formal and abstract. This conception of morality as concerned with the activity of care centres moral development around the understanding of responsibility and relationships, just as the conception of morality as fairness ties moral development to the understanding of right and rules” (p. 61).

Gilligan developed the Gender Socialisation Theory and contends that gender identity is established in the earlier years of growing up and cannot be changed or reversed. The games boys play teach them to respect rules and fairness whilst the games for girls teach them to be caring and inclusive (Gilligan 1982). Therefore, according to Gilligan’s theory it can be predicted that males and females will have, and prioritise different ethical values leading them to different approaches in their ethical decision making in the workplace. Roxas and Stoneback (2004) assert that under a gender socialisation approach males and females have different values and can respond differently to a similar set of conditions. From a young age males and females are treated differently and as a result society’s expectations of the gender are also different. Gilligan’s theory thus suggests that differences exist in the moral judgment and decision making abilities of females and males.

Reviewing the literature for gender differences in moral reasoning abilities and ethical decision making it is evident that the results are mixed. A number of studies have supported the gender socialization approach, reporting that female students demonstrate better ethical reasoning ability than males (Ameen, Guffey, and McMillan 1996, Coate and Frey 2000, Elm, Kennedy, and Lawton 2001, Cohen et al 2001; Eynon, Hill, and Stevens 1997, Shaub 1994, Venezia 2005, Demosthenous 2006). In contrast there have been studies that found gender has no effect on the moral reasoning abilities of accounting students and accountants (Alansari, 2002, Dellaportas, 2006; Gautschi and Jones, 1998; Lowry, 2003).

Shaub (1994) investigated the moral development of 91 senior auditing students and 207 practising auditors and found that female auditors and auditing students exhibit significantly higher DIT scores than males. Cohen et al (2001) in their study found that females indicated

a lower intention to perform questionable actions than the male counterparts and viewed such actions to be less ethical. Kish-Gephart et al. (2010) found that the females make slightly more ethical choices than males. Ritter (2006) found that female students showed significantly improved levels of moral awareness and decision making processes after an ethics program was completed than males. Bernardi and Bean (2008) analysed a number of studies of accounting students and they found that female accounting students score 10.4% higher on the DIT than the male accounting students.

Given the increasing number of women in the workplace and entering the accounting profession it would be useful to continue to examine the gender differences and working population. Therefore, for this study, the following hypothesis is examined:

H4. Male accounting students will have a significantly different P-score to female students

### 2.2.3 Age

While the literature indicates that gender differences may exist in moral judgment and ethical decision making abilities, a small number of studies consider the age variable, which could also influence the moral judgment of accounting students. It is reported that, as one gets older their moral reasoning abilities also develop using the DIT so therefore age is a variable that should be examined in explaining moral reasoning (Rest and Narvaez, et al 2000). Rest (1988) also concludes that people in the twenties and thirties change their thinking in the way they define what is morally right or wrong. This supports Kohlberg's claims that principled thinking which is the post conventional level of moral reasoning is reached after the age of 20 years (Kohlberg 1987). So it would be useful and interesting to investigate the influence of age on moral reasoning and identify if accounting students have reached this 'principled thinking' mile stone of moral reasoning.

Recent studies (Borkowski and Ugras 1998; Chan and Leung 2006; Dawson 1997; Krambia-Kapardis and Zopiatis 2008a; Eweje and Brunton 2010) have recognised the importance of including and examining the age variable in their ethics research. Rest, Thoma and Edwards (1997) indicated in their study that age is associated positively with P scores. Serwinek (1992) has argued that the age variable is so important in explaining moral reasoning that the results of those studies that do not include age will probably be misleading. The results of a number

of studies have found age to have a positive effect on students' ethical orientation (Arlow 1991; Meising and Preble 1985). Borkowski and Ugras (1992) examined a sample of business students and found that undergraduate students used a justice-oriented approach in their decision making and the post-graduate students used a more utilitarian approach in solving ethical dilemmas. Krambia-Kapardis and Zopiatis (2008a) found individuals over the age of 30 were more ethical than those under 30 years regarding ethical perception. Similarly, the 2017 EMEIA fraud survey published by EY found that the Generation Y cohort (24-35 year olds) are more likely to behave unethically in the workplace than older employees. Seventy three percent of the Generation Y believed that unethical behaviour is justified if it to help the business survive and would also offer money to win or retain contracts. Chan and Leung (2006) concluded in their study that age is positively correlated with ethical sensitivity. Generally, studies examining the impact of age on the ethical decision making of individuals, have found that the older respondents are more ethical than the younger counterparts (Ruegger and King 1992; Serwinek 1992). This is supported by Valentine and Rittenburg (2007) who in their study found ethical judgment to be associated with increased age.

On the other hand, Forte (2004) found no significant relationship between an individual's age and the moral reasoning ability of managers. Similarly, Marques and Azevedo-Pereira (2009) study reported no significant differences of ethical judgment between older and younger respondents.

A number of studies examining accountant's moral reasoning have found that accountants with greater experience have lower moral reasoning abilities than less experienced accountants (Ponemon 1992; Ponemon and Gabhart 1990; Shaub 1994). These and other findings showing accountants and accounting students generally as having lower moral reasoning ability than expected is further evidence of Kohlberg's statement that the post conventional level "is reached by a minority of adults" (Kohlberg 1987, p. 283).

It can be concluded that the limited research conducted considering age and moral reasoning abilities has also produced inconclusive results, and it is the aim of this study to add to that body of literature. In order to do this, the following hypothesis is tested:

H5. Older accounting students will have a significantly different P-score to younger students

#### 2.2.4 Work experience

The effect of work experience on the moral development of accountants or accounting students is not well documented in the accounting literature. A number of studies have considered the level or position of accountants within an organisation or the number of years of experience rather than comparing students with or without work experience.

Ponemon (1990) examined a sample of accountants and found that CPAs with greater experience scored lower on the DIT. Armstrong (1987) also found that qualified accountants with higher experience scored lower on the DIT and therefore indicating experienced accountants as having a lower level of moral reasoning. Ponemon and Gabhart (1994) in their study compared auditors based on age and experience and found that older and more experienced audit managers possess lower level of moral reasoning than younger and less experienced audit managers. An explanation for experienced accountants possessing lower level moral reasoning, could be that these accountants did not undertake tertiary studies in accounting whereas the younger and less experienced accountants would at least have completed a bachelor degree in accounting. Also, another explanation could be that they have never studied ethics and therefore are deficient in their ethical knowledge, thus limiting their moral awareness and understanding and application of ethics in their decision making. Ponemon (1992) suggests that high ranking accountants may be attracting people similar to themselves in a selection socialisation mechanism (p. 252). In other words, these senior accountants are lacking ethics knowledge and principled thinking in their ethical decision making and thus are recruiting similar candidates with lower level of moral reasoning. This is unfortunate because one would think that individuals with more work experience would have had increased exposure to business situations and dilemmas and therefore would have improved their ethical sensitivity and ethical judgment.

In contrast to the results of the above studies, Pierce and Sweeney (2010); Valentine and Bateman (2011) report in their studies a positive relationship between work experience and ethical decision making. Similarly, other researchers report that individuals with more work experience demonstrate higher level of moral judgment (Cohen, Pant and Sharp, 2001; O'Fallon and Butterfield, 2005).

In the study of Eweje and Brunton (2010) it was found that the more experienced students appeared to be more ethically oriented and had greater ethical intention. In another study experience was associated with increased ethical judgment (Valentine and Rittenburg 2007). McCullough and Faught (2005) concluded that work experience was shown to be related to one's tendency to be more morally conservative or moralistic. These results are further evidence of a positive relationship between work experience and moral judgment and support Glover et al. (2002) argument that greater experience may be associated with greater awareness of what is ethically acceptable. As individuals gets older one would logically expect their ethical standards to change and become more ethically mature with years of experience.

It seems that empirical research continues to provide mixed results and thus the hypothesis for this study is:

H6. Accounting students with work experience will have a significantly different P-score to students with less or no work experience.

### **2.3 Chapter Summary**

This chapter provided a review of the relevant literature and developed a series of hypotheses that will be investigated in this study. Six hypotheses were developed to examine the moral reasoning abilities of Cypriot accounting students. Reviewing the literature indicated a number of different variables may influence the moral reasoning and development of individuals. This chapter provides a discussion of the variables selected to be used in this study which include tertiary education, studying ethics, age sex and work experience. Before describing the methods used to conduct the study, it is important to consider the background to ethics and ethical behaviour and the particular theoretical lenses that will be used to inform this study.

### **Chapter 3: Models and Theories of ethical decision making (behaviour)**

This chapter begins by explaining the Fraud triangle model in an attempt to explain why individuals behave unethically or commit fraud. Other topics discussed include unethical behaviour in accounting (the financial crisis in the US,) the main principles of the code of conduct for accountants and the main ethical theories that can be used to evaluate behaviour. The ethical responsibilities of accountants are also discussed with regards to the information that they should provide about the corporations they represent. A number of different theories are discussed in explaining the differing views of what are the ethical/social responsibilities of accountants.

An accountant plays a pivotal role in communicating the financial status and other information about a corporation. Using their accounting knowledge and professional judgment, an accountant is expected to analyse the transactions and other significant events of a corporation in terms of relevance and provide a 'truthful picture' of the business to interested parties. In providing financial and non-financial information about a corporation's operations in an annual report places the accountant in the role of an agent for the corporation. Shareholders and other stakeholders rely on the integrity of this information provided by the accountants to make informed judgment/decisions about the corporation. Providing a truthful account of the corporation's actions is a response to the transparency expectations/requirements of society and provides for answers to questions as to how and should the corporation exist within society (Schweiker 1993, p. 232). Unfortunately as illustrated by the corporate collapses and scandals, accountants and managers do not always behave morally and professionally and instead behave unethically and engage in fraudulent activity. A lack of attention to ethical and professional principles such as integrity and objectivity (see page 38 for further principles and explanation) by accountants, is the cause of mistrust and "brings the greatest harm to those reliant on their expertise and moral judgment, typically clients, employers and ultimately, the public" (Dellaportas et al. 2005, p. 93).

#### **3.1 Why do individuals behave unethically?**

There are many reasons why individuals behave unethically or commit fraud. Some of these reasons include wanting to become rich quickly (Adeyemo 2012), living an extravagant lifestyle (Balogun, Selemogwe and Akinfala 2013) and one that they cannot afford or just not

having enough money to survive and thus using unethical means to obtain further income. Additionally, another reason could be that society generally relates one's social status to their level of financial wealth so individuals want to increase their level of wealth and thus improve their social standing. It seems that fraud for whatever reason is occurring globally in the corporate world including the Cypriot environment and fraudulent activity is costing corporations large amounts of money and decreasing shareholder return. For example, in 2012, the ACFE in its report to the Nations on Occupational Fraud and Abuse, estimates that the annual cost of fraud globally may be as large as \$2.9 trillion.

According to the Fraud Triangle model developed by Cressey (1950) certain factors have to be present for individuals to behave unethically or commit fraud (Dorminey et al. 2011). In his criminology study Cressey analysed the data from his interviews with convicted fraudsters and observed that these individuals had common characteristics. From his observations Cressey concluded and proposed the three factors that have to be present for fraud to occur. The three factors or criteria are perceived pressure and/or incentive, perceived opportunity and rationalisation.

The first factor, perceived pressure and or incentive, refers to pressure or incentive to commit fraud due to having a financial problem that they cannot share with others. The individual may deem the problem to be non-sharable for different reasons. It could be that they are 'too proud' (personality traits) to ask for help from those around them (Dorminey et al. 2011). Additionally, the individual may perceive the financial problem as having a social stigma associated with it and thus feel embarrassed to own such a problem (Dorminey et al. 2012).

The second factor is Perceived opportunity. For an individual to engage in fraudulent activity they must be of the perception that an opportunity exists and the likelihood of them getting caught is low due to non-existent or poor internal control. If this individual is motivated to behave unethically due to the lack of detection/punishment it would mean that they reason at the pre-conventional level of Kohlberg theory of moral reasoning.

The third factor of the Fraud triangle model is Rationalization. Individuals who commit fraud rationalise to themselves and sometimes to others as to why they are stealing or behaving unethically. Fraudsters often provide justifications for their unethical actions so they can feel comfortable with themselves in doing the wrong thing. Often these individuals have low



moral reasoning or lack the moral compass to allow themselves to behave in this way. However, according to Kassem and Higson (2012) given the right conditions, that is perceived pressure and opportunity, many individuals regardless of low or high moral reasoning, may commit fraud or behave unethically. Krambia-Kapardis claims that some individuals commit fraud because of their character or personality traits (Krambia- Kapardis 2016, p. 16). In an attempt to explain why individuals commit fraud Krambia-Kapardis developed the ROP model (2001 p. 83). According to the ROP model three components have to be present including Rationalisation, opportunity and crime-prone person. The 'crime-prone person' component was included because certain personalities irrespective of intelligence are more prone to committing fraud than others (Krambia- Kapardis 2016, p. 16).

### 3.1.1 Unethical behaviour in Accounting

In recent times many business scandals involving accountants have occurred and as a result the accounting profession's reputation has been tarnished and accountant's ethics has been under scrutiny.

In 2001 the famous globally publicised Enron scandal again included an accounting firm behaving unethically. Anderson were Enron's external auditors for many years but they also accepted the responsibility to perform the internal auditing for Enron and other consulting work which is not acceptable practise in the accounting profession (Brown and Trevino, 2006). Accountants are expected to behave ethically in their daily operations and therefore must abide by the Accountants code of conduct (see discussion of the accountants code of conduct below). The code of conduct stipulates that accountants are to be objective and avoid and not be part of any situations with conflict of interest. The accounting firm Anderson were paid \$47 million for their services by Enron. Anderson accountants violated the basic principles of objectivity and integrity of the Accountants ethical code by providing both accounting and auditing services to Enron. They prepared the financial statements and then provided external auditing services. A major responsibility of an external auditor is to evaluate financial statements and declare that they represent a fair picture of the financial situation of a company. Another major responsibility is to be a watchdog and call into question irregular practices that would distort those pictures (Duska 2005, p. 17). Auditors are supposed to follow the principle of independence in their work and in particular when conducting audits of financial statements. Anderson accountants therefore should have avoided this situation

that created a conflict of interest and rejected the offer to audit the accounting services they initially provided to Enron. Anderson accountants violated APESB, s.120.2 of the ethical code by entering into a contract where there was conflict of interest and allowing the influence of Enron to override their professional or business judgment. Accountants must be objective at all times in their work place and therefore must maintain an impartial attitude when providing accounting services.

In addition to using the accounting standards in their daily work, accountants, as professionals, must also abide by the Accountants code of conduct. The code of conduct consists of five main principles and are discussed below.

### **3.2 Accounting Code of conduct**

Although accountants' knowledge of accounting standards (and accounting generally) is essential and provides for their expertise, in situations when there are no rules or there is no clear solution, accountants moral reasoning levels will determine the quality of their ethical and professional judgment. Belonging to the accounting profession, accountants are expected to behave professionally and ethically in the workplace and must abide by the accounting code of conduct. The accounting code of conduct is only a guideline as to how accountants should behave and not a legal requirement. Although the code of conduct provides a guide as to how accountants should behave, it does not provide assistance in identifying and providing solutions to potential ethical dilemmas. Only if students undertake ethics courses will they be given the opportunity to learn about ethical theories, ethical dilemmas and ethical decision making processes. It is ethics education that can provide for future accountants' ethical knowledge and expertise. Many studies/researchers have found/claimed a strong positive association between university education and moral reasoning and development (Rest 1986; Shaub 1994; Wu 2003; Dellaportas 2006; Desplace et al. 2007; Mayhew and Murphy 2009).

In the past, and in particular, before the GFC (global scandals), ethics education and environmental (TBL) reporting was not part of the accounting or business curriculum. Accounting students were taught to obey the rules of accounting and that financial success and cost benefit analysis is the basis of all business decisions, with no consideration for ethics and the environment. Globally, if accountants are to behave professionally and ethically in

their daily work, that would mean that they should apply/follow the Code of Ethics for Professional Accountants. This code was developed by The International Ethics Standards Board for Accountants (IESBA) of the International Federation of Accountants (IFAC). IESBA is an independent standard-setting board that in attempting to protect the interest of the public with regards to accounting services, develops and issues ethical standards for professional accountants worldwide to follow.

The general application of the Accountants code of conduct includes five basic principles for accountants to abide by in their daily operations and dealing with the public. These principles are integrity, objectivity, confidentiality, professional competence and due care, and independence (Dellaportas et al. 2005).

### **Integrity**

Accountants as individuals should have integrity and possess the trait of being courageous. This principle imposes an obligation on accountants to be honest and candid within the constraints of client confidentiality, and not knowingly omit material facts (APESB, s. 110.1).

