



**Universidad San Francisco de Quito**  
**Colegio de Administración para el Desarrollo**

**Locus of control and its effects on individual motivation**

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**Gerald L. Finch, Ph.D., Director de Tesis**

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Quito, mayo de 2014

**Universidad San Francisco de Quito  
Colegio de Administración para el Desarrollo**

**HOJA DE APROBACIÓN DE TESIS**

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Quito, mayo de 2014

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**Dedication**

The thesis is dedicated to my father, who continually sacrifices for the entire family and whom I consider as my life tutor; and my mother, who persistently supports me in my everyday life providing her sympathy, loves, generosity and comprehension. Additionally, the current study of titration is devoted to my parents as a remarkable reward of mine, because they have offered me such a precious, but irreplaceable gift – residing and studying in Ecuador for almost five years as of the year 2009; owing to that, studying in a foreign institute of high education has been one of the aims in my life, despite the difficulties that are sometimes involved in studying abroad. The efforts of all people around me are the vital dynamic elements in turning my dreams into realities. This thesis is dedicated to me as well; since I have given all my energies and put all my effort into it; additionally, the experience of writing the actual thesis has been an enriching experience for me.

## **Acknowledgments**

Regularly the sensation of accomplishment which it is not easy but it has been achieved appears in human thought, and accordingly it is the accurate moment for devoting what has been impossible that it seemed originally when done alone. I would like to express my sincere gratitude to all the people who have assisted me in the current thesis. Furthermore, I would like to thanks every single person who has trusted, supported and given me the indispensable strength on the path of this thesis.

## **Resumen**

En circunstancias que son relativamente homogéneas, la percepción de los individuos varía de una dimensión comparativamente inmensa, puesto que la gente posee diversas percepciones sobre el control del resultado de cualquier hecho o situación, que podrían ser interno, de transición o externo. Consiguientemente, esta tesis pretende explorar y explicar los efectos del locus de control en la motivación personal. El estudio de las posibles influencias del locus de control en la motivación individual se ha llevado a cabo mediante el análisis de los datos compilados de la encuesta de un grupo de más de 100 estudiantes ecuatorianos de pregrado, los cuales están en el entorno social, cultural y económico idéntico. Después de un análisis de los resultados de la investigación dentro del patrón estadístico elegido, se determina que existe una relación entre el locus de control externo de las personas y su propia motivación. Además, se revela que el puntaje de la escala de la prueba del locus de control se ve afectado por ciertas teorías de la motivación individual que han sido reconocidas por el mundo entero. Conjuntamente, la investigación actual acerca de cómo el locus de control podría afectar la motivación personal no sólo ayuda a investigadores y estudios futuros tener un panorama general, sino también a obtener cierta información primaria de investigación.

## **Abstract**

In circumstances that are rather homogenous, individuals' perception varies in a quite immense dimension, because people possess diverse insights about the control towards the result of any event or situation, which could be internal, transitional or external. Consequently, this thesis is going to address, explore and explain the effects of locus of control on personal motivation. The study of the possible influences of locus of control on individual incentive schemes has been carried out by analysing the compiled survey data from a group of more than 100 Ecuadorian undergraduate degree students, who are in the identical social, cultural and economic background. After an analysis of the research results within the selected statistical pattern, it is determined that there is a relation between people's external locus of control and their own motivation. Also, it is revealed that the scale score of locus of control test is affected by certain individual motivation theories which have been recognised by the whole world. Besides, the current investigation on how locus of control could affect men's incentive schemes not only helps researchers and further studies to have a general panorama, but also to obtain certain primary research information.



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## **Chapter 1 Introduction**

In the fast-paced global developing contemporary society, people have reached a stage where they are surrounded by innumerable circumstances related to their survival, such as threats, rivalry, opportunities, decision making, choices and other extrinsic elements. As a result of facing those situations, people react differently in accordance with their attitudes, perceptions, personalities and other particular factors. As a result, it is essential to study the interconnection, if any, between people's own interpretations towards the circumstance via locus of control and their individual motivation. Up to now, a number of researchers around the world have already carried out investigations starting with the term – locus of control, which was introduced by the North American psychologist Julian B. Rotter in the 20th century after his abundant experimental and theoretical acceptance for the psychology study in the University of Connecticut.

### **Statement of problem**

The concept of locus of control offers people an understanding of how certain beliefs affect them in both positive and negative habits. Locus of control impacts people in so many ways, which include personal decision making, individual lifestyle choice, interpersonal relationships, and so forth. It also marks the impacts on an individual's potential capacities, as such leadership, work efficiency and effectiveness, among others. Since locus of control drives personal perceptions to such a substantial way, it is necessary and significant to study what its influence is on people's incentive schemes and behaviour. Hence, the foremost issue statement addressed in this thesis is how locus of control impacts personal incentive scheme in the same communal, economic and cultural conditions.

**Background and need**

The associated review of scientific and Management topic journals and those respected universally celebrated academic text books which are primarily applied in the course of the research reveal potential relationships between the two fundamental concepts – locus of control and motivation (See the literature review chapter). Besides, in the literature review section, various internet sites affiliated to the psychological areas of locus of control are comprised. Conjointly, the earlier and more current individuals' motivation theories, which could be allied to people's locus of control, are encompassed from worldwide eminent academic text books. Furthermore, a few former research papers about locus of control have been reviewed as well in the course of the study so as to gain a deeper understanding of the topic.

**Rationale**

As the general problem is how locus of control could affect personal incentive schemes, which is the basic investigation theme, the thesis is allied to several universal typical motivation theories –which are: expectancy theory, equity theory, hierarchy of needs theory, reinforcement theory, social cognitive theory and theory X and Y– with the aim of defining the quantitative dimensions of men's locus of control influence towards their inducements since individuals react differently in a comparatively alike situation relying on their own perception and other psychological factors. In addition, before addressing the actual study, locus of control will be addressed to convey a broad understanding within locus of control and motivation.

### **Purposes of the thesis**

Based on the statement of problem above, which is how individuals' locus of control could affect their own motivation, the objectives of the current thesis are the following: one, to delineate the relationship between personal locus of control, or men's perceptions that are the cause of certain events, which is the dependent variable; and the academic specialty, age, gender, number of years of higher education and religion of the survey contributors who are a group of Ecuadorian undergraduates, which are autonomous variables of the study. Two, on the basis of the background of the investigation, to comprehend how locus of control could impact on the group of university students' incentive schemes. And, three, to conclude which motivation theories addressed previously in the thesis influence the focus group of constituents' own performance.

### **Research questions and hypothesis statements**

Since the main research issue of the thesis is how locus of control could affect people's motivation, the general hypothesis is that men's locus of control impacts their incentive schemes in profound manners. Likewise, it is assumed that individuals with an internal locus of control have internal motivation factors, and vice versa. It is worth pointing out that those people with internal locus of control deem that they are motivated by their own intrinsic factors, as an illustration, their aptitudes, desires or needs and efforts; and persons with external locus of control perceive that what occurs to them is not controllable due to extrinsic conditions, for example behaviour of others, environment and weather. Consequently, in connection with the thesis intentions, the investigation questions are: what is the quantitative relation between the group of Ecuadorian undergraduates' locus of control and their age, gender, country or region where they have lived the longest,

academic major, number of years of university education and religion; and which incentive theories could be affected by their own locus of control, and in which dimensions.

Congruently, the hypothesis declarations of the present study are: in the first place, there exists a certain correlation between an individual's age, gender and his or her number of years of higher education with locus of control; that is to say, a senior year female undergraduate degree student gets a lower score in locus of control test, which implies that this type of individuals tends to have an internal locus of control disposition. In the second place, a man's incentive modes are directly proportional to his or her locus of control. Moreover, a person is more inspired by hierarchy of needs theory, equity theory, expectancy theory and social cognitive theory, which are formerly accepted by intellects and multitudes in the world.

### **Limitations**

Generally, the limitations of the research result from, firstly, the lack of some psychosomatic aspects of motivation, paucity of information about the topics, and the limited time and deficient resources of the investigator. Secondly, as the actual survey is a non-random one, the data has been collected at the researcher's convenience and judgement; literally, the entire samples are both convenience and judgement samplings. Similarly, the study simply represents the determined group, which is composed of different academic specialities students of the University San Francisco of Quito. Hence, if future studies are going to use this thesis as a reference, special considerations are deemed prudent. Correspondingly, specimens for each extremity of locus of control are rather complicated to encounter. Equally, it is rational that some variables, such as social and

characteristic variations, are fairly difficult to regulate as the University San Francisco of Quito in Ecuador is multicultural.



## **Chapter 2 Literature Review**

### **Locus of control**

Locus of control is one of the most investigated variables in psychology and the other social sciences. It is first introduced by the eminent and influential North American psychologist Julian B. Rotter in 1966 after his research in psychology at the University of Connecticut. This framework is applied usually in aspects such as clinic psychology, personality psychology and social learning psychology; it relates to individual control perceptions about whether current actions affect future consequences in his or her lifespan. That meant, a person with internal locus of control believes that what happens in his or her life is contingent on his or her conduct (Roddenberry and Renk, 2010, 354); or, in other arguments, he or she associates with his or her own control in actions, abilities, efforts and so forth. At the same time, an individual with external locus of control concerns that what occurs in his or her life directly depends on environmental factors which he or she cannot control.