In this context, integrity as a quality is widely seen as being honourable and reliable. According to Windal (1991, p. 26) 'integrity is an element of character and is essential to the maintenance of public trust'. Thus accountants with integrity can be trusted to do 'right thing' and provide accounting information that can be relied upon by their clients and other users of this information.

Courage is an important aspect of integrity. Integrity without the strength of character to pursue one's convictions could result in inaction when action is required. An accountant who does not have the strength in character to stand up for what they believe will not withstand the pressures of corrupt or unethical colleagues and may do the wrong thing. Thus, it can be said that an accountant who does not possess the personality traits of integrity and courage will not be honourable and reliable, and therefore cannot be trusted. Those people who blow with the wind, who are two-faced, who are hypocritical, and who do not have the courage to stand for anything, stand for nothing. In short, a person with integrity must be honest and have the courage to pursue their convictions.

## **Objectivity**

With this principle, Professional accountants are expected to maintain an impartial attitude in their work. Accountants in their line of work must avoid situations that may impair their objectivity in the application of professional judgement. In order to avoid violating the principle of objectivity, the code states that accountants have a duty to avoid relationships or other situations:

- that may create a conflict of interest (APESB, s. 120.1); or
- which allow prejudice, bias, conflict of interest or the undue influences of others to override professional or business judgment (APESB, s. 120.2).

The principles of integrity and objectivity are intrinsically linked to professional independence (s. AUST120.3).

## **Competence and due care**

Accountants are expected to both obtain and maintain their accounting knowledge and skill at the level expected of professional competent accountants. They need to possess the necessary up to date knowledge, if they are to ensure that the service they provide to their clients is based on current developments in practice, legislation and techniques.

The competence obligation has two components – the first is to obtain the professional competence, which is normally achieved with studying and completing an accredited university accounting degree and a professional development program such as the CA/CPA Program.

The second component requires accountants to maintain their professional competence. In order to fulfil their duty to maintain professional knowledge and skill, accountants must keep up to date with the relevant changes and development in the profession. This can be achieved by attending workshops and seminars providing such information.

The second obligation Due care requires members 'to act diligently [to the best of one's ability] in accordance with applicable technical and professional standards when providing professional services' (APESB, s. 130.1).

## **Confidentiality**

According to the confidentiality principle, accountants are expected to be confidential with client and employer information that they have acquired through their services as accountants. This information must not be provided to third parties unless required by law. Clients and employers have a right to expect that information provided to accountants is maintained confidential. Additionally, accountants must also, not use this confidential information to advantage themselves or any third party (APESB, s. 140.1).

Individuals requiring the services of accountants provide the accountant with their personal or business financial records and therefore there is an expectation by the client and a requirement by the profession that accountants can be trusted with these records and that they maintain the confidentiality of this information. Additionally, a professional accountant is expected to not disclose any such information to third parties, unless there is a legal requirement or a duty to disclose.

## **Professional behaviour**

An accountant should 'comply with relevant laws and regulations and should avoid any action that discredits the profession' (APESB, s. 150.1).

According to this principle accountants also have a responsibility to the profession. They must act in a professional manner and in a way that promotes the good reputation of the accounting profession. They must act honestly and not misrepresent the public with information about the services they offer, qualifications or experience. This principle also includes that accounting professionals should act in a way that they 'do not put down' other accountants or their work. (APESB, s. 150.2)

A good reputation is very important for the accounting profession if it is to continue to exist and grow but this is very much dependable on the behaviour of its members.

In order to abide by the above principles a great deal of individual judgement is involved and required by an accountant. Accountants, as professionals, must be able to identify and solve complex dilemmas in the workplace. They must have the ability to solve problems and dilemmas where routine or mechanical solutions are not available (Dellaportas et al. 2005, p. 94). Unfortunately, rules cannot determine what to do in every situation. Therefore,

professional judgment is required and thus important in such situations. Empirical research, therefore, must examine and understand the various variables that may affect the moral reasoning abilities and ethical judgment of accounting students, who in the near future will be working as accountants and facing ethical dilemmas in their workplace.

As explained above, the code of conduct is only a document providing guidance as to how accountants should behave. It does not provide assistance in evaluating the moral judgment/decision making of accountants. The unethical actions of individuals and accountants can be evaluated either by looking at the consequences of their action or the action itself. Ethical theories can be used to evaluate the moral judgment or actions of an accountant and hence, a discussion of the main ethical theories is provided below.

### **3.3 Theoretical Ethics**

Appelbaum (2006, p. 67) defines ethics as “a set of moral values that govern a person’s behaviour or how an activity is conducted.....the moral standards of society”. Sullivan (2005, p.29) believes that “ethics is how we choose, in virtually every decision we make, to treat people we work with and for, and the world around us”. The term ‘ethics’ can be broadly explained or defined as the study of human behaviour and decision making in terms of whether ones actions/decisions are ethically right or wrong. This definition thus assumes that the principles or values of an individual and their approach to their ethical decision-making are also examined if one is to identify if the actions are ethically right or wrong. Thus, an explanation of the Principle approach (Deontological ethics) and Consequential approach (Teleological ethics) to ethics is warranted and may assist one in understanding an individual's approach to ethical judgment/decision making and is provided below. A discussion on other relevant theories in business such as Virtue ethics, legitimacy and stakeholder theories is also provided in this section.

#### **3.3.1 Deontological Ethics (Principled approach)**

Deontological Ethics is concerned with assessing the rightness or wrongness of an act only by reference to the intrinsic nature of the act itself. The consequences of the act are disregarded. For example, actions such as telling the truth and respecting others’ rights are considered as 'good' and other actions such as behaving dishonestly or stealing are considered to be 'bad'. According to Deontological ethics no matter how much good comes from a bad action such

lying or stealing or a bad action was done for a good reason, the action is considered to be wrong or unethical.

The main proponent of Deontological Ethics is Immanuel Kant. Immanuel Kant (1724-1804), developed the deontological perspective in his critique of pure reason. Kant believed that he found the moral law that would determine the ethical character of an action with regard to its consequence. He called his moral law the 'categorical imperative'. Kant suggests that if one is faced with an ethical dilemma one should act in accordance with universal principles that apply, irrespective of the consequences of the actions. It is categorical because it does not allow for any exceptions and it is considered imperative because it gives instruction about how one must act in every situation (Sharp, Aguirre and Kickham, p. 12). Kant's categorical imperative states that "only act in ways that enables the principle on which you act (the maxim) to become universalised" (Kant, 1959, p. 3). A maxim (principle), which cannot be universalised, is unacceptable so therefore this follows the golden rule of 'do unto others as you would have them do unto you'. So in other words, if the action cannot be a universal rule or one is not 'treating others how they want to be treated' then that action would be considered unethical.

Kant wrote "Act in such a way that you treat humanity, whether in your own person or in the person of any other, always at the same time as an end and never simply as a means" (Kant, 1959, p.48). It was Kant's belief that all people have a dignity that must be respected when we deal with each other and one should treat other people as an end and not as a means to an end. For example, Individuals operating factories with 'sweatshop conditions' whereby employees are mistreated, made to work long hours and in unsafe working conditions would be considered as behaving unethically and treating their employees as a mean to an end. Ethical behaviour in the business world would mean that business owners/employers use employees to work for them for as long as they are providing good working conditions such as competitive wages and a safe working environment. In addition, employers should be considering those employees' goals and aspirations and treating them fairly and with respect.

As with all theories Deontological ethics does have its limitations. One issue with Deontological Ethics or the Principle approach to ethical decision making is that it can be too rigid at times. When making a decision using this approach, ethical principles such as honesty

have to be followed without considering the outcome of the decision. For example, in an instance where being honest (an ethical action) in a situation may lead to negative outcomes, this approach does not allow for alternative options to be considered that may lead to better outcomes. Thus, the Principle approach to ethical decision making does not provide a basis for further evaluation of alternative options of what is best.

With Deontological ethics not allowing for critical assessment of rules or principles limits the development of rules or laws. In the case of accounting rules and standards, accountants are expected to follow/use the standards when providing accounting services because it is their duty to follow these rules and standards, even if they do not provide for good outcomes to the user. Accounting rules and standards of today will be of yesterday era if the appropriateness of these standards were not considered for today's business world.

### 3.3.2 Teleological Ethics (Consequential approach)

The word teleological is derived from the Greek words of "telos" and "logos". Telos in Greek means end and logos means the reason or to tell or logic. In Greek when you ask someone to explain "ton logo" for their actions it means to be asking for the reason or the logic for their action. Thus, with this approach to evaluating one's actions an individual would be studying the ends or consequences of an action. Teleological theories are sometimes referred to as consequentialist theories because they base ethical rules and judgment on the consequences of an action. The Teleological outlook or approach to ethical decision making which is dominant in Liberal-democratic societies is concerned with judging the rightness or wrongness of an act by reference to the consequences of an action and more specifically to the utility the action generates (White, 1998, p. 41).

#### Utilitarianism

The effective founder of the Teleological approach was Jeremy Bentham (1748-1832), who was an English thinker and social reformer (White, 1993, p. 5). This approach is most popular with business managers and accountants because it is a type of cost-benefit analysis approach. It is particularly appealing to managers and accountants because it takes a pragmatic, common-sense and even a cost benefit approach to ethics. Advocates of this approach claim that the moral action depends on the practical matter of the extent to which actions actually help or hurt people (White, 1993, p. 5). So, according to the utilitarian



principle an action is 'ethical' or 'right' if it provides 'the greatest good to the greatest number', and an action which provides less good than harm would be considered as unethical or wrong (Beauchamp and Bowie, 2004).

The Consequential approach to ethical judgment/decision making does have its flaws. Firstly, this approach creates uncertainty for the decision maker and the stakeholders involved. One (determine or) cannot be certain that the consequences of an action will occur prior to the action occurring. Thus, the argument for selecting an action was based on the consequences, becomes weak/invalid if the consequences may not occur. The decision maker using this approach is only selecting an action or can be considered as behaving ethically if the assumed consequences of that action do actually occur.

Secondly, with the consequential approach a course of action is selected based on the premise that it provides 'the greatest good to the greatest number'. If this is the case, the minority (the smaller number) group and their interests are ignored with this approach. The minority groups also need a voice and to be considered and respected. This approach seems to be unfair to the minority and the negative impact that the decision will have on them seems not important.

A major problem with Utilitarianism is whether units of happiness or some other utilitarian value can be measured and compared in order to determine the best action among the alternatives (Beauchamp, Bowie 2004, p. 28). For example, how can one measure and compare the environmental impact of pollution of businesses dumping their waste into the waters (oceans) versus the financial success of that organisation and providing employment to that community. In addition, how is the utility to be measured? Is or should financial currency be used as a method of measurement and who is to determine the benchmark? How can one measure emotions of happiness or sadness? These questions are beyond the scope of this study.

### **3.4 Ethical responsibilities of Accountants and corporations**

An accountant's business decision or action based on utilitarian principles would be considered ethical if it produced the greatest good for the greatest number. An example to illustrate this would be an organisation deciding to reduce the number of employees in order to decrease costs. The outcome of this decision would ultimately be an increase in profits

due to the reduced costs and therefore the decision would be considered as ethical or right. The organisation is more profitable, the remaining employees and managers are achieving their goals at the cost of a smaller number of people losing their jobs and the unhappiness it will cause them.

Accounting students, accountants and managers are constantly expected and are taught to use cost benefit analyses. For example, in business, accountants or managers would undertake a cost/benefit analysis of different options before making a decision. The option that provides the least cost and most benefit will be considered as the best option to select. In addition, according to Milton Friedman (1970), the social responsibility of business is to increase its profit, so maximising profits would be seen as ethical in his view. Thus a profitable business would be considered to be socially responsible because by continuing to be in operation it would thus provide employment, services and or products and therefore would assist with community objectives.

Historically and as pointed out by Gray, Owen and Maunders (1987) traditional accounting is only concerned with financial accountability through the financial statements. If the financial statements show a large profit, according to the Utilitarian approach, the organisation has achieved its goal to make a profit, the shareholders would be pleased and thus the company can be considered as acting ethically. However, these financial statements would not reveal how these profits were achieved in terms of the damaging effects on the environment or whether child labour was used to achieve the production levels. Information provided by accountants should include both financial, social and environmental accounting information so organisations can be accountable not only for the allocation of the organisational resources but also for their environmental utilisation and social impact (Gray et al. 1987). Government agencies/authorities should also be transparent in their actions and provide sufficient information to the public in their reporting about the use of public expenditure. In Cyprus for a number of years now, the annual report to parliament by the auditor general of Cyprus has highlighted significant deficiencies in public sector reporting concerning both financial and non-financial information (Krambia-Kapardis, Clark and Zopiatis, 2016). If the Cypriot government is to be trusted in the future and contribute to eliminating corruption it must be more transparent and provide more information to the public.

Even in countries where it is mandatory to provide non-financial information corporations are selective as to what they provide and do not provide all negative information. This further provides evidence to the argument that non-financial information should be made mandatory globally, but stricter controls should be implemented to provide for transparency and more accountability of corporations' actions.

Providing environmental and social information is a step forward in establishing an accountability relationship between corporations and stakeholders. In order to achieve this accountability, governments in Europe have actively promoted corporate social responsibility and have increasingly supported the argument for businesses to provide social and environmental information. Most recently (February 26, 2014) the EU approved the European Directive on Corporate Responsibility determining companies with more than 500 employees to report performance on social, environmental and employee related issues. These companies have to also disclose their approach to anti-corruption, bribery and human rights (Irvine 2014). The European directive of corporate responsibility will provide the EU the first legislation regarding non-financial reporting (Irvine 2014).

Accounting, by aiming to “expose, enhance and develop social relationships” (Gray 1992, p. 413) with the use of the environment by corporations, can direct managers to become more ethical in their decisions and consider all stakeholders. If Corporations move to ethical decision frameworks this may assist management with developing sustainability policies which, if enforced may lead to achieving sustainability objectives and provide for sustainable practises and a sustainable future.

Accounting standards since becoming international are fast becoming 'global' with many countries fully conformed to International accounting financial reporting. Since 2005 the EU commission proposed that it should be compulsory for all listed companies in the EU to use international financial reporting standards for consolidated statements (Parker and Karlsson, 2010, p. 924). Thus, accountants in all EU countries are required to follow international accounting standards and the International code of professional conduct. With using international accounting standards there is also the assumption that accountants globally will apply the standards in the same way and apply their judgement in the same way and ignoring for any cultural/national differences. International accounting firms operate around the

world and offer similar if not the same accounting services. Accountants of international firms are expected to apply the same international standards and possess the same level of technical expertise. Although, this is reasonable to expect of accountants, it is less reasonable to expect accountants globally to possess similar levels of moral reasoning and ethical judgment/decision making. This study will provide information in this area and add to the ethics literature regarding accounting students' moral reasoning and development. If accountants are expected to behave ethically does that also mean they have a social responsibility to all stakeholders to provide both financial and non-financial information? This is a topic of discussion that has conflicting views depending on the theoretical lens used. Below a number of theories are discussed in explaining the social/ethical responsibilities of accountants and corporations.

When one is investigating the responsibilities of an individual or a corporation they must first examine their roles. One important duty of directors of corporations is that they have a fiduciary responsibility to act in the best interest of the shareholders (Boatright 2002, Marcoux 2003). "Shareholders give managers authority to handle their business in accordance with their best interests" (Frederiksen 2010, p. 368). The managers are acting as agents for the shareholders and therefore should have a moral obligation to act ethically and manage the corporation in the best interest of the shareholders and not themselves. One of the main goals of a business is to increase profits and maximise shareholder wealth (Friedman, 1970). Given that managers have this responsibility to maximise shareholder wealth they sometimes may behave unethically and become greedy in achieving this goal. The shareholders are the owners of the organisation and therefore the profits belong to them. However, does that entitle the directors, managers and accountants to act in a manner which may be considered unethical to benefit the shareholders or to take unnecessary high risks without shareholder approval? Corporate executives including accountants must understand that their role is to act ethically and must make decisions that are/or do what is right for all stakeholders, including the environment and the community at large. Accountants must act professionally and ethically at all times, follow the basic principles of the accountants' code of conduct and thus must provide both financial and non-financial information (financial, social and environmental information) that users need and reliably can depend on when making decisions.

### 3.4.1 Accountants and Deontological theory

Under deontological theory, accountants and corporations should pursue to behave trustingly and reliably because they have a moral duty to their stakeholders to behave ethically. Investors, creditors, employees and other stakeholders rely on the information that accountants provide and therefore they owe it to them to behave ethically and prepare information that can be relied upon by end users. Accountants should be treating stakeholders as ends rather than merely as means to corporations' ends. Corporations should not damage or pollute the environment and should be honest in their dealings with the stakeholders. They should follow the golden rule of whereby one should treat others the way they want to be treated (Trevino and Nelson 2011). Principles are usually what laws are based on and are very useful for dealing with large groups of people. Society (including corporations) should act in accordance with universal principles that apply, irrespective of the consequences of the actions (Ferrell, Fraedrich and Ferrell 2008). For example, financial statements that accountants prepare for corporations should always be truthful and thus providing evidence of transparency of the corporations' actions. In addition to the financial information accountants should also provide both positive and negative social and environmental information in the corporations' annual reports. Information should be true, fair and relevant and accountants should provide this information out of duty to their stakeholders and not to legitimise the corporations' existence or if it profitable to do so. If a corporation is part of society then it should treat the community as an end rather a means to an end and should not make profits at the expense of acting ethically and with integrity (including the provision of social and environmental information), in particular if society expects this of corporations. Accountants and Corporations have a duty to society to behave ethically and should assume social responsibilities because it is morally correct to do so (Branco and Rodrigues 2006, p. 127).

### 3.4.2 Accountants and Virtue ethics

Certain character traits are desirable in accountants if they are to carry out their accounting duties in an ethical manner and be trusted by their clients and the general public. As stipulated in the IFAC code of conduct there are five main principles that accountants should apply in their daily operations. Principles or virtues such as objectivity, honesty and integrity

are important traits that accountants (and the corporations they represent) should possess if they are to carry out their accounting duties with excellence.

Virtue ethics is all about developing good behaviour/habits. For example, virtues or principles such as honesty and fairness must be practised everyday if they are to become virtuous habits. An individual must act honestly and be fair to others indefinitely particularly when it is most difficult to do so. Through constant choice, being honest and fair in dealing with others it becomes a 'habit' of an individual. These virtues become part of ones 'nature' or 'character' and thus develop a higher level of moral reasoning and can be considered a virtuous person. When dealing with a dilemma a virtuous individual asks "How would a virtuous person act in this situation? A virtuous individual would evaluate an act as being ethical if they believed that is what a person with high moral character would do. The character of a person is what is important, and is evaluated as to whether they possess the necessary virtues. For example, an ethical manager should practise the virtues of integrity, accountability and transparency in all their dealing with stakeholders if they are to be trusted with all their actions and information they provide to users.

If accountants and corporations are to be accepted as being as part of society they too can be judged according to Virtue ethics. Although virtues relate to character traits of people it may be applied to corporations because the accountants and executives are the people who manage and make decisions on behalf of these corporations. The virtues that may apply to accountants and the corporations they represent are *honesty* which refers to the principles of truthfulness, integrity and trustworthiness and *fairness* which is the quality of being just, equitable and impartial (Ferrell, Fraedrich and Ferrell 2008). In addition, transparency is a virtue (Murphy et al. 2007) which involves openness, availability or disclosure of information (including environmental and social information) and would allow a virtuous accountant and corporation to display these character traits. If accountants are not providing social and environmental information both positive and negative, it can be said that they are not being transparent and therefore breaching the principles of honesty and not behaving in a virtuous manner and the same applies to the corporations they are representing. Previous studies have shown that virtuous organisations enjoy amongst other things higher levels of productivity and profitability (Brady 2006; Paine, 2003). Thus, it benefits accountants and

corporations to behave ethically both for economic reasons and for attaining a reputation of being virtuous and professional.

Accountants will need to be educated or be exposed to ethic courses if they are to learn about moral or ethical behaviour and develop their moral reasoning. A number of studies around the world have shown that ethics education improves an individual's moral or ethical reasoning (Wu 2003; Demosthenous 2006; Desplaces et al. 2007). Generally, accountants will need plenty of teaching from their environment including from family, employers and school or from their daily experiences of life if they are to think more practically and with moral principles. If the accounting profession is to improve their reputation (from the recent accounting scandals) and be trusted by the public they must ensure their members apply the principles of the IFAC code of conduct in their daily activities and in particular when solving ethical dilemmas.

### 3.4.3 Accountants and Teleological (Utilitarian) ethics

Business decision making and traditional accounting thought implicitly applies Utilitarian reasoning. Living in today's capitalist society accounting students are generally taught to think that 'a good/successful business is one that makes most profits' and the majority of the public would agree with this statement. Typically, accounting students are taught that they discharge their accountability via the financial statements they provide to users. But these financial reports do not show, for example, what environmental damage has been incurred by the business or if the decisions of management were ethical or socially right or were based on minimising risk for the corporation. In most cases the reduction of labour and other costs seems to be the major business goal and this is reflected with large number of manufacturing plants closing down and relocated to developing Asian countries where labour is very cheap and workers' rights are violated (Cavusgil, Riesenberger, Rammal, and Rose, 2015). Only in recent times environmental and social disclosures have been included in annual reports and mainly of large multinational companies.

The cost benefit analysis approach has been the basis of accounting education in teaching students in making decisions and only recently environmental accounting has been included in the curriculum. With utilitarianism, the consequences of an action are considered to be ethical if they provide more good or benefits than harm or costs (Beauchamp and Bowie,

2004, p. 23). Therefore, Utilitarian reasoning assesses actions by reference to the utility they generate. This is further narrowed by Financial Utilitarianism whereby the actions which generate greater financial utility (profits) are considered as better actions than those which generate less financial utility (Beauchamp and Bowie 2004). If one follows Friedman's view that the social responsibility of business is to be profitable, and furthermore, consequences are measured by costs and benefits, it appears logical from a utilitarian perspective that the best ethical option is that which maximises profit and not those that consider the environment at the cost of reduced profits.

Friedman's view to managing business takes the classical perspective. This is an approach to management that advocates the "invisible hand" of free market forces, with their allocating and coordinating efficiencies in resource allocation, to regulate business for society's betterment and to dictate the actions of business. In its basic formulation, it espouses that the entire social responsibility of a business entity is to "make profits and obey the law" (Bartol et al. 1998, p. 131). The supporters of the classical perspective to managing corporations would claim that it creates the greatest good for the greatest number, and therefore government intervention is not required. Obeying the law is good but it does not always equate to ethical behaviour. Laws do not cover all situations, are often dated and need to be changed to reflect society's changing values. So the challenge to business schools/universities is to provide the future generation of accountants with both accounting and ethical knowledge. Accounting students will need to develop moral values and become ethically mature if they are to move away from the teleological approach to decision making, apply moral judgment and be competent moral accountants, in today's complex business environment with its many shades of grey.

#### 3.4.4 Accountants and Stakeholder theory

Another theoretical explanation for why corporations undertake ethical or socially responsible activities, and should be transparent about them, is stakeholder theory. If businesses are to fulfil their social responsibility accountants and managers must consider the interests of all parties affected by their actions. According to stakeholder theory, the corporation ought to be managed for the benefit of all its stakeholders (Mele 2008, p. 63). Thus, another way to analyse the social responsibilities of business is to consider all the parties that have a stake in the business, and as referred to as stakeholders. Freeman (1984)



defined stakeholders as “any group or individual who can affect or is effected by the achievement of the organization’s objective (p. 46). Examples of stakeholders include shareholders, employees, suppliers, customers, creditors, competitors, governments, and communities (Goodpaster 1991, p. 53). In other words, a stakeholder is any person or entity that is directly or indirectly affected by the decision-making of a corporation. So the corporation has the obligation to not violate the rights of stakeholders and should be accountable and responsible for their effects of their actions on others. Accountants play an important role in the discharge of the corporation's accountability to stakeholders through the disclosure or provision of financial, social and environmental information.

Unfortunately, accounting students are generally taught to think that ‘a good/successful business is one that makes most profits’ and the majority of the public would agree with this statement. Typically, they are also taught that businesses discharge their accountability via the financial statements they provide to users. But these financial reports do not (always) show, for example, what environmental damage has been incurred by the business or if the decisions of management were ethical or socially right or were based on minimising risk for the corporation. It is only in recent times that environmental/social disclosures have been included in annual reports and mainly of large multinational companies. According to the KPMG International Survey of Corporate Responsibility Reporting (2017) this type of reporting has increased substantially only since 2002 with 18% to 75% of companies in 2017. In countries such as Australia environmental reporting is only provided on a voluntary basis so not all corporations provide this type of information and in particular any negative information.

The community is an important stakeholder because in theory the local community grants the business the right to exist and provides their ‘license to operate’ (Deegan 2009). Society or the community grant the business the right to operate, and they purchase the business’s products. Given the important role that society or community plays in the existence of the any business, this provides justification for all businesses to apply the stakeholder approach to their decision making and consider the impact on the community. Corporations should not pollute the environment because in effect they are exposing the community to hazards (health hazards) and affecting their right to a clean environment. So according to stakeholder theory if accountants and/or the corporations are only considering the shareholders and not

the community as a whole they are not behaving ethically and are “not fulfilling their role according to the social contract or their license to operate” (Deegan 2006, p. 277). The accountants’/corporations should also provide the community with information about the utilization of resources and the positive and negative effects the operations of the business are having on the environment.

#### 3.4.5 Accountants and Legitimacy theory

Legitimacy theory suggests that Corporations continually seek to ensure that they are perceived as operating within the values and expectations of their respective societies. Corporations are expected to be responsive to the changing ethical (or moral) environment in which they operate (Deegan 2006, p. 275). Legitimacy theory relies on the notion that there is a ‘social contract’ between the corporation and the society in which it operates. Although difficult to define, the ‘social contract’ is an unwritten contract whereby it represents the implicit and explicit expectations that society has about how a corporation should conduct its operations (Deegan 2006, p. 277). In recent decades society’s expectations of corporations have changed and expect corporations to make outlays to repair or prevent damage to the environment, to ensure the health and safety of consumers, employees, and other stakeholders (Tinker and Neimark, 1987, p. 84). It is assumed with Legitimacy theory that If corporations meet the expectations of society then they are given the right to operate or ‘licence to operate’ by society (Deegan 2006, p. 277).

If society is the one that provides the ‘license to operate’ or the legitimacy to corporations then these corporations have a moral obligation to respect the rights and expectations of society and provide them with the correct and full information regarding the utilisation of resources in their published reports. If accounting information is to be used by corporations as accountability for their actions to the public, then it can be argued that corporations have a moral obligation to provide social and environmental information in their published accounting reports. Gray’s concept of accountability must be developed ie. “Society has a right to receive information and a corporation and accountants have a duty to supply it” (Gray 1990, p. 23). Disclosure of social and environmental information by a corporation is or can be considered a “part of the social contract or part of their licence to operate” (Deegan 2006, p. 339). It therefore can be said that, a corporation that fails to provide environmental/social information is failing their part of the social contract and their legitimacy or part of their

license to operate. Thus, accountants play an important role in making corporations more accountable, by providing social and environmental information so that society can use to evaluate corporations' environmental utilisation and the social impact it has had on society. Gray (1990) argues that by providing this additional environmental data this keeps organisational decision-makers and the public informed about the organisations use of economic resources. Accounting, by aiming to "expose, enhance and develop social relationships" (Gray 1992, p. 413) about the use of the environment by corporations, can assist managers to move towards an ethical decision making process that would be beneficial to society at large. Additionally, accountants' providing this expected information to stakeholders fulfil their part of the social contract with society and thus achieving the status of being Legitimate. If accountants are considered to be legitimate by society then the accounting information they produce will be trusted and relied upon and could assist in improving the overall reputation of the profession.

### **3.5 Theoretical Framework for this study**

Most ethical theories are classified into three main categories: (a) Teleological Ethics, (b) Deontological ethics and (c) Virtue Ethics. These three categories serve as the basis for Kohlberg's theory of moral reasoning and development. An individual goes through a decision making process when they are required to solve an ethical dilemma. In order to apply ethical judgment an individual's level of moral reasoning is involved and influences ones rationale for making a decision. Kohlberg's theory of moral reasoning and development includes three levels namely pre-conventional, conventional and post-conventional with two stages in each of the levels (see page 62 for further details). This study is examining the moral reasoning of Cypriot accounting students using the DIT so Kohlberg's theory of moral reasoning is used to explain the level of moral reasoning of students. Depending on the moral reasoning level one has reached they either consider Teleological ethics (consequences) or Deontological ethics (principles) in their approach to decision making. Thus ethical behaviour is the result of moral reasoning and ethical decision making. Ultimately, the different categories of ethical theories can be used to judge an individual's behaviour or decision making as to whether it is ethical or not.

### **3.6 Chapter Summary**

This chapter began with a discussion of why individuals behave unethically and the environmental variables that provide for unethical behaviour. Continuing on from this is a discussion on unethical behaviour in accounting and business and the main principles of the accounting code of conduct. Also included is an outline of the different ethical theories and approaches used to examine ethics and ones behaviour if it is ethical or not ethical. This chapter concludes with a discussion of different theories that can be used to explain why accountants should provide both financial and non-financial information to stakeholders.

## **Chapter 4: Methods**

This chapter begins with an explanation of the research design used for this study. A description of the sample used for this research and an overview of the survey instrument used to measure the moral reasoning of these students is provided. Included in this chapter is a discussion of Kohlberg's theory of moral reasoning and Rest's moral judgment model that form the theoretical framework for this study. The limitations of Kohlberg's theory are outlined and a potential extension of this theory is proposed.

This chapter begins with a brief explanation of the research design and a description of the selected sample of students used for this study. Given that this study is examining the moral reasoning and development of Cypriot accounting students, the evolution of the Cognitive Moral Development (CMD) theory is provided. A description of Piaget's research, Kohlberg's six stage moral theory and Rest four component model is provided culminating in the selection of the Defining Issues Test (DIT), the survey instrument used in this study. The DIT is outlined, followed by a discussion of the validity, reliability and the scoring of this instrument. Additionally, the limitations of Kohlberg's theory of moral reasoning are discussed and a potential extension of this theory is proposed. It is suggested that there is a potential gap in the theory and that a spiritual/religious stage should be added. It is claimed/argued that the theory does capture those respondents whose moral reasoning and ethical behavior is heavily influenced/guided by their religion.

### **4.1 Research design**

True Experimental studies are generally used to establish a cause and effect relationship between two variables, that is, a change in one variable is caused by the change in the other variable. In this study the independent variables (accounting course and ethic topic) of the study are not manipulated or controlled by the researcher to observe changes on the dependent variable (student's moral development – P score). Additionally, there is no interference with the student's normal university life or work. So, given these are the conditions and there is no manipulation of the accounting and ethics education, this study can be categorized as a quasi-experimental study. This study is a quantitative quasi-experiment because the participants were not randomly assigned to the treatment or control group (Streubert and Carpenter, 2011).

In recent times the increasing trend of corporate fraud has been linked to low level moral reasoning among accounting professionals (Thomas 2011; Warinda 2012). Corporate scandals involving accountants, has led to the questioning of their level of moral reasoning and lack of ethics. Furthermore, tertiary accounting and ethics education has been blamed as been inadequate in developing the moral reasoning skills of these individuals.

On average, previous studies have indicated that the level of moral reasoning of accounting students is lower than other students from other disciplines. To improve the understanding of the decline in ethical behavior by accounting professionals, there was a need for further research into the effects of tertiary education and other factors that may influence the moral reasoning and development of accounting students.

This quantitative quasi-experimental study examines the level of cognitive moral reasoning and development of undergraduate and post graduate accounting students at two public university in Cyprus. The aim of this thesis is to explore and measure for the first time the moral reasoning levels of Cypriot accounting students. This study examines the relationship of accounting and ethics education to the moral reasoning and development of Cypriot accounting students. Additionally, the Cypriot accounting students' moral reasoning results are examined and analysed for significant differences based on their age, university year level, and gender. Rest's Defining issues Test (DIT) was utilized to collect data and quantitatively measure the moral reasoning level of the accounting students. An additional section was added to the DIT survey to collect the required demographic data. The DIT and related material was provided to students in class and students were given the option to participate in this study on an anonymous basis.

#### 4.1.1 Sample

This study included one hundred and ten university accounting students from two public universities in Cyprus. Twelve survey respondents were omitted either due to failing internal validity checks or insufficient data provided resulting in a final sample population of ninety-eight accounting students. The final sample includes fifteen post graduate students studying the professional accounting program and eighty-three undergraduate students studying accounting from two public universities in Cyprus. Four groups of students participated in this study; first, second and third year accounting students and a group of trainee accounting

students studying the accounting program for Certified Accountants. The sample for this study includes both male and female students age 18 years and above.

Students were offered the opportunity to participate in this study on a voluntary and anonymous basis and this was further emphasised in the letter of introduction. Willing participants were provided with the DIT survey and a letter of introduction. The DIT survey included a demographic section to collect demographic data to satisfy the independent variables of the study. The letter provided information about the researcher and the study. In addition, the letter provided an explanation about the survey, the time required to complete and assured that all responses are anonymous and will be kept confidential. The questionnaire was distributed to students at the beginning of the semester. In an accounting class they were offered the surveys package if they wanted to be part of the study. A copy of the DIT survey and letter of introduction is included in appendix 1.

#### 4.1.2 Permissions

In conducting this study, the researcher attained the permission/approval of the:

- Ethics committee of their university to ensure all ethics requirements were met and the correct procedures were followed;
- Appropriate persons of the universities in Cyprus in order to use their accounting students for this study;
- Moral reasoning centre of Minnesota in the USA, for the use of the DIT instrument for this study and to overcome any copyright implications.