Additionally, locus of control is delivered from Julian B. Rotter's social learning theory; which posits that behavioural expectancy has an impact on motivation of people to engage in that behaviour. Because, in relation to the perspective, since persons grow and develop from their infancy, they are followed by a few systems of reinforcement, which enhance their expectancy; where their certain conducts would produce those preferred reinforcement. Subsequently, reinforcement occasionally is seen as contingent upon personal performance (Rotter, 1966). It is advocated as well that societal background, environmental and trait aspects have influence on both internal and external control of reinforcement of people, often referred to as locus of control (Rotter, 1990).

Also, on the basis of the North American psychologist –Julian B. Rotter– whose social learning theory has not been influenced by that of the Canadian psychologist Albert Bandura, the effects of reinforcement on past behaviour depend on, in part, whether an individual distinguishes the reward as conditional on his or her own actions or sovereign of it (Rotter, 1966). Acquisition and behaviour differ in situations are perceived as determined by skills versus chance (Rotter, 1966). Persons may perhaps also differ in generalised expectancies for internal versus external control of reinforcement (Rotter, 1966).

On account of the former general descriptions with reference to the psychosomatic term – locus of control, it appears that within the concept of motivation, both extrinsic and intrinsic incentives of all the human beings are associated with locus of control; insomuch as extrinsic motivation is the motivation to become involved in an activity as a means to an end, and intrinsic motivation is the men's incentive scheme to become involved in an activity for its own sake (Wiseman and Hunt, 2008, 49). Similarly, intrinsic type of goal setters accounts their personal factors, for example their curiosity, enjoyment and interests, as for mastering tasks. Unlike intrinsic type of aim setters, the characteristics of extrinsic motivation persons are underlined in environmental factors, for instance, rewards, social pressures and punishment; where extrinsic individuals judge themselves in other's eyes, and eagerly desire for approval of behaviour in standpoints of others (Wiseman and Hunt, 2008, 51).

### **Motivation**

Motivation, which is conceptualised as the processes that account for an individual direction, intensity and persistence of effort toward accomplishing an aim (Judge and Robbins, 2009, 175), on one hand, is an internal state which arouses men to action, directs

them to certain behaviour and assists them in preserving excitement and action (Wiseman and Hunt, 2008, 43). On the other hand, it is the study of interactions between human performance and confronted situations according to human's own psychological factors. These factors are chiefly attitude, cognitive aptitude, personality and perceptions; albeit it is clear that particular psychological factors differ from people. Amidst the definition of motivation, there exist three crucial aspects: direction, intensity and persistence. Favourable consequences are channelled to beneficial direction, high individual intensity and a maintained persistence dimension of effort (Judge and Robbins, 2009, 175); vice versa, inauspicious outcomes are involved with unfavourable direction, low personal intensity and a brief persistence dimension of effort.

There are diverse theories about motivation, which essentially can be divided into two categories – early and contemporary theories of motivation. Among the early classical theories, theory X and Y and Abraham H. Maslow's hierarchy of needs theory are highlighted; however they lack sufficient empirical evidence. Theory X and Y which was developed by Douglas McGregor propose two distinct human views. That is, theory X assumes that individuals dislike work and taking responsibility, because they are naturally lazy; hence, they must be compelled to perform. However, theory Y adopts a positive assumption where people are creative, like to work and seek for responsibility; as a consequence, they can work out by themselves instead of being inspected constantly.

Abraham H. Maslow hypothesised that within every human being, there exist a pyramid of physiological, safety, social, esteem and self-actualisation needs. Physiological needs are composed of bodily needs. Safety needs consist of protection and security from emotional and/or physical harm. At the same time, social needs demonstrate acceptance, affection,

belongingness and friendship. Esteem needs implies both internal and external factors; as an illustration, achievement, autonomy and self-respect are internal factors, whereas attention, recognition and status are external factors. Meantime, self-actualization drives an individual to become what he or she is capable of becoming. Abraham H. Maslow parted these five needs into higher-order and lower-order needs, where higher-order needs are satisfied within the person, meanwhile, lower-order needs are predominantly satisfied externally (Judge and Robbins, 2009, 176).

A number of recently conventional theories are comparatively effective due to extensive and valid supporting documentation. Amongst the modern theories, social cognitive theory, reinforcement theory, equity theory and expectancy theory are argued. Social cognitive theory implies the personal belief of being gifted for a task. A higher self-efficacy believer claims that he or she is capable for determined tasks; accordingly, his or her motivational intensity and persistence of effort are directed to achieve goals. Again, a lower self-efficacy advocate decreases his or her intensity and persistence of effort for a negativistic motivation, namely he or she lessens his or her effort or give up altogether.

Reinforcement theory evidences that individuals behave dependently as effects of environmental conditions. This means that, as soon as an after effect which is caused by environmental conditions is immediately reacted, for example labour compensation, it seems that people try to repeat their behaviour owing to their individual internal cognitive learning. Notwithstanding, in reinforcement theory own inner states, such as attitudes, expectation and feelings, are ignored; and the stated theory concentrates solely on what happens to a person as soon as he or she takes some action (Judge and Robbins, 2009, 176).

Equity theory refers to personal comparison about personal inputs versus outcomes with

relevant others; and individual behaviour will be adjusted afterwards to eliminate any inequities. A state of equity exclusively exists when the personal perception of private inputs and outcomes have parity in contrast with related others (Judge and Robbins, 2009, 176).

Expectancy theory, which is ordinarily attributed to the Canadian professor Victor H. Vroom in 1964, proposes that an individual decides to act or behave in a certain way in order to benefit him or herself the most – maximize his or her own performance's value. Nevertheless, this theory suggests that the introduction of extrinsic compensation for job, which is previously intrinsically rewarding tends to reduce overall motivation. When extrinsic rewards are given to people for performing an interesting job, it causes intrinsic interest in the job to decrease. In essence, expectancy theory figures out that self-action or behaviour is determined by desires and rewards towards results. When personal desirability of the aftermath is more intense, individual behaviour will be motivated by his or her best interest; vice versa, a more inferior desire of the outcome results a poorer personal performance.

Besides, expectancy theory specifies three components of the connection between behaviour and reward – which are: valence, instrumentality and expectancy. This theory attempts to explain what is needed for a reward to motivate behaviour (Marcic, Seltzer and Vaill, 2000). Each of these three components is indispensable; if one of them is faint or missing, then the whole connection is feeble and behaviour is poorly inspired. Valence describes that rewards must be valued according to individual performance. As people have a great variety of valence, for example own satisfaction, money and interpersonal relationships value, individuals' differing potential motivate diverse behaviour.

Instrumentality, which is often called performance-reward expectancy, demonstrates perceived connection between performance and compensations, or how well own job action or behaviour leads to job reward. The expectancy theory measures the perceived connotation between effort and behaviour (Marcic, Seltzer and Vaill, 2000).

### **Chapter 3 Methodology**

The study of locus of control and its effects on individual motivation has been accomplished by aligning an academic and scientific investigation method, which contains the procedures of choosing the research theme, identifying those possible and best academic sources, amassing background information about the subject, conducting the organized survey for a posterior profounder analysis, collecting the complied data and information, discussing and interpreting the gathered data and information for the purpose of getting subsequent conclusions around locus of control's effects on people's own motivation factors. Inasmuch as there is slight former information about the accurate covered topic, which is locus of control and its effects on personal incentive scheme, this investigation technique has been applied in the course of the research in order to form a primary and quantifiable assay, which could be passably gainful for succeeding ateliers round the theme of locus of control.

Apropos of those possible and best academic resources, for the purpose of grasping a general idea of the subject, internet research with key words has been enforced at the outset. Additionally, globally famed reading materials, psychological journal articles from renowned authors and internet-based dependable academic lectures are employed as well to generate a deeper comprehension of the theme. Jointly, as regards to the survey, the questionnaire is subdivided into three sections; where the first section attempts to determine participant's locus of control by dichotomous questions. The second section brings for measuring his or her own motivation through showing him or her sets of questions, and for requiring respondent to weigh those statements, predominantly propounded by the researcher. And the third section of the questionnaire merely amasses

participant's demographic information, for example, respondent's gender, age, academic specialty, religion, number of years of higher education and so forth.

Concerning the research, the selected methodology of the survey is a cross-sectional and quantitative investigation; because the data and information from the population of this survey, which is the total undergraduate degree students who are studying at the University San Francisco of Quito thru the second semester of the academic year 2013 – 2014, have been collected at one precise point in time. And on the basis of the transversal analysis, descriptive studies will be used promptly. Further, after the data registers of this thesis across the survey's questionnaire, which is composited of two non-overlapping options interrogates and constant sum questions, the empirical analysis via computational techniques, mathematical, numerical or statistical data will be utilized as well. What is more, due to the complexity of acquiring the sample frame for the investigation, it is inconvenient for the investigator to attain an exhaustive undergraduates' information base; as a consequence, the specimen of the research converts to a non-probabilistic sample.

### **Selected methodology justification**

Given that all human beings have their own locus of control, which is a psychological term that refers to individual perception of occurrence's causality in their everyday life, people intuit their conducts completely dissimilar based on their own incentive schemes under divergent circumstances. Accordingly, it is meaningful to perform a primary exploration about how locus of control could affect, if possibility exists, personal motivation. Besides, the investigation around locus of control and its impacts on individual motivation supports scientists, expressly psychologists, scholars and researchers who are interested in the psychological subject of locus of control and individuals' incentive scheme offering them a



general panorama about those reckonable variables regarding to deliberated effects of the theme. Moreover, it seems that this thesis could provide other investigators and/or scholars a crucial source for their future studies about the topic.

### **Research tool application**

In the course of this study, the approved questionnaire which is predominantly designed by the investigator is employed as the research tool. The researcher has approached those participants by convenience and judgment with the intention of carrying out the survey. During the survey, the investigator first gives the participants a brief introduction in accordance with the questionnaires, then delivers the printed survey, and after that, immediately accompanies the participators aiming to respond to their concerns and also to monitor their response and behaviour. Once the survey is done, which has taken the contestants approximately 20 minutes in average to answer, the investigator thanks the participants' collaboration and confirms that all questions on the questionnaires have been answered.

### **Description of survey participants**

The group of contestants in the former designed survey about locus of control and motivation consists of beyond 100 participants who are Ecuadorian undergraduate degree students at the University San Francisco of Quito, which is modelled on North American liberal arts institutes of higher education institute (Urigüen, 1997, 70). The reasons why this specific group of responders has been designated are not only that they match the required survey profiles, as individual locus of control is affected by three macro-variables, which are society, culture and economy; but also this group of participators are relatively

accessible for the researcher. Accordingly those survey participants are selected as the subject of this thesis.

## **Chapter 4 Results analyses**

Before starting with the investigation procedure about locus of control and its effects on individual motivation, the universe of the research, which is all the students who are actually studying in the University San Francisco of Quito during the second semester of the academic year 2013 – 2014, is defined. According to the acquired data from the university's Register Department, there are in total 6,299 students who are currently studying in the superior education institution<sup>1</sup>. Additionally, in the course of the research, which has been carried out approximately in seven days, 155 undergraduate degree students have been involved in the non-probabilistic survey; and of whom, 149 students have given their valid response to the investigation. In other words, the results analysis will be based on those 149 valid compiled questionnaires. Congruently, those 149 participants denote around 2.37% of the entire population for the research, which is composed 6,299 students of the University San Francisco of Quito.

### **Demographic information of the participants**

According to those participants' gender, among the 149 survey contributors, 60 of them are male participants, who hold 40.27% of the sample; at the same time, there are 89 female participators, who occupy 59.73% of the sampling. However, the investigator's essential aim has been to be fair in their gender – both female and male participators indicate each 50.00% of the research specimen. Regarding the age of the survey attendants, the average age of those 149 respondents is roughly 21 years. Besides, amongst those survey participants, the youngest age has been 17 years old, while the eldest contestant is 57 years old (See Figure 1). In the meantime, the mode valour of those 149 participants' age is 19 years old; which demonstrates that most of the sample's respondents are 19 years old.

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<sup>1</sup> The information was provided by the register Mónica Viviana Gonzaga Muñoz from the Register Department of the University San Francisco of Quito on 26th February of 2014.

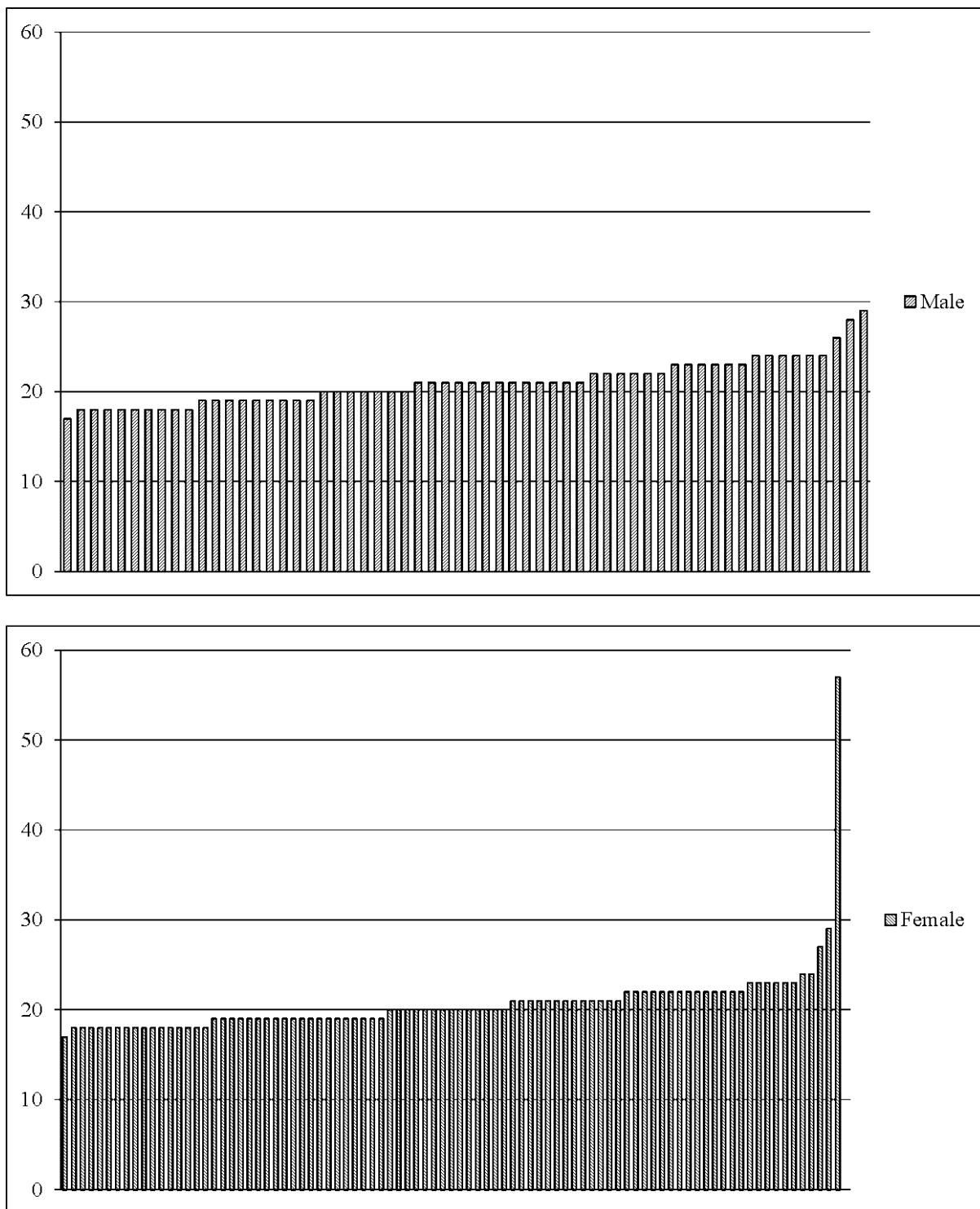


Figure 1 Age and gender of the participants

Conjointly, as for the complied data from the investigation, in the range of those 149 respondents, ten of them are majoring Architecture and Environmental Design, four of them study Art and Design study, 11 of the 149 participants are majoring in Biological

Sciences and 19 of them specialise in Business and Economics. At the same time, nine of those 149 attendants concentrate on Communications speciality, 21 of them are studying Engineering, 13 of them specialise in Health and Physical Education and six of those 149 investigation participators are majoring in Performing Arts. Additionally, another participator's field of study is Physics. In addition, approximately 8.72%, 4.03%, 1.34%, 18.79% and 4.03% of the survey attendants are studying Political Science, Psychology, Sociology and Social Sciences, Teacher Education and Gastronomy and Hospitality at the present moment, respectively; where the Gastronomy and Hospitality specialty is showed as undefined (See Figure 2).

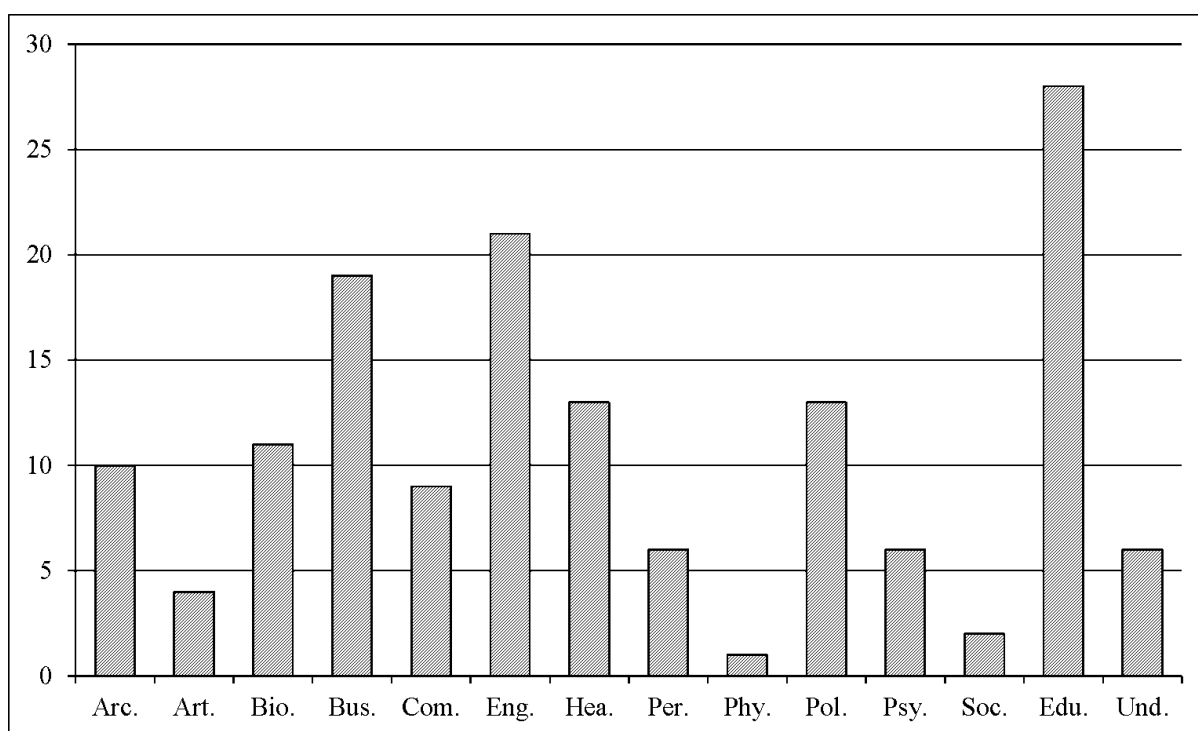


Figure 2 Academic major of the participants

Furthermore, in connection with those 149 contestants' religion, or how they would describe their religious belief, on one hand, 14.09% of them are agnostic and 10.07% of them are atheist; 32.89% of those 149 participators are moderately religious, 37.58% of them are religious and 5.37% of them are very religious. On the other hand, the majority of