#### **4.2 Cognitive Moral Development (CMD) Theory**

Lawrence Kohlberg (1969) extended the work of Jean Piaget (1966) a Swiss clinical psychologist who was famously known for his work on child development and his theory of cognitive development. Piaget's theory was about explaining the mechanisms and processes by which a child develops whilst growing up into an individual who can reason and think using hypotheses. Piaget's theory has four universal stages and he believed that all children must go through step by step. The stages are Sensorimotor Stage (Birth-2years), Preoperational (2-7years), Concrete operational (7-11years) and Formal operational (11 and over).

#### 4.2.1 Kohlberg theory

Kohlberg's research differed in that the focus of the research moved from cognitive development to moral judgment. In addition, it was a longitudinal study examining a sample of boys' moral reasoning between the ages of 10-16 years. This sample was followed at three year intervals for twenty years. Kohlberg wanted to identify how moral reasoning changed as individuals became older. Kohlberg's research study examined the cognitive processes used by these individuals in determining right from wrong but more importantly the reasoning behind their decisions. Kohlberg developed the Moral judgment interview (MJI) instrument and each boy was interviewed for two hours based on the ten dilemmas (Colby and Kohlberg 1987). He found that the boys reasoning changed as they got older.

Kohlberg (1969) concluded that there are three distinct levels of moral reasoning that individuals use when making moral judgment decisions namely pre-conventional, conventional and post-conventional, each containing two stages.

At the **pre-conventional level** a person is primarily concerned with what effect a chosen action will have on them. At this level, individuals are considered to be 'egocentric' and determine what is right or wrong based upon consequences. Individuals are either motivated by rewards or behave in a way to avoid punishment. They do the right thing or make the right decision to get a reward or act in way to avoid punishment. It can be said that an individual at this level does not have the ethical maturity or reasoning to develop their own set of ethical principles, and thus looks at the rewards or potential punishment of their actions to guide/influence them with their choice of actions. Given that an individual at this level does not consider the impact of their actions on others and mainly think of themselves in their decision making, it can be re-named the 'egocentric level' of moral reasoning. An accountant reasoning at this level may behave unethically if they believe that they will not "get caught" or be punished for their unethical actions and the reward for behaving unethically outweighs the cost or punishment.

##### **Stage one - reward or punishment**

An individual at this stage considers the potential reward or punishment of an action prior to their decision making or acting in a particular way. They do not act ethically out of principle or because that is the right thing to do. The reward of an action or the avoidance of



punishment prompts them to act ethically. For example, an accountant at this level will behave professionally and as expected if they believe that the detection and punishment from their boss is likely or if they are promised a reward for behaving as expected. An individual with stage one reasoning will not consider the impact of their actions on others, only the reward or potential punishment of their actions.

### **Stage two - instrumental relativism.**

An individual at this stage is developing/progressing in their reasoning and is considering others in their decision making but only as far if they are to benefit themselves from the situation. Prior to their actions or making a decision an individual applies/uses a cost benefit approach and considers the resultant costs or benefits of their action.

An accountant at this stage would consider taking a bribe from a client to falsify their financial statements (cook the books) if the bribe (the benefit) outweighs the punishment of preparing incorrect statements or if they think that they will not get caught. This stage has been referred to as "You scratch my back and I will scratch yours" because one only considers others or makes a decision that would benefit others only if they are to benefit themselves from the situation. In other words "What's in it for me?" and "is it worthwhile?" An accountant will behave as expected or ethically if they are promised a reward that outweighs the effort of their action. Thus, an accountant may work overtime unpaid for a period of time to achieve organizational goals on the promise from their supervisor that they will be promoted as result of this. A person at the pre-conventional level of moral reasoning uses the Teleological or consequential approach to decision making because ultimately the consequences of a decision is what is considered and influences the choice of action. Individuals do not possess the moral reasoning to behave ethically or make the right decision because principally that is what an ethical person should do or basically it is the right thing to do.

At the **conventional level** of moral reasoning an individual is mostly concerned with their relationships they have with those persons close to them, and how this relationship will be affected by their chosen actions. At this level an individual generally use the society's laws and expectations as a guidance as what is considered right or wrong. Thus, morality is basically following the rules and laws of society, and they serve as the benchmark for what is

considered as ethical behaviour. An accountant reasoning at this level may follow the accounting standards, and act or feel pressured to abide by work peer norms or standards even if they do not agree with them. The expectations or standards of others (including the organization they represent) become the focus and are used as a basis to determine as to what is ethical or unethical behavior. According to Kohlberg (1987) most adults do not progress beyond this level.

### **Stage three – Good boy/girl orientation.**

An individual at this stage of reasoning would behave in a way to please those around them or to 'fit in'. The relationship they have with those around them is so important that they would behave or do of what they think is expected of them. An accountant at this stage would behave professionally and competently if they feel that is what the profession and their workplace expects. At the same time because individuals at this stage 'act to please' or to secure approval of those around them may also behave unethically if that is what the majority around them are doing. Individuals at this stage are socialized very easily by those around them.

### **Stage four – Law and order.**

Individuals at this stage of moral reasoning respect law and order and consider the law as a benchmark to morality/parameter as what is right or wrong. Behaving ethically or contributing to social order ('doing the right thing') is to respect authority and accept and obey the law without question. An accountant at this stage would comply with the accounting standards and any other rules and regulations of the accounting profession without question and therefore consider themselves as fulfilling their duty as an accountant and member of the profession. So individuals at this stage of Kohlberg's theory would benefit from ethics education/training, increasing their ethical awareness and understanding of ethics and therefore developing the necessary ethical skills to make ethical decisions.

An individual at the **post-conventional level** defines their personal values in terms of their own chosen principles and are usually based on the principles of justice and equity. A post conventional level thinker may seek to change existing laws if they feel that they do not benefit most of society and are not based upon rational considerations. Laws are respected

and followed only as far as that they are fair and do not violate individual rights. At this level the application of Deontological ethics is used so therefore individuals adopt universal ethical principles and consider human rights in their decision making.

#### **Stage five – Social contract.**

Individuals at this stage of reasoning begin to develop their own value system to determine as to what is right or wrong. They are law abiding citizens and consider the laws to be a social contract and therefore feel an obligation to follow laws for the benefit and protection of society. However, they would question the laws and may consider changing them if they feel they lack justice or are not beneficial to society. Accountants at this stage would follow the accounting standards or abide by the ethical code of the accounting profession because it is for the betterment of the profession and all the accounting clients, but would consider changing them if they feel that they are not fair or are biased or do not protect public interest.

#### **Stage six – Universal ethical principles.**

A person reaching stage six reasoning would be using their inner conscience and self-chosen ethical principles in defining as to 'what is right and wrong' and it would include advocating justice and equality universally (Ponemon 1992) and not corporate policies. It would be assumed that an accountant at this level may protect the public interest even if it means 'going against corporate policy'. Therefore stage six involves the application of deontological ethical theories of justice, duty and equality universally. An individual may decide to 'blow the whistle' and provide confidential information to the media about their organization, if they believe that the actions of the corporations are considered to be unethical and may be detrimental to the public (Kohlberg 1971). Individuals consider their own developed universal principles rather than the social structures/norms in promoting justice and human rights for society in general. Individuals believe that people should be treated as 'ends' rather than a 'means to an end'.

Thus Kohlberg claims that individuals all act for different reasons and human moral development means going through all six stages in this order. In other words, the rationale for their decision one takes differs depending on their stage of moral reasoning. Additionally,

full moral development is not achieved unless one uses principled thinking (post conventional level) in the moral judgment.

Kohlberg's theory of cognitive moral reasoning and development will be used as the theoretical foundation for this thesis. Research into accountants' and accounting students' ethical behaviour and moral reasoning has used a variety of models of ethical decision making, but the majority has used the Kohlberg (1969) theory of moral reasoning (Rest 1986; Lovell 1997; Jones et al. 2003) and Rest's Defining issues test (DIT).

#### 4.2.1 Application of Kohlberg's model

Kohlberg's theory can be used to assess the level of moral development of individuals over a period of time, or it can be used to identify the percentage of post conventional reasoning that is used at a point in time. According to Kohlberg's theory, before reaching moral maturity as adults, individuals start at stage one of moral reasoning and move to higher stages of moral reasoning as they get older. Kohlberg (1987) concluded that the majority of American adults at moral maturity develop conventional moral reasoning. Thus for most people that only develop stage four of moral reasoning would refer to morality as to obeying the rules and laws of that society. The aim of this study is to apply Kohlberg's theory and explore and analyze the moral reasoning and development of Cypriot accounting students. The moral reasoning of students from different year levels will be examined using the DIT. The study will also assess the level of moral development of these students over a period of time and investigate for any effects that gender, age, work experience and studying ethics may have on the moral reasoning of students. Since Kohlberg's initial research, there has been a considerable amount of support for his moral development model (Rest 1979; Blasi 1980; Snarey 1985; Elm, Kennedy, and Lawton 2001; Woodward et al. 2007).

#### 4.2.2 Limitations of Kohlberg's theory of development

The value of justice is the main emphasis of this theory so researchers (Gilligan 1982; Richard and Davison 1992) who believe that other values are important in moral actions have criticised this theory. Carol Gilligan (1982) claimed that this theory was male biased given that Kohlberg in developing this theory used only male subjects in his study. Gilligan is of the belief that males and females reason differently and therefore different values such as 'care' should be considered as with her theory of moral development. In response to Gilligan's claims

against this theory Rest (1986) suggested there is little evidence to propose that males are better able to reason (under the justice principle) than females. In addition, Rest (1986) in his meta-analysis of 56 studies found that ‘in less than one half of 1 percent of the variance in DIT scores is attributable to the variable gender’ (p. 113). Other studies investigating gender influences (Walker 1984; Tsalikis and Ortiz-Buonafina 1990) concluded that males and females reason in a similar way or that females score higher than males using the DIT instrument (Goolsby and Hunt, 1992; Loe and Weeks, 2000).

Another limitation of this theory is “its failure to account for people’s theological motivations for pursuing moral actions” (Balswick, King and Reimer 2005, p. 262). People who live by or believe god’s moral principles must be obeyed do not always fall into the post conventional thinking (Johnson 1996). These people are probably more moral than the average person but this theory would categorise them to be less ethically mature if they do not use principled reasoning. Thus it could be argued that another stage could be added and therefore extending Kohlberg’s theory to include a religious or spiritual stage. The aim of this study is not to extend Kohlberg’s theory of moral reasoning and development but however, a brief discussion arguing for another stage to be added to Kohlberg’s theory is provided below.

A potential limitation of Kohlberg’s theory is that it is assumed that all individuals have the capacity to think and decide rationally and to consider the advantages and disadvantages of a situation every time. If this was the case most people would make good decisions at all times and there would be less people in prison. Unfortunately, for different reasons some individuals are not rational with every decision they make and do not consider the advantages and disadvantages of every situation before making a decision.

#### 4.2.3 Extension of Kohlberg theory – add a spiritual/religious stage

Religious people often cite religion or provide religious beliefs for an explanation or rationale for their actions or decision making. Many religious people often provide no logical explanation/rationale for their behaviour other than to say that they behave the way they do because of their religious beliefs. A religious person would claim to have a relationship with god or their religion which is important to them. Behaving according to their religion’s expectations is evidence of maintaining that relationship and doing the right thing in the eyes of their group and/or family. Additionally, religion provides them a sense of belonging and a

fulfilment of their duty/ loyalty to their religious group. The expectations or standards of their religion become the focus and are used as a basis to determine as to what is ethical or unethical behavior. Morality for this category of individuals is basically following the rules of their religion, and they serve as the parameters of ethical/appropriate conduct. For example, some religions dictate to their followers as to what is appropriate/acceptable behaviour or decision making with regards to issues such as marriage, dress code, diet and daily life behaviour.

It can be assumed that an individual who uses their religion to guide their behaviour would have developed the moral maturity beyond the pre-conventional level and have moved to conventional level of moral reasoning. A religious/spiritual stage is necessary and would provide a rationale or explanation for those people who use their religious beliefs as the benchmark as to what is morally right or wrong and also use their religious values/beliefs to guide them to act ethically. This stage would probably fit within the conventional level of Kohlberg's theory because an individual who reasons at the conventional level would consider morality as basically following the rules and laws of society and want to do the 'right thing' by those around them. Religious individuals are similar to this as they would identify themselves with or have internalised the rules and expectations of their religion and that of society. Thus it can be justified to extend Kohlberg's theory and include a religious/spiritual stage at the conventional level to capture religious individuals.

#### 4.2.4 Rest's four component model of moral judgment

Kohlberg believed that individuals as they get older and more mature they also progress in their moral reasoning abilities. He claimed that individuals move sequentially from stage one of his theory to the higher levels of morality. However, unlike Kohlberg, Rest believed that individuals at any one time may use a combination of moral reasoning abilities simultaneously. In addition, Rest's model hypothesises that moral reasoning is not sequential and in one direction and each component may influence another component of the model. Rest, Narvaez, Stephen, and Bebeau (1999) claim that an individual moves upward in terms of "gradually shifting distributions of the use and preference for more developed thinking" (p. 4). Rest criticised Kohlberg's research and theory by saying that it is "too narrowly focused on justice, being too rationalistic, individualistic, and partisan to Western liberalism" (Rest, 1994, p. 7). Rest (1986, p. 60) states that "ethical reasoning is only part of an individual's

overall capacity to frame and resolve ethical issues.” With Rest’s model there is more emphasis on moral behaviour rather than the rationale or the effect of the behaviour.

In response to the claimed gaps of Kohlberg’s theory Rest et al. (1986) developed a survey instrument, the Defining Issues Test (DIT), to measure the moral reasoning of individuals. In developing the DIT it was recognised that Kohlberg’s (1969) stage sequence model was an integral part of a more comprehensive cognitive model of ethical decision making.

Based on Kohlberg’s theory, Rest (1994) discussed the relationship of moral reasoning to moral behaviour and identified a four component model of moral judgment, an alternative approach to measure the moral development of individuals. Rest model includes the following components:

1. Moral sensitivity - this component is the recognition and interpretation of a situation. An individual before making an ethical decision must first be able to recognise or be aware of an ethical dilemma. It is believed that studying ethics increases ethical awareness and students become more ethically sensitive, assuming that students will be exposed to ethical dilemmas and are given the opportunity to discuss and make a judgment of different cases in their ethics classes. An individual will need to recognise and interpret the situation in terms of how their action will affect the welfare of others.
2. Moral judgement – One is required to make a judgement as to whether an action is morally right and therefore determining as to what ought to be done. After recognising and interpreting a situation as being an ethical dilemma a moral judgement will be required to be made as to the action that best meets a particular moral ideal. This is where the DIT instrument is used to determine the ethical reasoning and judgment ability of the respondents.
3. Moral motivation – This process requires an individual to decide what to do by selecting and placing one moral value above another. One has to select and pursue a particular action from different alternatives recognising that each have different moral and competing motives.
4. Moral character – After considering and selecting an action from alternative options one needs to have the strength of character to implement a moral action. One may

know what action or decision is best but one also has to have the strength to be able to execute their chosen action. In addition, an individual will need the strength of character to be able to deal with any obstacles or negative consequences that may face with their decision (Rest et al. 1999, p. 101).

Rest's four components should be the objective of any ethics course which is to increase the ethical awareness of students and thus make them ethically sensitive. Ethics courses should expose students to many ethical dilemmas therefore giving students the opportunity to apply component one and two of Rest model. Students who develop ethical sensitivity are able to recognise a situation as being an ethical dilemma and therefore would be in a better position to apply ethical judgment. It can be assumed that students with these competencies would then be on the right path to develop moral character.

#### **4.3 The survey instrument – Defining Issues Test (DIT)**

Since the introduction of Kohlberg's (1969) theory, researchers have attempted to construct a reliable instrument to measure the level of moral reasoning of an individual. Initially, the Moral judgment interview (MJI) was developed by Kohlberg and his colleagues but it is both labour intensive and time consuming. It required the interviewer to administer it individually through open-ended questions for two hours using the ten dilemmas. The MJI involved a series of standardised scenarios involving a moral dilemma. The person interviewed was expected to resolve the dilemma. An elaborate scoring system was then used to analyse each person's answer to the resolution of the ethical dilemma. As an alternative to the MJI and in response to the negatives of the MJI, Rest (1979, 1986) developed the Defining Issues Test (DIT) and it is based on Kohlberg's theory. The DIT is a self-administered (written) multiple-choice questionnaire to objectively measure the moral reasoning of individuals. The original DIT requires the respondents to consider and make decisions about six different social dilemmas. The rationale behind the decision of individuals is what is most important rather than the final decision.