the participants, 56 out of 149, consider themselves as religious (See Figure 3). Likewise, the mode value of those 149 attendants' number of years of university education is one, which implies that the majority of those 149 contestants are in their first year of the university. Moreover, 27, 30, 39 and seven of the research contributors are in their second, third, fourth and fifth year of superior education, respectively. Meanwhile, there is one male participator who is specialised in Performing Arts in his sixth academic year, and another one who is focus on the Biological Sciences academic subject in the seventh academic year (See Figure 4).

Similarly, 98.66% of the participants have been living in Ecuador for a long period of time, excluding two female participators who are Austrian and Venezuelan in turn. However the dual outliers, or the two female participants, have been living in Ecuador for a long time. As a consequence, all survey respondents are concerned as the Ecuadorian long-term settlers by the investigator. Additionally, despite, at the first sight, it seems that the independent demographic variable, the country or region in which the investigation contributors have lived the longest, is inconsequential, for all data has been inputted as "Ecuador"; nevertheless, this subcategory does contribute to the macro-variables control in the course of the investigation.

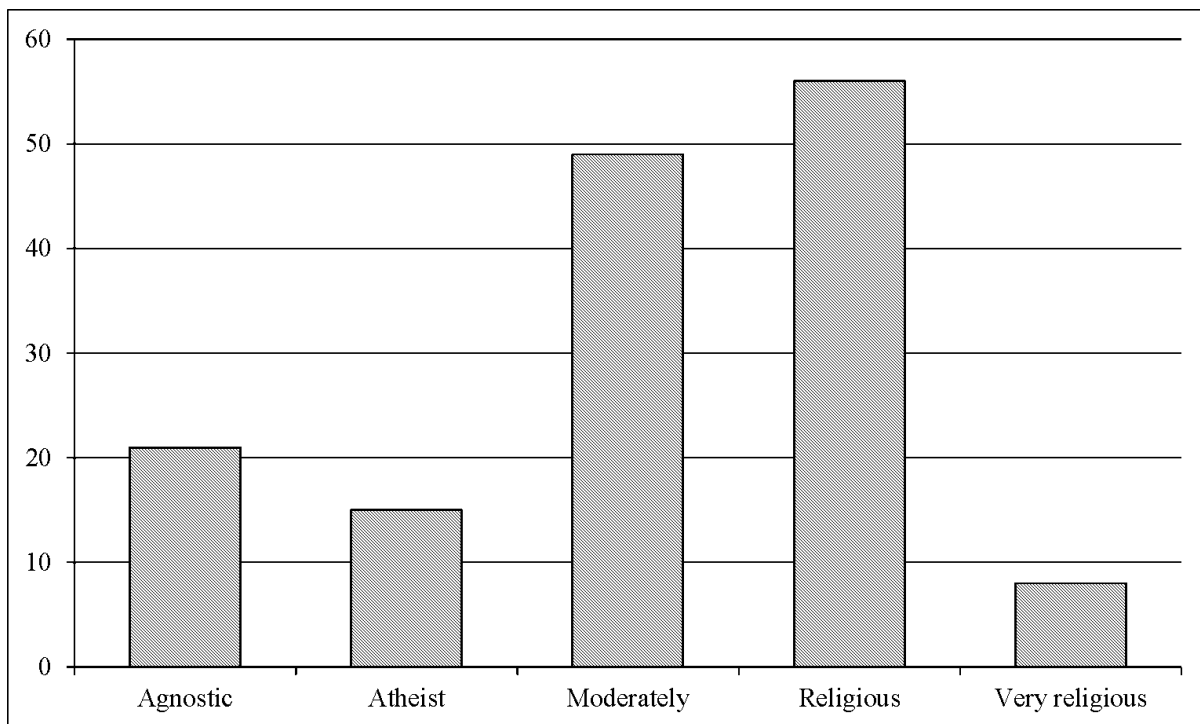


Figure 3 Religion of the participants

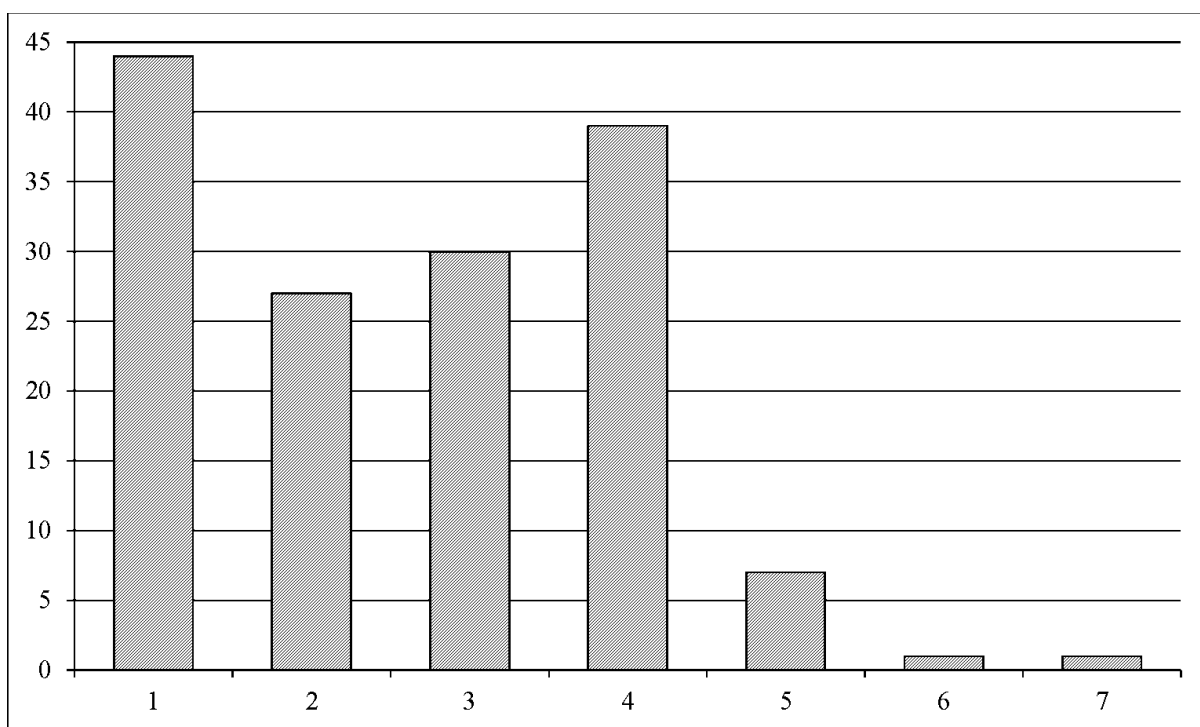


Figure 4 Number of years of university education (in years) of the participants

### **Locus of control and autonomous variables of the participants**

In accordance with the locus of control scale norms which is built pursuant to the research realised by Stephen Nowicki Jr. in the 20th Century, where the sample was composed of mostly Caucasian students, men's locus of control is concerned as internal when their scale score is between zero and six, people's locus of control is defined as intermediate when their scale score is more than six but less than 16, and persons are external scorers if their test score is 16 or above (Launius, 2004). On the basis of the former standards, those survey contestants have been classified into: 15 participants with internal locus of control, 94 respondents with transitional locus of control and 40 of them with external locus of control. External scorers believe that happenings' consequences are beyond their control. While individuals with transitional locus of control are inconsistent with incidences' results; it seems that they undoubtedly can dominate some areas of their life but not in others. Besides, internal locus of control people have a solid belief that their abilities affect aftermaths of deeds.

Congruently, the subsequent results analyses are carried out basing on a 95.00% of significance level where the valour of  $\alpha$  equals to 0.05, which is significant for the actual thesis. Furthermore, the three assumptions which have been mentioned above are: one, there exists a certain correlation between men's gender, age, academic major, their religion and years of higher education with locus of control; two, personal incentive schemes are directly proportional to locus of control; and, three, people are more enthused by equity theory, expectancy theory, hierarchy of needs theory and social cognitive theory (See the introduction chapter). Accordingly, the three former assumptions are concerned as the alternative hypotheses, whilst the neutral hypotheses for the suppositions are: one, there exists no correlation between individuals' gender, age, specialised careers, religion and



years of university education with locus of control; two, men's motivation is not directly associated with their locus of control; three, people are not more enthused by equity theory, expectancy theory, hierarchy of needs theory and social cognitive theory.

According to those assumptions and the objectives of the thesis (See the introduction chapter), the investigation results will be deliberated based upon a 95.00% of significance level. As for those research attendants' gender, the variable's  $p - value$  is approximately 0.63 (See Table 2), which is evidently mayor than the  $\alpha$  valour – 0.05; hence the null hypothesis, which is there exists none correlation between gender and locus of control will not be denied. Apart from the  $p - value$ , the correlation coefficient, which is a descriptive dimension of the intensity of the linear relationship between two variables, concerning the group of contestants' gender and locus of control is  $r \approx 0.04$ , and exhibits that the two variables are positively related, yet barely 4.02% (See Table 1). For these reasons, the relation between those 149 investigation contributors' gender and their locus of control will not be statistically considerable.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.0402	0.0016	-0.0052	5.1835	149

Table 1 Regression statistics of locus of control and gender of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	12.9888	0.5495	23.6395	0.0000
X Variable	-0.4221	0.8659	-0.4875	0.6266

Table 2 Regression analysis of locus of control and gender of the participants

Regarding the regression of the participants' age, the  $p - value$  of the variable is around 0.05 (See Table 4); and the determination coefficient, which assesses the estimated regression equation's goodness of fit and equals the percentage of the total sum square, designates that the coordinate system's points are 2.50% enclosed with the graphic (See Table 3). Furthermore, the regression line does not indicate an applicable relation between

the two variables (See Figure 5). Subsequently, the neutral hypothesis is not rejected. It is worth stating that no relationship exists between those 149 respondents' age and their locus of control.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.1581	0.0250	0.0183	5.1225	149

Table 3 Regression statistics of locus of control and age of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	8.2590	2.3868	3.4604	0.0007
X Variable	0.2188	0.1127	1.9407	0.0542

Table 4 Regression analysis of locus of control and age of the participants

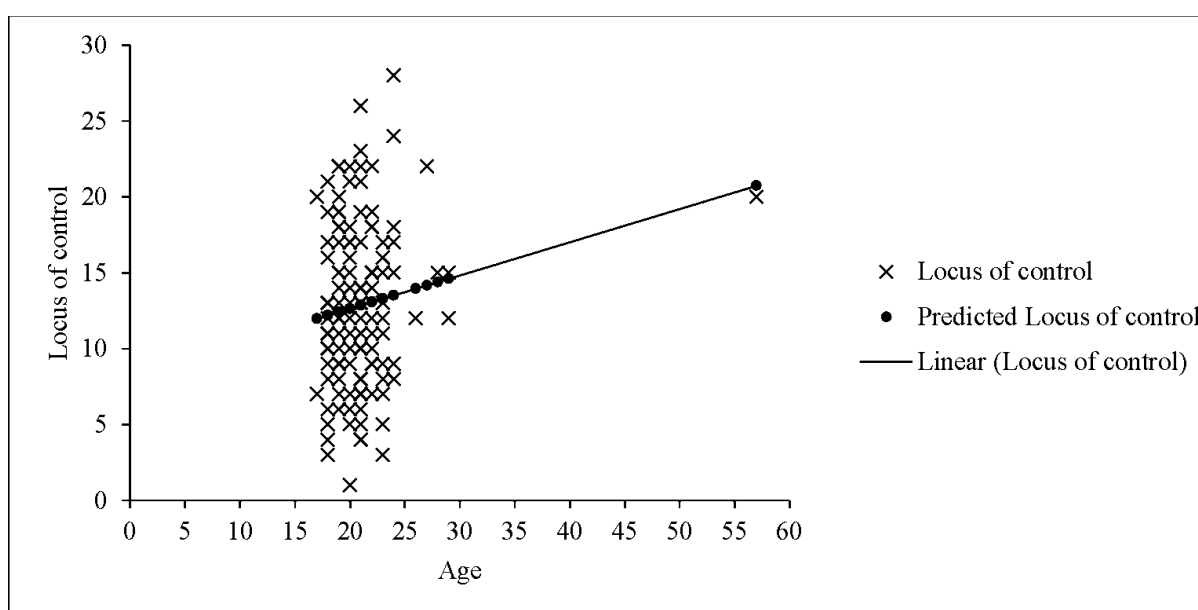


Figure 5 Line fit plot of locus of control and age of the participants

Concerning the participants' academic specialities, all specialised subjects have been categorised by codification numbers before starting with the results analysis (See Table 5). However, a few careers have been omitted in the regression model since the compiled data from those 149 contributors has not included the consequent specialities: Agricultural Sciences, Anthropology, Chemistry, Computer Science, Culture and Society, Environmental Studies and Sciences, History, Humanities, Languages and Literature, Mathematics, Media or Film and Television, Philosophy and Physical Sciences. Jointly, pursuant to the statistical analysis, aside from the *p – value* of the variable is 0.50 (See

Table 8), the estimators from the regression are insignificant as the  $t$  value is minor than the  $t$  critical one-tail value (See Table 7). Therefore, the null hypothesis is not denied. In ordinary language, the group of contestants' academic major, which is independent variable, has none correlation with their locus of control (See Table 6).

Codification number	Academic major
0001	Agricultural Sciences
0002	Anthropology
0003	Architecture and Environmental Design
0004	Art and Design
0005	Biological Sciences
0006	Business and Economics
0007	Chemistry
0008	Communications
0009	Computer Science
0010	Culture and Society
0011	Engineering
0012	Environmental Studies and Sciences
0013	Health and Physical Education
0014	History
0015	Humanities
0016	Languages and Literature
0017	Mathematics
0018	Media or Film and Television
0019	Performing Arts
0020	Philosophy
0021	Physical Sciences
0022	Physics
0023	Political Science
0024	Psychology
0025	Sociology and Social Sciences
0026	Teacher Education
0027	Undeclared

Table 5 Codification of academic major of the participants

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.0554	0.0031	-0.0037	5.1797	149

Table 6 Regression statistics of locus of control and academic major of the participants

	df	t Stat	P (T<=t) one-tail	t Critical one-tail
Variable 1	148	-2.3324	0.0105	1.6552
Variable 2				

Table 7 t-Test: Paired two sample for means of locus of control and academic major of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	13.3038	0.8369	15.8960	0.0000
X Variable	-0.0328	0.0487	-0.6724	0.5024

Table 8 Regression analysis of locus of control and academic major of the participants

In accordance with those 149 participants' religion, or how they would describe themselves about their religion, the  $t$  Stat value, which denotes the significance of

estimators, is higher than the  $t$  critical one-tail value (See Table 10); thus, it can be appreciated that the estimators of the regression are significant. In addition, the  $p - value$  is 0.59 (See Table 11). Thus, the neutral hypothesis, which has a directly proportional relation between religion and locus of control, is rejected; and the alternative one will be accepted. Nevertheless, the variables' correlation coefficient, determination coefficient and the slope indicate that the statistical prediction is irrelevant; because their values are fairly small (See Table 9 and Table 11). Accordingly, the relationship between religious belief of the respondents and their locus of control are not considerable in this thesis.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.0440	0.0019	-0.0049	5.1827	149

Table 9 Regression statistics of locus of control and religion of the participants

	df	t Stat	P (T<=t) one-tail	t Critical one-tail
Variable 1	148	22.6315	0.0000	1.6552
Variable 2				

Table 10 t-Test: Paired two sample for means of locus of control and religion of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	12.1883	1.2540	9.7197	0.0000
X Variable	0.2033	0.3805	0.5344	0.5939

Table 11 Regression analysis of locus of control and religion of the participants

In agreement with the number of years of university education of the investigation contributors, it possesses an  $p - value$  which equals to 0.87 (See Table 14); consequently, within the 95.00% of significance level, the null hypothesis, which is there does not live a correlation between the group of participants' number of years of higher education and their locus of control, will not be denied. In other words, there exists a certain relation between the two variables. Even so, the values of the correlation coefficient and determination coefficient are not apparent although the statistical  $t$ -test is significant. Hence, the correlation between the two variables does not exist because the line's slope is almost parallel to the  $x$  axis. Nonetheless, the attained conclusion contradicts the

hypothesis made by other previous researchers, which reveals that students tend to be internal scorers while they are in their senior years of superior education level.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.0134	0.0002	-0.0066	5.1872	149

Table 12 Regression statistics of locus of control and years of university education of the participants

	df	t Stat	P (T<=t) one-tail	t Critical one-tail
Variable 1	148	23.1830	0.0000	1.6552
Variable 2				

Table 13 t-Test: Paired two sample for means of locus and years of university education of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	12.9526	0.9266	13.9787	0.0000
X Variable	-0.0508	0.3130	-0.1625	0.8712

Table 14 Regression analysis of locus of control and years of university education of the participants

In relation to the country or region where the participants have lived the longest, it seems that there is no relation between this variable and their locus of control; for the  $p$  – value of the variable is undefinable (See Table 16). Subsequently, both the neutral hypothesis and the alternative one cannot be argued. Likewise, the correlation coefficient and the determination coefficient are quite small to concern (See Table 15). Therefore, the country or region in which the 149 respondents have lived the longest is not discussed in this thesis; though the variable stimulates the researcher’s variables control.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.0891	0.0079	0.0012	5.1671	149

Table 15 Regression statistics of locus and country in which the participants have lived the longest

	Coefficients	Standard error	t Stat	P-value
Intercept	12.8188	0.4233	30.2828	0.0000
X Variable	–	–	65,535.000	#NUM!