The DIT has been used extensively by researchers from different disciplines to measure the moral reasoning of their sample. For the last three decades accounting researchers have used the DIT to explore the levels of moral reasoning and judgment of accountants and accounting students. Numerous studies have utilized the DIT as an instrument to explore and measure



the moral reasoning and development of Accountants (Ponemon and Gahhart 1994; Sweeney 1995; Sweeney and Roberts 1997; Tsui and Windsor 2001; Thorne et al. 2003, Massey and Thorne 2006). In addition, the DIT has also been used to measure the moral reasoning of accounting and commerce students (Armstrong 1987; Jeffrey 1993; Ponemon 1993; Ponemon and Glazer 1990; St Pierre et al. 1990; Shaub 1994; Eynon et al. 1996; Kracher et al. 2002; Venezia 2005; Brown-Liburud and Porco 2011). The DIT instrument has become “the measure of choice in higher-education assessments of moral judgment development” (Bailey et al. 2010, p. 8).

The majority of all published empirical ethics research used Rest’s (1986, 1993) DIT to determine the moral reasoning of their subjects. Since the 1970’s the DIT has been used in over thousand studies to test the moral reasoning of their respondents (Rest 1993). The DIT instrument is the most widely used instrument of moral judgment and the best documented in terms of reliability and validity (Rest 1986). The DIT was developed “based on the premise that people at different points of development interpret moral dilemmas differently, define critical issues of the dilemmas differently, and have intuitions about what is right and fair in a situation” (Rest 1986, p. 196). The DIT measures moral reasoning development, and as the aim of this study was to examine the moral reasoning and development of accounting students throughout their tertiary studies, the DIT survey is considered the most appropriate for use in this study. A copy of the DIT questionnaire can be found in Appendix A.

#### 4.3.1 The scoring of the DIT instrument

There are two versions of the DIT available, one containing six moral dilemma scenarios and the other a subset of three. The scenarios involve a variety of social moral issues ranging from a doctor giving an overdose of morphine to kill a patient that wants to die to having to steal medicine to provide for a sick and dying partner (see DIT questionnaire on page 124 for full details of the six dilemma scenarios). None of the dilemmas are in a business context, therefore making this questionnaire more appropriate to students and, in particular, to those who have just began their accounting studies and have not been exposed to the business environment.

With each moral dilemma scenario there is an action to be chosen. The respondent must indicate their chosen action, justify their choice and rank the relative importance of their

reasons for choosing that action. The respondent's task is to rate each statement according to its importance in making moral decisions (importance rating as "great," "much," "some," or "none"). After the respondents have rated the 12 items, they are then asked to consider all items simultaneously and to rank the most important of the 12 considerations in making a decision ("most important," "second most important," "third most important," or "fourth most important") (Rest 1986, p. 4). In order to mitigate self-serving bias the participants of the DIT are requested to resolve the ethical dilemmas from a third person's point of view.

The ratings and rankings of the items are used to derive a respondent's score. The rationale or the reasoning for the decision to be taken is of vital importance. Measurement of the respondent's moral reasoning level is achieved by calculating a weighted index of the percentage of stage five and six reasoning used to resolve the dilemmas. A score is then generated to reflect the level of moral reasoning of the individual. From the rankings provided by the respondents a Principled score (P score or P index) is then calculated.

The P score is calculated in the following way:

- if a respondent ranked a post-conventional item as "most important," then the P score will increase by four points,
- if the post-conventional item was ranked as "second most important" the P score will increase by three points,
- if the post-conventional item was ranked in third place the P score will increase by two points,
- if the post-conventional item was ranked in fourth place then the P score will only increase by one point.

To get the raw principled morality score ("P"), the points from the post-conventional level (levels 5 and 6) are added together. This score is interpreted as "the relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas" (Rest, 1986, p.42). The total raw principled P score that can be achieved by the respondents using the six moral dilemma scenarios in the DIT can range from 0 to 57. To convert the raw principled morality score to a percentage it must be divided by .6. The P percent score can

range from 0 to 95 instead of 100 because on three scenarios there is no fourth possible principled item to select (Rest, 1979). In explaining what the P score is, Rest (1993) states, "it represents the degree to which a person's thinking is like the thinking of moral philosophers" (p. 13) such as Immanuel Kant. He goes on to say "The P percent score is interpreted as the extent to which a person prefers Post-conventional moral thinking" (Rest and Narvaez, 1998, p. 19) and has the ability to consider principles of fairness, justice and human rights in their decision making. The P score is a reflection of the individual's moral reasoning ability.

If respondents achieve a low P score, this would mean that they ranked considerations that used self-interest, the avoidance of punishment or breaking the law as most important. Thus, meaning their moral reasoning level is at the pre-conventional stages of Kohlberg's theory. Rest (1993) has reported that the average P score for the USA (adult) general population is 40 and for college graduates is 45 (see appendix B for table of mean P scores of other groups).

A new score was developed namely the N2 score (Rest and Narvaez, 1998) as an alternative to the P-score. As the P-score is a weighted sum model of each post-conventional item, the N2 score is more of a weighted average of all scores. "The N index is actually a hybrid score resulting from the combination of three scaled stories with three stories utilizing the P-score index" (Sweeney and Fisher, 1998, p. 142). The N2 is similar to the P score but it incorporates more information (Bailey et al 2005). Thus the N2 score is similar to the P score except it is adjusted for lower stage reasoning as well. The N2 also considers the related rating that respondents have developed during their decision making process in making their rankings (Rest et al. 1999).

#### 4.3.2 The validity and reliability of the DIT

The DIT has been proven both reliable and valid, and its standardisation and ease of administration (no verbal interview) has made it a popular test (Payne, 1988). According to Rest et al. (1999) based on the six scenario DIT, the reliability of the P score is in the upper seventies and low eighties for both the test-retest reliability (with one-to-three week time intervals) and internal consistency as measured by Cronbach's alpha (p. 646). Cronbach's alpha (Cronbach, 1951) is an estimate of an instrument's 'internal consistency reliability' based upon the average correlation among items within the instrument. The score (alpha) is

a function of the number of items in the instrument (numerator) divided by the heterogeneity of the sample in response to the items (denominator).

The DIT has also 'internal reliability checks' to ensure that respondents are following instructions and are responding sincerely. Within the DIT there are statements that really have no meaning and are pretentious sounding, and are designed to detect if respondents are attempting to increase their P scores by selecting these responses because they sound complex. These items are called 'M items' and if respondents choose too many of these statements they are discarded from the analysis. There is also the "Consistency Check" that is designed to detect respondents who randomly mark response items. It compares the ratings of the response items with that of their ranking and respondents are rejected if there are too many inconsistencies. According to Rest (1993) most studies lose 5 to 15 percent of their respondents to either the Consistency Check or the M score.

Due to the time constraint in completing this study, the advantages of the DIT and its validity to measure the moral reasoning of individuals, it was selected as the appropriate instrument to test the moral reasoning of students. Also, because the survey questionnaire is anonymous, students will feel more comfortable in participating in the survey and answering the questionnaires more truthfully. In addition, given the respondents are busy tertiary accounting students, it is likely they would prefer to participate in the survey at their convenience. Previous research (Demosthenous 2010) has proven that accounting students prefer a survey questionnaire (DIT) over an interview.

#### **4.4 Statistical analysis**

This study uses the DIT questionnaire to quantitatively measure the moral reasoning of accounting students with the resulting dependent variable P score. This study attempts to understand whether there is a statistical relationship between the dependent variable of moral development of accounting students and the independent variables of education level, ethics education, gender, age and attitude to ethics. The statistical techniques used to identify for any significant differences in the mean scores of all the variables are two-sample t tests. In addition, a multivariate Ordinary Least Squares (OLS) linear regression model is applied to consider some variables, where appropriate.

The OLS model used can be demonstrated as:

$$PScore = \beta_0 + \beta_1StudyEthics + \beta_2Gender + \beta_3StudyEthics*Gender + \beta_4Attitude + \beta_5EducationLevel2 + \beta_6EducationLevel3 + \varepsilon$$

Where  $\beta_0$  is the intercept;  $\beta_s$  represent parameters to be estimated, and  $\varepsilon$  is error term.

The variables for study ethics, gender and attitude are measured as dummy (zero-one) variables and the category coded as zero acts as the base case (e.g. for study ethics zero represents no ethics) while education is measured as a three-level ordinal variable and so is included in the model as two dummy variables where the excluded base-case in the model is the lowest level of education.

#### **4.5 Chapter Summary**

This chapter began with a brief explanation of the research design and a description of the selected sample of students used for this study. Given that this study is examining the moral reasoning and development of Cypriot accounting students, the evolution of the Cognitive Moral Development (CMD) theory was discussed. A description of Piaget's research, Kohlberg's six stage moral theory and Rest four component model is provided culminating in the selection of the Defining Issues Test (DIT), the survey instrument used in this study. The DIT is outlined, followed by a discussion of the validity, reliability and the scoring of this instrument. Additionally, the limitations of Kohlberg's theory of moral reasoning are discussed and a potential extension of this theory is proposed. It is suggested that there is a potential gap in the theory and that a spiritual/religious stage should be added. It is claimed/argued that the theory does not capture those respondents whose moral reasoning and ethical behavior is heavily influenced/guided by their religion.

## Chapter 5 Analysis and presentation of findings

This chapter provides the analysis and results of this study examining the moral reasoning abilities of tertiary accounting students in Cyprus. As noted above, the aim of this study is to determine whether accounting and ethics education can develop Cypriot accounting students' moral reasoning ability. In order to address this aim, a number of research questions and related hypotheses were developed and are reproduced in this chapter with an outline of the major findings. Firstly the demographic distribution of the sample is described. It is then followed by the answers to the research questions and an evaluation of the results of the study.

### 5.1 Descriptive Results

Table 5.1 provides the descriptive statistics for the sample investigated.

**Table 5.1: Descriptive Statistics**

Variable	Percentage	N
GENDER		
Male	36%	35
Female	64%	63
	100%	98
YEAR		
1	38%	37
2	36%	35
3	11%	11
4	15%	15
	100%	98
AGE		
18-19	44%	43
20-24	31%	30
25+	25%	25

The female respondents of this study accounted for sixty four percent of the sample population and male respondents accounted for 36% of the sample, as shown in Table 5.1. There are more females than males studying accounting which support the recent trend of more females are entering the workforce (Eurostat Labour Force Survey (LFS) 2013) and in particular the accounting profession.

Data for year level was also collected and pooled together from the two universities. The language of the two public universities is Greek. The intake of students in the public universities as opposed from the private are the students predominately from public education obtaining very high entrance marks. Only 10% of a university intake may be from the private schools. There was thirty eight percent of students from the total sample of respondents that completed year one of their degree which was the highest number of students from all the year levels. The second highest was thirty six percent of students that completed year two and a decreasing number of eleven percent of students completing their third year of their degree.

The student sample of this study was also separated and grouped according to their age as shown in Table 5.1. The age group of eighteen to nineteen years accounted for forty four percent of the total student sample which was the largest number of students from the three age groups. The second highest age group was the twenty to twenty four group which comprised thirty one percent of the student sample, followed by the twenty five plus group with twenty six percent of the total student sample. It can be said that there was a minimum variation in the number of students between the age groups which provided for a satisfactory comparison between the different ages.

In addition, correlations between independent variables were run, using Polychoric correlation as most are ordinal or categorical variables. These are presented in Table 5.2 and as can be seen there are high correlations between the year level and most other variables. This is discussed further when the statistical modelling is presented.

**Table 5.2: Polychoric Correlation Matrix – independent variables**

	YEAR	SEX	Attitude	WORK	AGE	studyethics	Educ
YEAR	1						
SEX	0.067	1					
Attitude	0.233	-0.119	1				
WORK	<b>0.941</b>	0.109	0.402	1			
AGE	<b>0.985</b>	0.100	0.378	<b>0.953</b>	1		
studyethics	<b>Approx. 1</b>	0.056	0.219	<b>0.774</b>	<b>0.959</b>	1	
Educ	<b>0.974</b>	0.040	0.225	<b>0.997</b>	NA	<b>0.993</b>	1

## 5.2 Hypothesis Testing

The first objective of this thesis was to examine the moral reasoning levels of Cypriot accounting students and to identify the moral development of these students. Additionally, to test for the effects of demographics factors such as gender, age, work experience on the moral reasoning results of the accounting students. The first research question and related hypotheses are discussed below.

RQ1. What impact, if any, does a university accounting degree program have on students' moral reasoning and development?

The mean moral reasoning P and N2 score for the Cypriot accounting students of this study is 63.88 and 57.34 respectively. The average college P score from studies conducted around the world is in the 40's for university students and in the 50's for graduate students (Rest 1993). In Cyprus only one other study examined the moral reasoning of tertiary students using the DIT to measure the moral reasoning (Demosthenous and Krambia-Kapardis, 2010). Demosthenous and Krambia-Kapardis (2010) used the English version of the DIT and found that Cypriot business students' moral reasoning was alarmingly low with a P score of 24.2. This score is only just above junior high school students and significantly lower than the average adult or university student (see appendix C on page 126 for other scores). This result supported previous claims that accounting and business students use low level of moral reasoning in their moral judgment and achieve lower level of moral reasoning scores when compared to students from other disciplines (Lampe and Finn 1992; Ponemon 1993; Eynon et al. 1996; Thorne 1999; Massey and Thorne 2006; Abdolmohammadi and Ariail 2009). However, the findings of this present study contradict these previous claims and results. The moral reasoning scores of the accounting students for this study are significantly different and much higher from Rest's national norms and previous studies of accounting and business students. The moral reasoning scores of this study suggest these accounting students are of an advanced moral reasoning level and comparable to that of moral philosophers whose score is 65 (Rest 1974). The high P score results of this study suggest that a university accounting degree program could have a positive impact on the Cypriot accounting students' moral reasoning and development. These are interesting findings that will be discussed further in the next chapter.



One might assume that as students progress through their education they may also advance in their ability for higher level moral reasoning. A number of studies previously have found and suggest that tertiary education does improve or has a positive effect on moral reasoning capacity (Rest 1986; Shaub 1994; Wu 2003; Desplace et al. 2007; Mayhew and Murphy 2009; Thomas 2012). However, the findings of previous studies are not conclusive. Accordingly, this study evaluates whether moral reasoning abilities of first year accounting students differ significantly from students from the upper year levels. The reason for this evaluation is to ascertain whether the P scores of students improved as they progressed in their studies and thus indicating a development in their moral reasoning. Two hypotheses were developed:

- H1. The moral reasoning levels (as measured by the DIT) of Cypriot accounting students in year 1 will be lower than the upper year level students?
- H2. The DIT P-scores of accounting students is positively associated with the number of years in university.

To test the first hypothesis an independent two-sample t-test was used to compare the moral reasoning results of the two groups of students (Table 5.3). The DIT P scores for the year 1 accounting students were compared to the final year accounting students. The year 1 students P score was 39.2 and 69.1 for the final year students.

**Table 5.3: P Score by year at university (year 1 v year 3)**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Year 1	37	39.2973	1.928159	11.72854	35.38681	43.20779
Year 3	11	69.12	3.038978	10.07915	62.34873	75.89127
combined	48	46.13167	2.447074	16.95383	41.20879	51.05455
diff		-29.8227	3.599054		-37.36037	-22.28504
diff = mean (1) - mean (3)					t = -8.2863	
Ho: diff = 0		Satterthwaite's degrees of freedom = 18.8244				
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

The first year accounting students achieved a much lower DIT P score than the third year students. At an alpha level of .05, a t-test finds that the difference in the means is statistically significant ( $P = 0.0$ ). Thus, it can be concluded that the difference is not due to random variation or chance alone, and there is a significant difference between the two means.

As Table 5.3 excludes students not in year 1 or their final year, the test is also run combining all students that are at a level higher than year 1. In Table 5.4, Group 1 includes the year 1 Cypriot accounting students and Group 2 includes a combined group of the students in years two, three and the professional program. Group 2 achieved a high mean P score of 63.98. This is a significantly higher P score when compared with the first year (group 1) students' P score of 39.29. This signifies that Cypriot accounting students before progressing in their studies possess a moral reasoning lower than the average adult. However, the Cypriot accounting student's moral reasoning develops to a much higher level of moral reasoning as they progress in their studies. Thus, H1 is strongly supported.

**Table 5.4: P Score by year level at university (year 1 v years 2/3)**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	37	39.2973	1.928159	11.72854	35.38681	43.20779
2	61	63.98836	1.487735	11.61958	61.01245	66.96427
combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
diff		-24.69106	2.435396		-29.54204	-19.84009
diff = mean(1) - mean(2)				t = -0.1384		
Ho: diff = 0		Satterthwaite's degrees of freedom = 75.5563				
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

To test the second hypothesis (H2), a two sample t test was conducted to compare students with only secondary education (group 1) with those who had prior education at bachelor level or higher (group 2). Table 5.5 provides the results, which indicate that years at university is also significantly associated with DIT score. Those with higher levels of university training scored 66.1 compared to 50.5. As for H1, H2 is also strongly supported.