Table 16 Regression analysis of locus and country in which the participants have lived the longest

After a relatively intimate statistical analysis which is based on the regression model by assessing the acquired  $p$  – value and/or  $t$  Stat for each autonomous variables, which are gender, age, academic major, religion and the country or region in which the 149 participators have lived the longest, it can be affirmed that, on one hand, among the

previous independent variables, solely the participants' number of years of university education has a slightly proportional relation with their scale score of locus of control. On the other hand, the hypotheses of the other sovereign variables have been not denied, which means that the other autonomous variables do not have any correlation with the participants' locus of control. Consequently, on the basis of a 95.00% of significance level, there is not any relationship between those obtained variables and locus of control of those 149 research contributors.

### **Locus of control and individual motivation**

In the second section of the given questionnaire, where the investigator intends to measure the motivation of the attendants, the ten pairs of questions are based upon some worldwidely eminent personal motivation theories, which are hierarchy of needs theory, equity theory, expectancy theory, reinforcement theory, social cognitive theory and theory X and Y. The first two sets of affirmations, or the questions 1-A, 1-B, 2-A and 2-B, are concentrated on the hierarchy of needs theory. The questions 3-A, 3-B and 4-A are focused on equity theory. The pronouncement of 4-B is concerted on expectancy theory. The statements thru 5-A to 7-B are based on reinforcement theory. The sets of questions from 8-A to 9-B are dedicated to social cognitive theory. And the last pair of the pronouncements is related to theory X and Y. Congruently, for the researcher's convenience, each of the ten sets of motivational statements in the questionnaire has been adjusted purposefully in order to distinguish which pronouncements are associated to externals and which ones are allied to internal scorers (See Table 17).

Question number	1-A	2-A	3-A	4-A	5-A	6-A	7-A	8-A	9-A	10-A
Association	Ext.	Ext.	Int.	Ext.	Ext.	Ext.	Int.	Int.	Int.	Ext.
Question number	1-B	2-B	3-B	4-B	5-B	6-B	7-B	8-B	9-B	10-B
Association	Int.	Int.	Ext.	Int.	Int.	Int.	Ext.	Ext.	Ext.	Int.

Table 17 The external ("Ext.") or internal ("Int.") locus statements association of the questionnaire

As to those externals, the lowest sale score is 16, while the highest one is 28 in the locus of control test. Furthermore, there is an intriguing phenomenon where eight of ten of the external locus of control assertions have the identical mode for those weighing values – five, which is quite neutral. Jointly, the other two external locus of control questions also have the same mode value, which is three (See Table 18). Consequently, it can be seen that the locus of control of those 40 externals has slight influence on their incentive schemes because they have been inclining to weigh a neutral score in the locus of control scale. Aversely, those 15 participants who are internal scale scorers, broadly, have the propensity of weighing higher values for the internal locus of control pronouncements, excepting the questions 2–B, 4–B, 5–B, 6–B and 7–A (See Table 18).

Mode value	Corresponding question number									
External scorers	1-A	2-A	3-B	4-A	5-A	6-A	7-B	8-B	9-B	10-A
	5	5	5	5	5	5	5	5	3	3
Internal scorers	1-B	2-B	3-A	4-B	5-B	6-B	7-A	8-A	9-A	10-B
	7	5	10	5	5	5	3	8	10	9

Table 18 The weightings' mode for externals and internals regarding matching questions

In accordance to those 94 intermediate locus of control individuals of the investigation, 70.00% of the sets of statements –which are the pairs 1, 2, 4, 5, 6, 7 and 8– are weighed disinterestedly, whilst the other pairs are weighed sufficiently heterogenous (See Table 19). To illustrate, in the third set of questions, which is based upon equity theory, most intermediate scorers have weighed more the internal affirmation; likewise, in the tenth pair of questions, which is designed on the basis of theory X and Y, the majority of the participants have pondered eight to the internal affirmation, and, barely, two points to the external one. As a result, it assumes that there exists little effect of locus of control on people's motivation.

Taking the external locus of control assertions from the given questionnaire into consideration, per the multiple regression model of the associated questions, the correlation coefficient value is 0.69. Accordingly, the cited motivation theories, which are hierarchy of needs, equity theory, expectancy theory, reinforcement theory, social cognitive theory and theory X and Y, are around 68.99% lineally linked with personal external locus of control (See Table 20). Moreover, as the nominal significance level equalises a 0.05, it appears that there has a proportional correlation between externals' locus of control and the social cognitive theory (See Table 22). Similarly, every single *t* test has presented that the estimators of those related motivation theories are significant (See Table 21). Subsequently, the projection equation between the variables is:  $S w = 0.16w_{1A} + 0.39w_{2A} + 0.10w_{3B} + 0.30w_{4A} - 0.03w_{5A} - 0.18w_{6A} - 0.04w_{7B} + 0.40w_{8B} + 0.01w_{10A}$  , where  $w_{nA}$  is the numerical weigh of the correspond question and *S w* is the external locus of control scale valour.

Question number	1-A	2-A	3-A	4-A	5-A	6-A	7-A	8-A	9-A	10-A
Mode value	5	5	10	5	5	5	5	6	10	2
Question number	1-B	2-B	3-B	4-B	5-B	6-B	7-B	8-B	9-B	10-B
Mode value	5	5	0	5	5	5	5	4	0	8

Table 19 The weightings' mode for intermediate scorers regarding matching questions of the participants

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.6899	0.4760	0.2953	2.3743	40

Table 20 Regression statistics of external locus of control and maching questions of the participants

Variable	df	t Stat	P (T<=t) one-tail	t Critical one-tail
1-A	1 39	27.5935	0.0000	1.6849
	2 39			
2-A	1 39	27.5935	0.0000	1.6849
	2 39			
3-B	1 39	40.4166	0.0000	1.6849
	2 39			
4-A	1 39	28.1643	0.0000	1.6849
	2 39			
5-A	1 39	21.7267	0.0000	1.6849
	2 39			
6-A	1 39	25.7798	0.0000	1.6849
	2 39			
7-B	1 39	26.0678	0.0000	1.6849
	2 39			
8-B	1 39	32.6694	0.0000	1.6849
	2 39			
9-B	1 39	44.6320	0.0000	1.6849



	2	39			
10-A	1	39	28.8034	0.0000	1.6849
	2	39			

Table 21 t-Test: Paired two sample for means of locus of control and the matching questions

	Coefficients	Standard error	t Stat	P-value
Intercept	11.9564	3.3613	3.5570	0.0013
1-A	0.1639	0.2497	0.6565	0.5167
2-A	0.3872	0.2694	1.4372	0.1614
3-B	0.1047	0.2860	0.3661	0.7170
4-A	0.3047	0.2237	1.3624	0.1836
5-A	-0.0286	0.2441	-0.1171	0.9076
6-A	-0.1827	0.2744	-0.6658	0.5108
7-B	-0.0370	0.2039	-0.1814	0.8573
8-B	0.4017	0.2516	1.5968	0.1212
9-B	0.8904	0.3319	2.6830	0.0119
10-A	0.0100	0.1808	0.0552	0.9564

Table 22 Regression analysis of external locus of control and the matching questions of the participants

In the same manner, pursuant to the multiple regression pattern within the internal locus of control scale scores and those interrelated affirmations, the correlation coefficient is nearly 60.63%, which implies that the internal locus of control scale is closely 60.63% allied to individual motivation (See Table 23). Additionally, since all  $p - value$  numerical values are superior than 0.05, there does live a relation amongst all the statements about internal locus of control people (See Table 25); however, the  $t$  test reveals that the estimators are not significant (See Table 24). Therefore, the relationship is not acceptable because the lack of the estimators' significance. Similarly, as intermediate scorers have unreliable perspectives around the degree to which their control their own fate, the intermediate locus of control persons in this thesis are not considered as fundamental subjects because of the unsuitability.

Multiple R	R Square	Adjusted R Square	Standard Error	Observations
0.6063	0.3676	-1.2135	2.0940	15

Table 23 Regression statistics of internal locus of control and the matching questions of the participants

	Variable	df	t Stat	P (T<=t) one-tail	t Critical one-tail
1-B	1	14	-3.6902	0.0012	1.7613
	2	14			
2-B	1	14	-1.1263	0.1395	1.7613
	2	14			
3-A	1	14	-9.7143	0.0000	1.7613
	2	14			
4-B	1	14	-1.0135	0.1640	1.7613
	2	14			
5-B	1	14	0.1002	0.4608	1.7613
	2	14			
6-B	1	14	-0.6667	0.2579	1.7613
	2	14			
7-A	1	14	-0.1935	0.4247	1.7613
	2	14			
8-A	1	14	-4.1075	0.0005	1.7613
	2	14			
9-A	1	14	-8.1217	0.0000	1.7613
	2	14			
10-B	1	14	-4.1113	0.0005	1.7613
	2	14			

Table 24 t-Test: Paired two sample for means of internal locus and maching questions of the participants

	Coefficients	Standard error	t Stat	P-value
Intercept	8.1224	7.0291	1.1555	0.3122
1-B	-0.1036	1.0119	-0.1024	0.9234
2-B	0.3412	0.8508	0.4011	0.7089
3-A	0.5234	2.0095	0.2604	0.8074
4-B	-1.1352	2.4437	-0.4645	0.6664
5-B	0.3174	1.6616	0.1910	0.8578
6-B	-0.0938	0.5114	-0.1834	0.8634
7-A	-0.3731	0.6608	-0.5647	0.6025
8-A	0.2085	0.9703	0.2149	0.8404
9-A	-0.7210	1.8009	-0.4003	0.7094
10-B	0.3346	0.5197	0.6438	0.5547

Table 25 Regression analysis of internal locus of control and the maching questions of the participants

## **Chapter 5 Results discussion**

This thesis, which is composed of a cross-sectional and quantitative investigation, addresses the primary study according to locus of control of the non-probabilistic specimen –which has been in total 155 contributors from the University San Francisco of Quito, and of whom 149 participants' data has been concerned and analysed– and its effects on individual motivation. Now that the research theme is apparent, the aims for the study are: one, to delineate the relationship between personal locus of control, or perceptions around daily happenings' causality, which is the dependent variable; and the academic specialty, age, gender, number of years of higher education and religion of the survey contributors who are a group of Ecuadorian undergraduates, which are autonomous variables of the study. Two, on the basis of the investigation background, to comprehend how could locus of control impact the group of university students' incentive schemes. And, three, to conclude which motivation theories addressed previously in the thesis influence the focus group of those 149 constituents' own performance.

With respect to the thesis objectives, the established hypotheses are: one, there exists a certain correlation between the group of contestants' age, gender and their number of years of university education with locus of control; two, their incentive modes are directly proportional to locus of control. And, three, the participants are more inspired by the hierarchy of needs theory of Abraham H. Maslow, equity theory, expectancy theory and Julian B. Rotter's social cognitive theory, which are formerly accepted by intellects and multitudes in the world. Accordingly, the acquired results from the research are going to be discussed within the 95.00% of significance level. In the first place, the independent variables, which are those 149 respondents' demographic information, are studied by applying the lineal regression analyses. The results demonstrate that there is no relation

between individual locus of control and the gender, age, number of years of superior education level, religion and the country or region of the longest living time. As a consequence, the neutral hypothesis of the first assumption of the thesis is that no correlation exists between people's gender, age, number of years of high education and their religion with locus of control is not denied.

In the second place, in agreement with the multiple regressions, the results analyses have indicated that the mentioned motivation theories which are hierarchy of needs theory, equity theory, expectancy theory and social cognitive theory have a notable relation with individual locus of control. Consequently, the null hypothesis of the second supposition personal motivation is directly proportional to locus of control is rejected. Regarding the neutral hypothesis of the third assumption, which is people's incentive modes are not directly associated with locus of control, there merely lives a direct ratio between individual locus of control and social cognitive theory, and it can be interpreted thru a lineal regression equation, which is:  $S w = 0.16w_{1A} + 0.39w_{2A} + 0.10w_{3B} + 0.30w_{4A} - 0.03w_{5A} - 0.18w_{6A} - 0.04w_{7B} + 0.40w_{8B} + 0.01w_{10A}$ , where  $w_{nA}$  is the weighs of the related interrogates and  $S w$  is the external locus of control score. Thus the alternative hypothesis for the third assumption of the thesis which is a proportional correlation occures between people's locus of control and their motivational behaviour is accepted as the quantitable relation between locus of control and those personal motivation theories has been covered.

## **Chapter 6 Conclusion**

In addition to an examination of the thesis topic, which is how locus of control affects individual incentive schemes, the following conclusions are offered based on a 95.00% significance level. Based on the demographic data which has been compiled, there are 149 investigation participants, who are actually studying 14 different subjects at the University San Francisco of Quito, with an age average of around 21 years old. Among the participators, 59.73% of them are female and 40.27% of them are male. In terms of locus of control, this group of research subjects is divided into 15 internal locus of control scorers, 94 intermediate locus of control persons and 40 external locus of control scorers across the scale from the first section of the survey questionnaire (See the Appendix 1).

Based upon the research data related to the three assumptions of the thesis, which were mentioned earlier, men's locus of control does not have any significant correlation with their age, career, gender, the time lived in country or region, religion and years of university education. This finding is significant, because prior informal investigation performed by Gerald L. Finch, the Management and Psychology professor at the University San Francisco of Quito, revealed a possible correlation between students' age – which relates to more education– and locus of control. It is worth pointing out that perhaps senior undergraduates do have more internal locus of control scale scores than junior university students. Because the regression model demonstrates that the correlation between locus of control and the individuals' gender is barely 4.02%, the correlation between locus of control and the contestants' age is merely 15.81%, the correlation between locus of control and the participants' academic major is approximately 5.54%, the correlation between locus of control and the determined group of people's religious belief is 4.40%, and the correlation between locus of control and the number of years of high

education of the 149 individuals is only 1.34%; additionally, there is no defined correlation between locus of control and the time men have lived in country or region. Consequently, it can be determined that there is no relation between those 149 investigation contributor's locus of control and their demographic information, for there is a non-noticeable relationship to the investigator, statistically speaking, as said above.

Besides, this investigation demonstrates that external locus of control influences personal incentive schemes as defined by equity theory, expectancy theory, hierarchy of needs theory, reinforcement theory, social cognitive theory and theory X and Y; it is worth stating that external locus of control affects individuals' motivational behaviours. For example, regarding equity theory, external locus of control scorers attribute their motivational conducts to uncontrollable external factors –such as exterior supports and environment– when their personal comparison of own inputs versus outputs with others produces any inequity. Concerning expectancy theory, due to that they do not have the ability to control external factors (circumstances), people with external locus of control decide to behave in a certain way in order to benefit themselves the most; for instance, they conduct in a certain manner which is determined by desires and rewards towards results. However, if they consider that organizational rewards are not attractive or accurate to them, they would often prefer to decrease their efforts.

In relation to Abraham H. Maslow's hierarchy of needs theory, men are motivated if their five-level desires are satisfied. Externals incline to reduce their positive motivational performance as their five-categorised needs are not satisfied. Equally, in accordance with reinforcement theory, external locus of control persons act dependently according to effects of environmental conditions. With reference to social cognitive theory, external

scorers believe that they are not proficient for a determined task owing to that extrinsic aspects are beyond their own control. Similarly, regarding to theory X and Y from Douglas McGregor, external locus of control individuals correspond to theory X more than theory Y. It is worth pointing out that they dislike work and taking responsibility, subsequently, they must be supervised to be motivated.

Congruently, a multiple variables equation has been developed through the regression pattern with the purpose of quantifying the general effects degree of locus of control on individual incentive schemes. Furthermore, the linear equation,  $S w = 0.16w_{1A} + 0.39w_{2A} + 0.10w_{3B} + 0.30w_{4A} - 0.03w_{5A} - 0.18w_{6A} - 0.04w_{7B} + 0.40w_{8B} + 0.01w_{10A}$ , has nine variables with both positive and negative slope to determinate the final external locus of control scale score. And for each value before the nine unknown numbers  $-w_n$ , it is known as the variable's gradient, which is a number that describes both the direction and the steepness of the line in the coordinated system. Jointly, in realistic terms, the equation expresses that external locus of control are quantitatively related to the previously cited personal incentive schemes theories, although its correlation is fairly inconspicuous, for its slope values are quite small.

Moreover, the previous equation can be construed in the following manner: the external locus of control score will increase 0.16 points if the weighing valour for the interrogate 1–A increases by a point, *ceteris paribus*. The external locus of control score will increase 0.39 points if the weighing value of the question 2–A increases by one point, *ceteris paribus*. The external locus of control score will increase 0.10 points if the weighing valour of the statement 3–B increases a point more, *ceteris paribus*. The external locus of control test score will increase 0.30 points if the weighing value of the interrogate 4–A increases

by one point, *ceteris paribus*. The external locus of control scale score will reduce by 0.03 points if the weighing value of the question 5–A increases by a point, *ceteris paribus*. The external locus of control score will decrease by 0.18 if the pondering value of the statement 6–A increases by one point, *ceteris paribus*. The external locus of control score will reduce by 0.04 points if the weighing value of the interrogate 7–B increases by one point, *ceteris paribus*. The external locus of control score will increase 0.40 points if the weighing of the question 8–B increases a point, *ceteris paribus*. And, finally, if the pondering of the assertion 10–A increases one point, the external locus of control scale score will increase by 0.01.

Hence, the findings in the course of the actual thesis around how locus of control affects personal motivation, within a 95.00% significance level, are: there is not any correlation between locus of control and the defined individual demographic information –which are academic speciality, age, gender, long-resided country or region, number of years of university education and religious belief– among the determined group of the research. Nevertheless, it has been suggested that there could be a relation between those 149 participants' locus of control and their age, gender and their number of years of university education. Because as students learn more, they sense that they have more control. What is more, on account of the social and cultural context, it has been assumed that Ecuadorian females inclined to be more internal than males, and Ecuadorian senior year university students tended to be internal locus of control scorers.