**Table 5.5: P Score by Education level**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
1	72	50.53681	1.96558	16.6785	46.61755	54.45606
2	26	66.10154	2.043998	10.42238	61.89185	70.31123
combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
diff		-15.56473	2.835742		-21.21879	-9.910675
diff = mean(1) - mean(2)				t = -5.4888		
Ho: diff = 0		Satterthwaite's degrees of freedom = 71.1822				
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

In addition to investigating the effects of tertiary accounting education on the moral reasoning of students, the effect of ethics education on accounting students' moral reasoning was also examined. Students were asked to indicate if they have studied ethics and whether they think that 'ethics education makes students more ethical'. The second research question and related hypotheses are discussed below:

RQ2. What is the effect, if any, of ethics education in the accounting curriculum on students' moral reasoning and development?

In order to answer the above research question the hypothesis below was formulated and tested.

H3. Accounting students who have undertaken an ethics topic in the accounting curriculum will have a significantly different P-score to those students who have not studied ethics.

In this study, nearly two thirds (sixty two percent) of the student sample responded that they have studied and completed an ethics topic in the past. Thirty eight percent of the student sample of this study responded that they have not completed an ethics topic previously. The accounting students that completed an ethics topic previously (group 0 in Table 5.6) achieved a P score of 63.9. The Cypriot accounting students (group 1 in Table 5.6) that have not studied or completed an ethics topic previously achieved a lower P score of 39.2. A t test was

conducted for significant differences in the mean P scores of the two groups of students. As shown in Table 5.6 the students that studied ethics previously achieved a significantly different score than the students who have not studied ethics. At an alpha level of 0.05 the t-test indicated there was a significant difference ( $p = 0.0$ ) between the means. Thus, it can be concluded that the difference is not due to random variation or chance alone, and there is a significant difference between the two means. From this test, there is evidence to support the third hypothesis (however, further testing is conducted in the regression modelling reported later in this section).

**Table 5.6: P Score by students that have studied ethics**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	95% Conf. Interval]	
0	37	39.2973	1.928159	11.72854	35.38681	43.20779
1	61	63.98836	1.487735	11.61958	61.01245	66.96427
combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
diff		-24.69106	2.435396		-29.54204	-19.84009
diff = mean(0) - mean(1)				t = -10.1384		
Ho: diff = 0		Satterthwaite's degrees of freedom =		75.5563		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

The final research question considers demographic variables, and has three associated hypotheses.

RQ3. What is the effect of demographic variables, such as gender, age and work experience, have on students' moral reasoning?

The first related hypothesis, H4, considers gender:

H4. Male accounting students will have a significantly different P-score to female students.

Comparing the respondent's DIT scores for gender differences it was found to be a trivial amount. The female accounting students of this study scored a P score of 56.29 and the male accounting students achieved a lower P score of 51.72. Although the scores are different and

the female students achieved a higher score than their male counterparts a t test was conducted for significant difference in the scores. A t-test was conducted for any significant difference in the mean P cores of the two categories and the result is presented in Table 5.7. At an alpha level of 0.05 the t-test indicated there was no significant difference ( $p = 0.188$ ) between the means. Thus, it can be concluded that the difference may be due to random variation or chance alone, and there is no significant difference between the two means. Therefore, from this test, there is no evidence to support H4 (however, further testing is conducted in the regression modelling reported later in this section).

**Table 5.7: P Score by Gender**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	95%Conf.Interval]	
0	35	51.728	2.685883	15.8899	46.26963	57.18637
1	63	56.29857	2.149014	17.05727	52.00275	60.59439
combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
diff		-4.570571	3.4398		-11.42348	2.28234
diff = mean(0) - mean(1)				t = -1.3287		
Ho: diff = 0		Satterthwaite's degrees of freedom =			74.6822	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0940		Pr( T  >  t ) = 0.1880		Pr(T > t) = 0.9060		

The second hypothesis related to RQ3, H5, considers age:

H5. Older accounting students will have a significantly different P-score to younger students

One would expect as individuals get older and have more experiences in life they develop in their moral reasoning and become more ethically mature. The student sample of this study was separated according to age and into three different groups. The three age groups are students between the age of eighteen and nineteen, twenty and twenty four and twenty five and above. According to Kohlberg individuals do not mature ethically before twenty years old so the researcher used this point to compare the mean P scores of Cypriot accounting students. Although initially the student cohort was grouped into three different groups, for statistical comparison the students were put into two categories. Group 1 consists of

accounting students aged below twenty years old, and group 2 includes accounting students twenty years and above. The students below twenty years old achieved a mean P score of 43.11 and the students in the twenty and above age group achieved a higher mean P score of 63.69. The results are statistically significant (Table 5.8) indicating support for H5 (as for education and gender, age is also considered further in the regression model that follows).

**Table 5.8: P Score by Age**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Group 1	43	43.11628	2.107033	13.81674	38.86411	47.36844
Group 2	55	63.69618	1.726669	12.80532	60.23442	67.15794
Combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
Diff		-20.5799	2.724146		-25.99455	-15.16526
Diff = mean(1) - mean(2)				t = -7.5546		
Ho: diff = 0		Satterthwaite's degrees of freedom =			86.8777	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

In addition to age another variable that may influence one's moral judgment is being employed and working in the business world. Once employed individuals are expected to abide by unique company codes of conducts and related company rules. Work experience provides individuals with real life business dilemmas and the opportunity to apply their moral judgment and solve operational business and ethical dilemmas. Exposure to unique business cultures and different experiences may change/mould ones values and therefore develop their moral reasoning abilities. It was hypothesised that:

H6. Accounting students with work experience will have a significantly different P-score to students with less or no work experience.

The sample was categorised into according to having work experience and no work experience. Group 0 are students with no work experience and Group 1 are students with work experience. Students who have never worked achieved a P score of 50.55 and students with work experience or are presently working achieved a higher P score of 66.03. A t-test

was conducted for any significant difference in the mean P scores of the two categories. At an alpha level of .05, a t-test finds that the difference in the means is statistically significant (Table 5.9). It can be concluded that the difference is not due to random variation or chance alone, and there is a significant difference between the two means, so H6 is supported.

**Table 5.9: P Score by Work Experience**

Two-sample t test with unequal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	72	50.55986	1.969203	16.70925	46.63338	54.48634
1	26	66.03769	2.035947	10.38134	61.84458	70.2308
combined	98	54.66622	1.68824	16.71272	51.31554	58.01691
diff		-15.47783	2.832463		-21.12479	-9.830871
diff = mean(0) - mean(1)				t =	-5.4644	
Ho: diff = 0		Satterthwaite's degrees of freedom =			71.5928	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr( T  >  t ) = 0.0000		Pr(T > t) = 1.0000		

### 5.2.1 Regression Modelling

In order to provide a more robust test of H3 and H4 a multivariate linear regression model (Ordinary Least Squares: OLS) is also used, as outlined in Chapter 4. The variables gender, education level and whether they have studied ethics previously are included in the model. Work experience and age had to be excluded due to lack of data (most students in the sample did not have work experience) and their high correlation with the year of study (0.94 and 0.98 respectively – see Table 5.2).

In addition, two more variables were added. First, a student’s attitude to ethics prior to studying an ethics topic was included. Second, interaction terms were added for the variables gender and study ethics. The Regression model results are shown below in Table 5.10.

**Table 5.10: Regression Results**

Source	SS	df	MS	Number of obs	=	98
Model	16381.9464	6	2730.3244	F(6, 91)	=	23.20
Residual	10711.6253	91	117.710168	Prob > F	=	0.0000
				R-squared	=	0.6046
				Adj R-squared	=	0.5786
Total	27093.5717	97	279.315172	Root MSE	=	10.849

PScore	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
1.studyethics	17.40224	3.90759	4.45	0.000	9.640291 25.16419
1.SEX	-.5926168	3.695757	-0.16	0.873	-7.933784 6.74855
studyethics#SEX					
1 1	8.957012	4.735634	1.89	0.062	-.4497425 18.36377
Attitude	2.563351	2.863251	0.90	0.373	-3.124147 8.250848
Educ					
2	-3.995043	3.454203	-1.16	0.250	-10.85639 2.866308
3	12.06729	3.758396	3.21	0.002	4.6017 19.53288
_cons	39.31928	2.963835	13.27	0.000	33.43199 45.20658

We see from Table 5.10 that the model is reasonably successful: the explanatory variables explain about half of the movement in the P Score (Adjusted  $R^2 = 0.579$ ). As expected, as there is at least one statistically significant coefficient in the model, the F-statistic has p-value  $< 0.05$  indicating no evidence for the null hypothesis that all coefficients are concurrently non-significant. Diagnostic tests indicate collinearity is unlikely to be a problem, and skewness, kurtosis and distribution show residuals are approximately normally distributed (see Appendix D for details).

In the demographic section of the survey the Cypriot accounting students were asked to provide data/information about their highest level of education in terms of three categories. The three categories are high school completion (education level 1), bachelor degree (education level 2) and higher degree (education level 3). In terms of the individual explanatory variables we see that the higher level of education (Edu3 p-value  $.002 < 0.01$ ) is associated with a higher P Score than the base-case (education level 1) but the mid-level education (Edu2) does not differ from the base. Model results suggest, all other things being held constant, that the Cypriot accounting students with a higher degree (with Education level 3) will on average be associated with approximately a 12-point increase in P Score compared



to those with have only completed high school education (Education level 1) (coefficient = 12.07; p-value  $0.002 < 0.05$ ). Education levels 1 and 2 are not associated with a difference in P Score (p-value for Education 2 =  $0.25 > 0.05$ ).

Finally, Attitude is not associated with differences in P Score (p-value  $0.373 > 0.05$ ).

To assess the influence of the variables included in the interaction terms (gender and study ethics) it is necessary to compute the marginal effects (i.e. we do not assess the significance and effect for the individual measures (gender, study ethics and the interaction between them) but we generate the joint impact of the variables)). To do this it is necessary to select specific values of gender and study ethics at which to evaluate the outcome. As the two variables are dummies there are only four combinations of the two:

Study ethics=0, gender=0

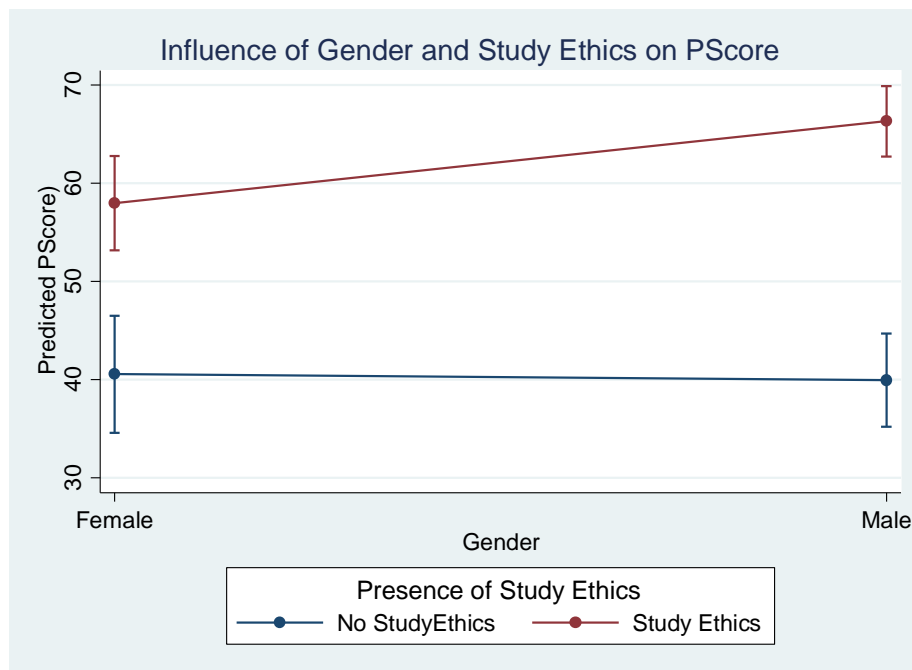
Study ethics=1, gender=0

Study ethics=0, gender=1

Study ethics=1, gender=1

Evaluation at these values results in the following comparisons of P Score values:

- When Study ethics = 0 there is no difference in the influence of gender (blue line in Figure 2 below) i.e. model predicted P Score is approximately 40 for males and females.
- When Study ethics = 1 there is a difference in the influence of gender (brown line in Figure 5.1), i.e. the model predicated P Score is approximately 58 for males and approximately 66 for females.



**Figure 5.1: Interactions**

In summary, from the regression model we can conclude the following:

- There is an association between P Score and Education level.
- There is a combined association of Gender and Studyethics with P Score. Specifically, females have a significantly different (and higher) score than males if they have studied ethics.
- Attitude does not appear to be associated.

### 5.3 Limitations of the Analysis

There are a number of limitations to analysis in this study. First the sample size is relatively small. Second, the model is cross-sectional as the data are collected at a single point in time and hence causality cannot be assessed by the models. Third, a number of other explanatory variables were considered of interest but the bivariate correlations showed very high correlation and so they could not be included jointly in the model. Specifically, Age, Education, Work Experience and Year Level had correlation coefficients ranging from 0.82 to 0.91 and so all four measures could not be included (See Table 5.2). After some exploratory models (in which high Variance Inflation Factors, VIF, were prevalent) the inclusion of Education as a proxy for these for measures was considered the better option.

## 5.4 Chapter Summary

This chapter presented the results of the analysis that tested the six hypotheses developed in Chapter 2. Firstly the demographic distribution of the sample is described and then followed by the findings to the research questions and an evaluation of the results of the study. Table 5.11 presents a summary of the findings.

**Table 5.11: Summary of Hypothesis Testing**

Hypothesis	Result
H1 The moral reasoning levels (as measured by the DIT) of Cypriot accounting students in year 1 will be lower than the upper year level students	Supported with the year 1 students achieving a lower P score (39.2) than the final year students (69.1).
H2 The DIT P-scores of accounting students is positively associated with the number of years in university	Supported for third year students, but regression does not find a significant difference between 1 <sup>st</sup> and 2 <sup>nd</sup> year students.
H3 Accounting students who have undertaken an ethics topic in the accounting curriculum will have a significantly different P-score to those students who have not studied ethics	Supported, but their prior attitude does not appear to have any impact.
H4 Male accounting students will have a significantly different P-score to female students	Supported and results show that there is a combined effect with whether they have studied ethics, with females scoring higher.
H5 Older accounting students will have a significantly different P-score to younger students	Supported with the students below twenty years old achieving a mean P score of 43.11 and the students in the twenty and above age group achieving a higher mean P score of 63.69.
H6 Accounting students with work experience will have a significantly different P-score to students with less or no work experience	Supported with students with work experience achieving a higher P-score (66.03) than students with no work experience (50.55).

These results are discussed in the next chapter in relation to the research questions and prior literature. Implications and suggested areas for further research are also presented.

## **Chapter 6 Discussion and Conclusion**

The purpose of this chapter is to conclude the thesis by providing a discussion on the findings of this study and its contribution to the accounting ethics education literature. Suggestions for future research in the area of accounting ethics are also presented. Conclusions are drawn on the findings of this study at the close of the chapter.

The unethical behaviour of accountants and managers has been linked to the lack of ethics training and the inadequacy of tertiary accounting/business education that these professionals had received. In addition, the recent increases in corporate fraud has been linked to low level of moral reasoning (Thomas 2012; Warinda 2013). To extend the understanding of the decline in moral reasoning and lack of ethical decision making in the accounting profession, further research was required to measure the moral reasoning levels of accounting students (Nather 2013), and examine the effects of accounting and ethics education on the moral judgment and development of future accountants.

This study was designed to examine the impact of accounting and ethics education on the cognitive moral reasoning abilities of accounting students in Cyprus. The study also sought to test the influence of demographic factors such as gender, work experience and age may have on the moral reasoning of these students. The moral reasoning of students was measured using the original hand written DIT, administered in an accounting class to each of the different year levels. The results of this study are based on accounting students from two (public) universities in Cyprus and therefore are not representative of accounting students from other universities in Cyprus.

### **6.1 Summary of key findings**

Previous research/studies have revealed that accounting students and accountants achieve low levels of moral reasoning in comparison to other students and professionals (Bailey et al. 2012). A recent study revealed that accounting students demonstrate lower moral reasoning abilities when compared to law and medical students (Chunhui et al. 2012). In another study, it was concluded that accountants scored lower on average than lawyers (Schofield et al. 2004). In fact, many other studies examining the moral reasoning abilities of accounting students and accountants found their moral reasoning abilities to be lower than students from other disciplines and professions (Ponemon and Glazer 1990; Armstrong 1987, 1993;

Bernardi and Arnold, 2004). Between 1990 and 2002 for studies using the DIT to measure the moral reasoning levels of their sample, it was found that accounting students achieved an average P score of 37.51 (Abdolmohammadi and Ariail 2009), which is lower than the average mean score for an adult or students from other disciplines (Rest 1999). In Cyprus no previous research had been undertaken to examine the moral reasoning abilities of accounting students. However, one previous study used the DIT to measure the moral reasoning of business students, and similarly, it was found that Cypriot business students demonstrated low levels of moral reasoning with a P score of 24.2 (Demosthenous and Krambia-Kapardis, 2010).

Surprisingly, and on a positive note, the level of cognitive moral reasoning of the Cypriot accounting students of this research are significantly higher than previous other studies of accounting and business students, (Lampe and Finn 1992; Ponemon 1993; Eynon et al. 1996; Thorne 1999; Massey and Thorne 2006; Abdolmohammadi and Ariail 2007) and as measured by meta-analysis on DIT data (Rest, Narvaez et al. 1999). The Cypriot accounting students of this study achieved an exceptionally high mean P score of 63.88 and N2 score 57.34 which is much higher than the average adult score of 40 and graduate students P score of 45 (see appendix C for P scores of other groups/disciplines). The results of this study may suggest that the Cypriot accounting students have benefited from the tertiary accounting education they received, because their moral reasoning improved as they progressed in their years of study.

Generally, previous studies only use the English version of the DIT and this was the case with the survey used in the study of Cypriot business students in 2010 (Demosthenous and Krambia-Kapardis, 2010). English is a second language for Cypriot students so to overcome any potential language barrier, for this study the DIT was professionally translated to Greek, pilot tested and the Greek survey was provided as an option to all the student sample. An explanation for the high P score achieved by the Cypriot students of this study could be due to the fact that the DIT was translated into Greek (the respondents' native language) and therefore the students did not have a language disadvantage in completing the survey and understood the issues raised in each dilemma. Additionally, these students are the cohort of students who have achieved the highest exam results from all high schools in Cyprus and therefore are academically advanced. Future research could examine and compare the

findings of studies which surveyed respondents for whom English is a second language but used the original English version DIT and studies that used the DIT version of their language. This may confirm and provide further information of the effect of translating/using own language surveys in comparison to using the English version.

Consistent with previous findings that examined the moral reasoning abilities of accounting students, the current study found that university accounting and ethics education may positively influence the moral reasoning and development of students (Rest 1986; Jeffrey 1993; Shaub 1994; Wu 2003; Desplace et al. 2007; Maeda et al. 2009; Mayhew and Murphy 2009; Thomas 2012). In support of the positive influence of tertiary education on the development of moral reasoning, Rest et al. (1986) suggest that education can act as a surrogate variable for other kinds of life experiences and moral judgment accompanies “a growing awareness of the social world and one’s place in it” (p. 57). The results suggest that tertiary education improves one’s moral reasoning ability and supports the reliance of accounting firms as stated by Warth (2000 p. 69) for colleges (universities) to provide the necessary ethics training prior to employment.

Rest (1979) provides substantial data on studies that have used the DIT instrument and support the positive impact of education on the moral reasoning abilities of respondents. Rest concluded in his review of these studies that education is a powerful predictor in the variance of DIT P scores. Rest stated that “Cognitive restructuring of one’s moral thinking seems to be more related to formal education than to the passage of years” (Rest, 1979, p. 112). In other words, education in particular tertiary education, has shown to have the most impact on one’s moral reasoning as measured by the DIT. The results of this study support this positive impact of formal education on the moral reasoning of students. In this study the mean P/N2 scores of the accounting students increased as they progressed through their years/with university education year levels. The upper year level (senior) of accounting students achieved a significantly higher P score/N2 score than the first year accounting students. These results indicate the senior year Cypriot accounting students frequently used post conventional reasoning in their ethical judgment, thus suggesting that they are more ethically developed/mature than the first year Cypriot accounting students. Additionally, the differences in P scores between the first and final years of accounting students may indicate that they make ethical decisions differently, implying the need for different focus when

teaching ethics to different year levels. The increase in moral reasoning abilities of Cypriot accounting students is further evidence and support for including ethics topics/training in tertiary programs. In addition, universities/academics should endeavour to improve their methods of teaching, to ensure that they are effective in improving the moral reasoning abilities and other skills of their students. Proposed effective methods of teaching could include case study analysis, discussion of ethical dilemmas (Huff and Frey 2005; Dellaportas 2006) and reflection exercises (Van Hise and Massey 2010).

Age is another variable that Rest (1982) identified as having a positive impact on the moral reasoning of individuals. One would expect as individuals get older and have more experiences in life they develop in their moral reasoning and become more ethically mature. The student sample of this study was separated according to age and into three different age groups. The three age groups are students between the age of eighteen and nineteen, twenty and twenty four and twenty five and above. According to Kohlberg individuals do not mature ethically before twenty years old so the researcher used this point to compare the mean P scores of Cypriot accounting students. Although initially the student cohort was grouped into three different groups, for statistical analysis the students were put into two categories. Group 1 consists of accounting students aged below twenty years old, and group 2 includes accounting students twenty years and above. The students below twenty years old achieved a mean P score of 43.11 and the students in the twenty and above age group achieved a higher mean P score of 63.69. A t test was conducted and it was found that the differences in the P scores to be significant.

Rest (1993) reported generally that women attain higher P score results than men, but overall, the results are inconclusive. The results of the present study support those researchers that found no significant difference in the DIT P score results between male and female respondents (Rogers and Smith, 2001; Das, 2005 and Woodward et al. 2007). The female accounting students of this study scored a P score of 56.29 and the male accounting students achieved a lower P score of 51.72. Both these mean scores are considered to be high P scores and suggest that both male and female Cypriot accounting students use Post conventional reasoning in solving moral dilemmas. Although the scores are different and the female students achieved a higher score than their male counterparts, a t test was conducted and it was found there is no significant difference in the scores.

An interesting observation is that when the female accounting students were exposed to an ethics topic they responded more positively to ethics education than their male counterparts. The female students' P score increased significantly when they studied ethics when compared to the male students' P score. Thus, it can be said that the females' moral abilities significantly improved when they studied ethics when compared to the results to the male students.

## **6.2 Implications**

The Cypriot accounting students that studied ethics or have completed an ethics topic in the past, use higher levels of moral reasoning as measured by the DIT than those who have not completed an ethics topic. Comparing these two groups of students in this study statistically it was found that there is a significant difference between their moral reasoning P scores. This is consistent with previous studies (Demosthenous 2006; O'Leary 2009; Suryaningrum, D. H., Hastuti, S., and Suhartini, D.2013; Martinov-Bennie and Mladenovic 2015) that conclude that ethics education is effective in developing the moral reasoning abilities of students.

Previous research has linked Post conventional moral reasoning with ethical decision making (Thomas 2012). The high P scores results of this study could suggest that the students of this study when they enter the business world of Cyprus may behave ethically in the workplace, and contribute to improving the reputation of the accounting profession and the corruption problem of Cyprus/the Cypriot business culture. Tertiary business schools/accounting education should focus on developing this type of principled thinking (post conventional reasoning) and provide for accounting graduates that possess higher levels of moral judgment.

In addition to providing students with the accounting technical knowledge, tertiary institutions should focus on developing students' moral reasoning abilities and critical thinking. Ethics education should focus on Deontological ethics such as Moral equity and social contract and avoid using egoism and self-interested approaches. Students when faced with and solving ethical dilemmas could be encouraged to use the universal rather than relative approach to ethical decision making. Ethics education could emphasise on the principles that are important to the accounting profession such honesty, integrity and professional behaviour (see discussion on the code of conduct for all principles). Tertiary education could teach students to apply the stakeholder approach to decision making, in



particular when the environment and society are at stake/involved. Students should be taught that financial benefits of a corporation should not be the primary or only concern, but instead, to include and focus on the goals of achieving fairness, justice and the good of society.

The low DIT scores/moral reasoning scores of accounting students in the past may be due to the fact that tertiary institutions did not include ethics as part of their curriculum and rules based learning was the focus. By not studying ethics the accounting students were not made aware of ethical dilemmas in the workplace and how to deal with them. They were not taught to critically evaluate corporations' operations and the implications of social and environmental issues. Accounting students were taught that the financial success of a business was the main consideration and the impact of corporations on the environment was low priority. If universities are to contribute to developing graduate accounting students with a conscience then topics such as Corporate Social Responsibility, Sustainability, Corporate governance, Fraud, Corruption prevention and TBL reporting should be included in all accounting/business programs. If accounting students are taught the importance of aligning business goals to fit in with society expectations, then maybe, the corporations globally may embark on the journey of sustainability, and maintaining the environment for future generations. Academics at tertiary institutions ought to consider designing and providing assessments that includes such topics and encourages critical thinking and less rules based learning.

The students that worked or had work experience achieved significantly higher moral reasoning scores than those students that have never worked, thus indicating that work experience could positively influences the moral development of students. The higher P score of working students could be attributed to the 'socialisation effect' which suggest that moral reasoning may be influenced by contextual factors associated with the professional or working environment. It can be said that accounting students may use different levels of moral reasoning depending on the contextual environment that they are exposed to. The working students achieving a higher P score than non-working students is an important finding and provides support for any university considering a work experience module in their programs. Providing a work experience module to students would be another opportunity at university to expose students to the real business world and assist with improving their moral reasoning skills amongst other practical skills. Alternatively, universities could develop a topic

that uses work type of issues/dilemmas to increase ethical awareness and judgement of students.

In order for accountants to behave professionally they may need to improve their moral awareness, develop their moral reasoning, and thus become more competent in solving ethical dilemmas. Ethical behaviour requires more than a good character. In this study the Cypriot accounting students that studied ethics achieved a significantly higher P score than the students that have not studied ethics, thus indicating that ethic education is effective in improving the moral reasoning of individuals. This finding may also indicate that, including ethics in tertiary accounting programs is important and should continue, and that individuals need to study ethics if they are to develop the necessary skills to recognise and solve ethical dilemmas in the workplace. The high P scores and moral reasoning development achieved by the Cypriot accounting students may suggest that tertiary business/accounting and ethics education can provide students with the knowledge and tools to improve their ethical judgment.

As expected, accounting professionals in their daily work must abide by the Accounting standards and the IFAC code of conduct. In order to do this, accountants need to develop both their technical and ethical skills. Business schools and the accounting profession have a responsibility to provide accounting students with the necessary knowledge and skills to fulfil their duties as accountants, including dealing with ethical dilemmas in the workplace. Teaching ethics to students could be the solution and pathway to developing their moral reasoning, and guiding them in their ethical direction. Developing the moral reasoning abilities of future accountants may contribute to minimising unethical behaviour in the workplace in the future, thus assisting in improving the tarnished reputation of the accounting profession.

### **6.3 Limitations**

There are a number of factors that may limit the generalisation of the findings of this study. These are as follows:

The students in this study volunteered to participate in this study so the results may be subject to self-selection bias (Dillman 2000).

The respondents of this study may have responded to what they thought is socially desirable and not to what they actually really think. In particular after studying ethics they would know as to what is considered as ethical behaviour. If this is the case the issue of 'social desirability' may apply and be a limitation of the findings.

Another limitation relates to the results of this study in that they are not representative of the population of accounting students in Cyprus, as they relate to findings from only two tertiary public institutions, and not all Cypriot accredited tertiary institutions providing accounting and business courses. The DIT was used as a measure of students' moral reasoning, so an assumption is made that moral reasoning is subject to measurement and that the DIT is the appropriate instrument to use for this purpose. The DIT instrument was also used to examine the effects of accounting and ethics education on the moral development of students but many other factors may have affected the moral reasoning and development of accounting students.

The methodology used in this study did not consider other factors that may also influence the DIT scores and could have contributed to the differences in scores in the different year levels.

In order to determine the moral development of Cypriot accounting students, data was collected for this study at a point in time rather than over a longitudinal time period. The reason for choosing this method to collect the data was to avoid the problems associated with longitudinal studies such as time, funding and panel attrition. For this study, the major reasons for selecting this method was to overcome the time constraint in completing the study and the high cost of travelling to collect the data from another country. The student sample from the different year levels consisted of different cohort of students, so therefore, the moral development of accounting students or differences in the DIT scores between the different year levels, may be due to differences in the student groups rather than accounting and ethics education. For this reason, the results regarding the moral development of Cypriot accounting students should be interpreted with caution.

#### **6.4 Future research**

Given the mixed and contradictory results of ethical reasoning and judgment of accounting students and accountants, more research needs to be undertaken to confirm the factors that do influence their maturity. Does accounting and ethics education improve the moral

reasoning abilities of accounting students/accountants? Which pedagogical approach is most effective to improve the moral reasoning abilities of students? When does moral development occur and is it in response to certain discussions that moral development begins to develop? Ideally a longitudinal study clearly stating the content of the ethics topic and pedagogical approach that is used would provide better answers to the above questions. Incorporating a time series analysis to a study could be useful in providing more information about the moral development of students and the non-linear effects of instruction (Lambie and Leva 2012). It would also provide to the educator the type of content and instruction that is more effective in improving the moral reasoning of students. Involving the same population of students throughout the study would provide clearer evidence as to what and when moral development occurs rather than a different cohort of students.

While using accounting students is a good proxy, future research can examine the moral reasoning abilities of Cypriot accounting practitioners. As shown by the results of this study, training and work experience may have a significant effect on ethical reasoning abilities, so therefore, examining the moral reasoning of Cypriot accountants could provide a more accurate portrayal of moral development. Also, incorporating an interviewing process in the study would provide the perception of the respondents and may shed light on other factors that may influence the moral reasoning that are not captured by quantitative studies. Respondents will have an opportunity to provide information about their experiences and the work environment/culture that they work in, thus capturing contextual factors that may influence the moral reasoning of respondents.

Future research could consider religion as an intervening variable. A future study investigating and examining the moral reasoning of religious individuals who claim that their religion heavily influences their moral behaviour, could be useful in providing evidence to the proposition that an extension of Kohlberg theory (see page 66) is required to fill the gap in the theory. These individuals may be more ethical than the average person, but without a religion stage in the theory, it may indicate that they are not capable of Post-conventional reasoning that required of autonomous judgment and ethical decision making.

Getting into the public universities in Cyprus is very difficult for two reasons. Firstly, the two public universities have recently commenced and have had an intake of students only since

1992 and 2007. Additionally, Cyprus has a relatively small size population and therefore only a small size of students enrol annually. Secondly, only students with excellent academic results are allowed into the courses of these universities, thus the sample of this study only include students with outstanding academic results. Cypriot students who do not get into the public universities either opt to go overseas or study at private universities. Using a sample of students from other universities would provide for a larger sample and a better indication generally of the moral judgment of future accountants and managers in Cyprus. A future research study can include students from these institutions thus providing for a larger sample of Cypriot accounting students and it can be determined if the findings are similar to this study.

In addition to utilizing students from other universities further studies could include students from other disciplines. This could provide for a comparison with other disciplines and further insight about students from non-accounting and business areas. Additionally, the Greek translated version of the DIT should be used to confirm the issue of language potentially being a barrier to the final P score results.

Future research studies can include a larger sample of accountants working in Cyprus in the public sector, different industries and firm size thus adding to the literature about contextual influences on the moral reasoning of accountants. This would also provide an opportunity to compare findings of studies involving accounting students and working accountants.

In addition to educational content influencing one's moral reasoning development the actual educational environment could be an influencing factor (Rest 1998). If this is the case, future studies should incorporate the total university experience to include factors such as the university environment, student lifestyle and the university curriculum.

More research is needed on Cyprus because very little research had been undertaken in the past on the moral reasoning and ethical decision making of Cypriot business, accounting students and accountants. Further research is needed in Cyprus to develop a database of research on this area and to provide the Cypriot perspective and to compare with findings from other EU member countries. EU citizens are permitted to work in any EU member country so it would be useful to compare the moral reasoning abilities and ethical decision making of EU citizens from different countries. The findings of these studies would be

important and useful and would assist corporations with understanding the ethical decision making and their moral reasoning abilities of new employees from different countries. Information on the ethical decision making abilities of future business professionals would also be useful to those responsible for developing ethics training to their employees to ensure the appropriate training is provided.

### **6.5 Contribution to the accounting ethics education literature**

This study extends the previous accounting ethics research and contributes to the existing literature in a number of ways:

The majority of previous studies in accounting ethics research comprise of samples of students from the US, Canada, UK and Australia. These countries are very similar in term of culture as they all score very high in terms of individualism as per Hofstede's model of culture (Hofstede et al 2010). Cyprus differs in terms of culture as it is a more of a collective society, it is a smaller country In terms of population and it is a member of the European Union (EU). In addition, no previous study has been undertaken in Cyprus examining the moral reasoning abilities (measures by the DIT) of Cypriot accounting students, so therefore this study provides for this gap and the Cypriot perspective. Additionally, this study provides a starting point from which a database of research can be developed in the area of Cypriot accounting and ethics education.

On average previous studies have focused on collecting data on one group of students or a sample at a particular point in time of their studies. Other studies have examined the effects of an ethics topic on the moral reasoning of their sample using a pre/post research design. These type of studies have not provided information about moral reasoning development as measured by the DIT. This study extends the literature/research by providing empirical research on the DIT P scores of Cypriot accounting students throughout their studies rather than a single topic by comparing the P scores of the different year levels. It provides the Cypriot perspective of moral reasoning of accounting students.

The students of this study were given the option of an English or Greek translated version of the DIT, so the respondents that felt more comfortable to complete the survey in their own language selected the Greek DIT. It would be assumed that completing the survey in their

own language, would have led to the respondents of this study having a clearer understanding of the DIT instrument and hence, provided better answers. This may have contributed to the high P score achieved by the Cypriot accounting students. The issue of providing the English version of the DIT to respondents for whom English is a second language must be further explored to ascertain the effect on the P scores of translating or not translating the survey into their own language.

Higher levels of moral reasoning have been associated with ethical behaviour and therefore moral development is important to accountants' ethical decision making. The findings of this study are useful to the accounting profession to understand how Cypriot accountants will approach and solve ethical dilemmas in the workplace. In addition, it could also be useful in assisting those responsible for developing and providing ethical training to students and accountants in better tailoring the needs of students. Tertiary institutions should continue to search for and use pedagogical approaches to teaching that are effective in developing students' moral reasoning abilities. Future studies should investigate and examine the effectiveness of different teaching and learning methods (role playing, reflection and critical evaluation seminars) in ethics in identifying those that improve the moral reasoning and development of students. The moral reasoning of students could also be improved due to learning about different theories such as Kohlberg's theory, TBL and Kantian ethics thus, future studies could investigate the effectiveness of including these theories on the moral reasoning of students.

The current study is the first to examine the moral reasoning of Cypriot accounting students, compare the P score results of the different year levels and investigate the effects of tertiary accounting education and other factors that may influence the moral reasoning of students. The significant difference in the P score results between the first year and third year Cypriot accounting students may indicate that they use a different rationale to solve ethical dilemmas. The findings are important to accounting educators as it will allow them to better understand the possible deficiencies in the moral reasoning and ethical decision making of accounting students and, hence, provide some direction as to what is needed to improve the moral reasoning of the lower level accounting students.

Previous studies that included accountants and other professionals in the work place supported the socialisation effect. Consistent with this finding, this study found that students that worked had a significantly different and higher P score than those students that have never worked signalling higher level of moral reasoning. Implications for the corporate world suggest encouraging additional workshops entailing the corporation's ethical values and their expectations of employees. This will familiarise new employees of the corporate culture and know what is expected of them in the workplace. These workshops could also provide an opportunity to corporations to provide employees with specific ethical dilemmas that are relevant to their workplace and therefore their employees will be better equipped to solve ethical dilemmas in the workplace.

Previous studies have examined the pedagogical approach to teaching ethics and the values to focus on. This study identified topics or areas of ethics that should be taught to accounting students. This included the fiduciary responsibilities of business professionals, universal approach to ethics, the social contract, TBL, Sustainability and critical analysis.



## 6.6 Conclusion

Due to the increasing number of business scandals globally involving accountants and executives there has been calls by the accounting profession and international education committees (Jackling and De Lange 2009) for improvement in the business and accounting education provided to the accountants and managers of the future. Furthermore, tertiary education and in particular the teaching of accounting ethics, has been considered inadequate in improving the generic skills and the moral reasoning of accounting students to a level that is required by employers and for autonomous judgment ethical decision making. If accounting graduates are to add value to business perhaps business and accounting education may need to focus on developing both the technical knowledge and the generic capabilities required by employers (Chia, Koh, and Pragasam, 2008; Natoli, Jackling, Kaider and Clark, 2013). Previous studies have found that accounting students' exhibit lower levels of moral reasoning and most adults do not go beyond the conventional level of Kohlberg's theory. "Theory suggests that the level of moral reasoning, as measured by the P score, would be positively related to ethical behaviour; as the P score (or N2) score increases, the level of ethical behaviour should also increase" (Bailey et al. 2010, p. 16). Thus, the focus of future research and what prompted this study, is to investigate/examine the moral reasoning levels of Cypriot accounting students, and to provide an answer to the following question: Is tertiary accounting education capable of improving the moral maturity of Cypriot students to the principled level of moral reasoning required for autonomous judgment and ethical decision making? Cyprus was selected because it has been hit hard by the financial crisis, it has had elite individuals go to prison because of illegal corrupt activities and according to Transparency international (2016) corruption is perceived to be increasing.

The study of moral reasoning in accounting is important and needs to be further investigated, because the moral reasoning levels (as per Kohlberg's theory) of individuals will influence how they consider and resolve ethical dilemmas, and thus, assist in understanding their ethical decision making process. Accounting students need ethical training more than most, because previous research indicated that they rank much lower in their moral reasoning abilities than students from other disciplines such as Law, political science and Philosophy (Rest, Narvaez et al. 1999). Contextual and demographic variables may influence the moral reasoning and development of students and therefore must be identified and further investigated.

The findings of this study, may suggest that tertiary accounting education could be effective in developing the moral reasoning abilities of students, and thus, providing them with the necessary skills to make autonomous judgment and ethical decisions. The high P scores achieved by the Cypriot accounting students in this study, are in direct contrast to the low moral reasoning scores achieved in previous studies involving accounting students and accountants. The respondent of this study with work experience achieved significantly higher P scores which may support the socialisation effect (and contextual factors) influencing the moral reasoning and development of individuals. It is also evident from the findings that in addition to curriculum content, other factors such as contextual and personal factors may influence the moral development, and therefore, must be included in research studies and further investigated in the future.

On a positive note the results of this study are optimistic, provide hope and may indicate that the accounting students of this study are capable of the post conventional reasoning (Principled thinking) required for autonomous judgment and ethical decision making. Including ethics in tertiary accounting programs may be the solution for accounting students to improve their level of moral reasoning and mature ethically. Exposing accounting students to ethics, could be the pathway to add principled thinking to their rule based reasoning approach to solving accounting dilemmas/issues. Optimistically, when employed in the future, the respondents of this study will have the moral capability to satisfy their professional responsibilities as accountants. If these future accountants behave ethically in the workplace, then this may provide hope and is good news for the fight against corruption in Cyprus and improving the reputation of the Cypriot accounting profession/business world.

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## Appendices

## Appendix A: Defining Issues Test (DIT)

### HEINZ AND THE DRUG

In Europe a woman was near death from a special kind of cancer. There was one drug that doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife. Should Heinz steal the drug?

HEINZ AND THE DRUG:  Should Steal    Can't Decide    Should not steal

GREAT MUCH SOME LITTLE NO	
<input type="radio"/>	1. Whether a community's laws are going to be upheld.
<input type="radio"/>	2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal?
<input type="radio"/>	3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
<input type="radio"/>	4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
<input type="radio"/>	5. Whether Heinz is stealing for himself or doing this solely to help someone else.
<input type="radio"/>	6. Whether the druggist's rights to his invention have to be respected.
<input type="radio"/>	7. Whether the essence of living is more encompassing than the termination of dying, socially and individually.
<input type="radio"/>	8. What values are going to be the basis for governing how people act towards each other.
<input type="radio"/>	9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
<input type="radio"/>	10. Whether the law in this case is getting in the way of the most basic claim of any member of society.
<input type="radio"/>	11. Whether the druggist deserves to be robbed for being so greedy and cruel.
<input type="radio"/>	12. Would stealing in such a case bring about more total good for the whole society or not.
Most important item	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> 12
Second most important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> 12
Third most important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> 12
Fourth most important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> 12



## ESCAPED PRISONER

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For eight years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mrs. Jones, an old neighbour, recognized him as the man who had escaped from prison eight years before, and whom the police had been looking for. Should Mrs. Jones report Mr Thompson to the police and have him sent back to prison?

GREAT MUCH SOME LITTLE NO	ESCAPED PRISONER:	<input type="radio"/> Should report him	<input type="radio"/> Can't decide	<input type="radio"/> Should not report him								
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. Everytime someone escapes punishment for a crime, doesn't that just encourage more crime?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Wouldn't we be better off without prisons and the oppression of our legal system?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. Has Mr. Thompson really paid his debt to society?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. Would society be failing what Mr. Thompson should fairly expect?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. What benefits would prisons be apart from society, especially for a charitable man?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. Was Mrs. Jones a good friend of Mr. Thompson?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. How would the will of the people and the public good best be served?							
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12. Would going to prison do any good for Mr. Thompson or protect anybody?							
Most important item		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Second most important		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Third most important		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fourth most important		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

NEWSPAPER

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the use of the military in international disputes and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair.

When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. Fred agreed and turned in several articles for approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks.

But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school. Should the principal stop the newspaper?

GREAT MUCH SOME LITTLE NO	NEWSPAPER: <input type="radio"/> Should stop it <input type="radio"/> Can't decide <input type="radio"/> Should not stop it																							
<table border="0" style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>1. Is the principal more responsible to students or to parents?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>2. Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>3. Would the students start protesting even more if the principal stopped the newspaper?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>4. When the welfare of the school is threatened, does the principal have the right to give orders to students?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>5. Does the principal have the freedom of speech to say "no" in this case?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>6. If the principal stopped the newspaper would he be preventing full discussion of important problems?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>7. Whether the principal's order would make Fred lose faith in the principal.</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>8. Whether Fred was really loyal to his school and patriotic to his country.</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>9. What effect would stopping the paper have on the student's education in critical thinking and judgment?</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>10. Whether Fred was in any way violating the rights of others in publishing his own opinions.</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>11. Whether the principal should be influenced by some angry parents when it is the principal that knows best what is going on in the school.</td> </tr> <tr> <td style="text-align: center;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </td> <td>12. Whether Fred was using the newspaper to stir up hatred and discontent.</td> </tr> </table>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	1. Is the principal more responsible to students or to parents?	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	2. Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	3. Would the students start protesting even more if the principal stopped the newspaper?	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	4. 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## DOCTOR'S DILEMMA

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway. Should the doctor give her an overdose of morphine that would make her die?

DOCTOR'S DILEMMA:  He should give the lady an overdose that will make her die  Can't decide  Should not give the overdose

GREAT	MUCH	SOME	LITTLE	NO	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. Whether the woman's family is in favor of giving her the overdose or not.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. Is the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Whether people would be much better off without society regimenting their lives and even their deaths.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. Whether the doctor could make it appear like an accident.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. Does the state have the right to force continued existence on those who don't want to live.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. What is the value of death prior to society's perspective on personal values.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. Whether the doctor has sympathy for the woman's suffering or cares more about what society might think.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. Is helping to end another's life ever a responsible act of cooperation.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. Whether only God should decide when a person's life should end.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. What values the doctor has set for himself in his own personal code of behavior.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. Can society afford to let everybody end their lives when they want to.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12. Can society allow suicides or mercy killing and still protect the lives of individuals who want to live.

WEBSTER

Mr Webster was the owner and manager of a gas station. He wanted to hire another mechanic to help him, but good mechanics were hard to find. The only person he found who seemed to be a good mechanic was Mr Lee, but he was Chinese. While Mr Webster himself didn't have anything against Orientals, he was afraid to hire Mr Lee because many of his customers didn't like Orientals. His customers might take their business elsewhere if Mr Lee was working in the gas station.

When Mr Lee asked Mr Webster if he could have the job, Mr Webster said that he had already hired somebody else. But Mr Webster really had not hired anybody, because he could not find anybody who was a good mechanic besides Mr Lee. Should Mr Webster have hired Mr Lee?

GREAT  
MUCH  
SOME  
LITTLE  
NO

WEBSTER:  Should have hired Mr. Lee     Can't decide     Should not have hired him

---

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. Does the owner of a business have the right to make his own business decisions or not?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. Whether there is a law that forbids racial discrimination in hiring for jobs.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Whether Mr. Webster is prejudiced against orientals himself or whether he means nothing personal in refusing the job.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. Whether hiring a good mechanic or paying attention to his customers' wishes would be best for his business.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. What individual differences ought to be relevant in deciding how society's rules are filled?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. Whether the greedy and competitive capitalistic system ought to be completely abandoned.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. Do a majority of people in Mr. Webster's society feel like his customers or are a majority against prejudice?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. Could Mr. Webster be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. Whether the Christian commandment to love your fellow man applies to this case.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12. If someone's in need, shouldn't he be helped regardless of what you get back from him?

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## STUDENT TAKE-OVER

Back in the 1960s at Harvard University there was a student group called Students for a Democratic Society (SDS). SDS students were against the war in Vietnam, and were against the army training program (ROTC) that helped to send men to fight in Vietnam. While the war was still going on, the SDS students demanded that Harvard end the army ROTC program as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degrees.

Harvard professors agreed with the SDS students. The professors voted to end the ROTC program as a university course. But the President of the university took a different view. He stated that the army program should stay on campus as a course.

The SDS students felt that the President of the university was not going to pay attention to the vote of the professors, and was going to keep the ROTC program as a course on campus. The SDS students then marched to the university's administration building and told everyone else to get out. They said they were taking over the building to force Harvard's President to get rid of the army ROTC program on campus for credit as a course. Were the students' right to take over the administration building?

GREAT MUCH SOME LITTLE NO	STUDENTS: <input type="radio"/> Take it over <input type="radio"/> Can't decide <input type="radio"/> Not take it over
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	1. Are the students doing this to really help other people or are they doing it just for kicks.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	2. Do the students have any right to take over property that doesn't belong to them.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	3. Do the students realize that they might be arrested and fined, and even expelled from sch
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	4. Would taking over the building in the long run benefit more people to a greater extent.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	5. Whether the president stayed within the limits of his authority in ignoring the faculty vot
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	6. Will the takeover anger the public and give all students a bad name.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	7. Is taking over a building consistent with principles of justice.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	8. Would allowing one student take-over encourage many other student take-overs.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	9. Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	10. Whether running the university ought to be in the hands of a few administrators or in the hands of all the people.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	11. Are the students following principles which they believe are above the law.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	12. Whether or not university decisions ought to be respected by students.

## Appendix B: Research Invitation



Flinders Business School  
Faculty of social and behavioral sciences  
GPO Box 2100  
Adelaide 5001 Australia

Telephone: (+61 8) 8201 3896  
Fax: (+61 8) 8201 2644  
Email: maz.demosthenous@flinders.edu.au

### ***Research Study: The effect of accounting education on Cypriot university students' moral reasoning and development***

Dear potential participant,

I, Maz Demosthenous a Lecturer from Flinders University is conducting a study to investigate the effect of accounting education on Cypriot university students' moral reasoning and development. The information collected will be used as part of a research project.

The proposed project aims to investigate, the moral judgment abilities of Cypriot accounting students at university. By identifying the moral judgment abilities of accounting students industry stakeholders will gain a better understanding of:

- (a) The decision making and judgment abilities of the future accounting workforce;
- (b) How to effectively manage the accounting workforce of the future; and
- (c) How to design more effective education programs to enable them to meet the needs of their multi-generational students.

The attached questionnaire asks you to provide your opinions about the decisions options available in a number of different situations. The questionnaire should take no longer than 30 minutes to complete and can be done so at your leisure. There is no right or wrong answer and the survey is anonymous and so no individual is identifiable. Your responses are confidential and your privacy is assured. No information that identifies an individual will be published in this research study and that the confidentiality of any information provided by them will be respected.

All completed questionnaires will be retained securely and will not be made available for general view. This survey is not compulsory for all students to participate. Students can and withdraw at any time or not respond, which would mean that they have chosen not to participate in the survey.

If you have any comments, suggestions or questions regarding this study please contact Mr. Maz Demosthenous on 97859395 or email [Maz.demosthenous@flinders.edu.au](mailto:Maz.demosthenous@flinders.edu.au).

Thanking you in anticipation.

Yours sincerely

Maz Demosthenous

### **Appendix C: Mean DIT "P" scores**

Mean "P" scores

Moral philosophy and political science doctoral students	65.2
Seminarians in a liberal Protestant Seminary	59.8
Advanced law students	52.2
Practicing medical physicians	49.5
Graduate students in business	42.8
Average college students	42.3
Average adults in general	40.0
Average senior high students	31.8
Prison inmates	23.5
Average junior high students	21.9
Institutionalized delinquent boys, 16 years old	18.9

(Rest, 1994, p.14)



## Appendix D: Regression Model Diagnostics

DIAGNOSTICS			
Variable	VIF	1/VIF	Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
			Ho: Constant variance
1.studyeth~s	2.99	0.334727	Variables: fitted values of PScore
1.SEX	2.61	0.383023	chi2(1) = 0.87
studyethics#			Prob > chi2 = 0.3522
SEX			<i>Cannot reject null of no heteroskedasticity</i>
1 1	4.51	0.221715	
Attitude	1.07	0.937433	Ramsey RESET test using powers of the fitted values of PScore
Educ			Ho: model has no omitted variables
2	1.29	0.776560	F(3, 88) = 0.70
3	1.17	0.853342	Prob > F = 0.5516
Mean VIF	2.27		<i>Cannot reject null of no omitted variables</i>

*VIF is below 5 therefore colliniarity is not likely to be a problem*