Additionally, the measureable model from the locus of control test conveys that external locus of control persons' scale score lineally fits with the significant regression equation, which is  $S_w = 0.16w_{1A} + 0.39w_{2A} + 0.10w_{3B} + 0.30w_{4A} - 0.03w_{5A} - 0.18w_{6A} -$



$0.04w_{7B} + 0.40w_{8B} + 0.01w_{10A}$ . It can be affirmed that this quantifiable dimension exists due to externals believe that what happens to them directly depends on extrinsic factors which are not controllable. Also, equity theory, expectancy theory, Abraham H. Maslow's hierarchy of needs theory, reinforcement theory, social cognitive theory and theory X and Y are rather associated with external factors; for instance, interpersonal comparison of input and output equity, diverse physiological needs and conducts compensation desires. Nonetheless, there is not any significant relationship between personal intermediate and internal locus of control and incentive schemes, for the statistical analyses demonstrate that the tendency is fairly neutral. That is to say that the relation between internal and intermediate locus of control and men's motivation is roughly zero.

## **Chapter 7 Recommendation**

After the whole research procedure, it is possible to offer recommendations and/or suggestions for future investigations. First, the survey should be a probabilistic one, if the possibility exists; in order to have a better and fruitful usage of the attained data for any posterior unexpected context. In addition, the investigation sample could be larger. It is worth pointing out that the researcher could extend the range of the survey participants, not only in a specific academic campus, but also in other areas of the country, for instance, in other Ecuadorian geographic regions, as long as the locus of control's macro-variables, which are cultural, economic and social factors, are controllable. Similarly, the investigator could permit more participation from the defined universe with the goal of an improved results analysis.

In accordance to the questionnaire of the survey, it would be useful if the researcher could tell the participants the time that the questionnaire will take, which is on average roughly 20 minutes for each participant in the given questionnaire, so as to coordinate the answering time range with the respondents. Furthermore, it is far better if the questionnaire could be translated into the local language; in this case the official language is Spanish; because several investigation contributors are not familiar with English. Likewise, the quantity of the questionnaire interrogates should be reduced by a wide margin despite there are solely dichotomous questions and pairs of questions for weighting. Yet, manifestly, whilst the more questions a questionnaire contains, the less patient any participators may be; and the chance of collecting false information would increase considerably. Moreover, the demographic subsection of academic specialities needs to contain all academic majors; with the aim of avoiding "Undefined" option. Or alternatively, the investigator could ask for the participants' university major in case of an undefined specialised field. What is

more, in the demographic information section, the researcher could gather the students' grade point average, or their G.P.A., for a following exploration regarding how the students' locus of control could impact their school achievements.

Also, before the survey fieldwork, it is indispensable for the researcher to perform a pilot test with the purpose of detecting any allied problem in time; and, subsequently, so as to modify the questionnaire. Also, before the investigation fieldwork, the investigator should have a codification table in hand to facilitate his or her subsequent task. In the same manner, it is an obligation for the researcher to provide the contestant a clear and tidy questionnaire as to not distort the participant; due to the motive of that any inadequate form of the questionnaire presentation to a respondent could run the risk of possessing an influenced result that has been complying. Furthermore, the investigator should adopt a suitable method to supervise a participator and not just hand out the reproduced questionnaire to a participator and let him or her to start answering.

## References

- Judge, T. A. and Robbins, S. P. (2009). Motivation concepts. *Organizational behaviour*. 13th ed. Upper Saddle River: Pearson Prentice Hall.
- Launius, M. (2004). *Locus of control scale*. Mansfield: Mansfield University.
- Marcic, D.; Seltzer, J. and Vaill, P. (2000). Work Motivation. *Organizational Behaviour: Experiences and cases*. 5th ed. Cleveland: South-Western College Publishing.
- Roddenberry, A. and Renk, K. (2010). Locus of control and self-efficacy: Potential mediators of stress, illness and utilization of health services in college students. *Child psychiatry and human development*. Vol. 41, No. 4, pp. 353 – 370.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and applied*. Vol. 80, No. 1, pp. 1 – 28.
- Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*. Storrs: University of Connecticut. Vol. 45, No. 4, pp. 489 – 493.
- Urigüen, M. (1997). Methodology. *Developing a self-evaluation process in Ecuadorian higher education: A comparative perspective*. Master's project, Lawrence: University of Kansas.
- Wiseman, D. G. and Hunt, G. (2008). Understanding motivation and motivating environments. *Best practice in motivation and management in the classroom: An integrative approach*. Springfield: Charles C Thomas Publisher, pp. 43 – 87.

## Appendices

### Appendix 1 – Survey questionnaire

Dear participant Number [0000]:

It is such a great honour to invite you to participate in the survey for an undergraduate thesis. The purpose of the survey is to collect the information about individual internal or external locus of control and also personal motivation factors. The collected data will be analysed and employed to determine how a person's locus of control affects his or her own motivation. The questionnaire below is completely voluntary and the data submitted is completely confidential. Only the researcher has the authorised access to view any compiled data. Once the results of the study are reported and/or published, you will not be identified by any personal information that could be used to infer your identity. Again, your participation is voluntary and your submitted data is strictly confidential. Now, if you agree to take part in this survey, please complete fully the following questionnaire. If you have any questions, please feel free to ask the researcher.

#### Section I – Locus of control test

Instructions: Answer the following questions the way you feel. There are no right or wrong answers. Do not take too much time answering any one question, but answer all questions. One of your concerns may be that you can answer some questions with both a “yes” and “no” answer. This is normal. If this happens, try to determine for which you answer you feel more strongly and choose only one. For example, if you are 51% in favour of “yes” and 49% in favour of “no”, mark the answer “yes”.

1. Do you believe that most problems will solve themselves if you just do not do anything about them?  
 Yes  No
2. Do you believe that you can stop yourself from catching a cold?  
 Yes  No
3. Are some people just born lucky?  
 Yes  No
4. Most of the time do you feel that success on work projects (or getting good grades at the university) is important to you?  
 Yes  No
5. Are you often blamed for things that just are not your fault?  
 Yes  No
6. Do you believe that if somebody works hard (studies hard) that he or she will be successful (do well in the course)?  
 Yes  No
7. Do you feel that most of the time it does not pay to try hard because things never turn out right anyway?  
 Yes  No
8. Do you feel that if things start out well in the morning, it is going to be a good day no

matter what you do?

Yes  No

9. Do you feel that most of time parents listen to what their children have to say?

Yes  No

10. Do you believe that wishing can make good things happen?

Yes  No

11. When you get punished, does it usually seems it is for no good reason at all?

Yes  No

12. Most of the time do you find it hard to change a friend's (mind) opinion?

Yes  No

13. Do you think that cheering, more than luck, helps a team to win?

Yes  No

14. Do you feel that it was nearly impossible to change your parent's mind about anything?

Yes  No

15. Do you believe that parents should allow children to make most of their own decision?

Yes  No

16. Do you feel that when you do something wrong there is very little you can do to make it right?

Yes  No

17. Do you believe most people are just born good at sports?

Yes  No

18. Are most of the other people your age stronger than you are?

Yes  No

19. Do you feel that one of the best ways to handle most problems is just not to think about them?

Yes  No

20. Do you feel you have a lot of choice in deciding who your friends are?

Yes  No

21. If you find a four-leaf clover (or other good luck charm), do you believe it might bring you good luck?

Yes  No

22. Do you often feel that whether or not you do your homework have much to do with what kind of grades you get?

Yes  No

23. Do you feel that when a person is angry at you that there is very little you can do to stop him or her?

Yes  No

24. Have you ever had and used a good luck charm?  
 Yes  No
25. Do you believe that whether or not people like you depends on the way how you act?  
 Yes  No
26. Do your parents usually help you if you ask them to?  
 Yes  No
27. Have you felt that when people were angry with you it was usually for no reason at all?  
 Yes  No
28. Most of the time do you feel that you can change what might happen tomorrow by what you do today?  
 Yes  No
29. Do you believe that when bad things are going to happen, they are just going to happen no matter what you try to do to stop them?  
 Yes  No
30. Do you think people can get their own way if they just keep trying?  
 Yes  No
31. Most of the time do you find it useless to try to get your own way at home?  
 Yes  No
32. Do you feel that good things happen because of hard work?  
 Yes  No
33. Do you feel that when someone wants to be your enemy there is little you can do to change matters?  
 Yes  No
34. Do you feel that it is easy to get friends to do what you want them to do?  
 Yes  No
35. Do you usually feel that you have little to say about what you get to eat at home?  
 Yes  No
36. Do you feel that when someone does not like you there is little you can do about it?  
 Yes  No
37. Do you usually feel that it was almost useless to try in school or university because most other students were just plain smarter than you were?  
 Yes  No
38. Are you the kind of person who believes that planning ahead makes things turn out better?  
 Yes  No
39. Most of the time do you feel that you have little to say about what your family decides to do?

- Yes
   
  No  
 40. Do you think it is better to be smart than to be lucky?  
 Yes
   
  No

### Section II – Motivation questionnaire

Instructions: Respond to the following questions based on the way you feel. There are no correct or incorrect weightings for the sets of questions. Record the weighting you assign to each of the two letters, A and B, in the space provided. The two numbers you assign to the corresponding sets of questions should total ten points.

- 1–A. You feel that sufficient (and/or additional) resources and/or tools, for example practical infrastructures, technical systems and so forth, at the university help you to get good grades at the university. \_\_\_\_\_
- 1–B. You perceive that your individual effort has a direct correlation with your academic achievement – getting good grades at the university. \_\_\_\_\_
- 10
- 2–A. Your instructors' expectation and understanding towards you gives you academic successes. \_\_\_\_\_
- 2–B. Your physical condition or health has a direct correlation with your accomplishments in academic activities. \_\_\_\_\_
- 10
- 3–A. You believe that working hard on academic activities will pay off. \_\_\_\_\_
- 3–B. You feel that working hard is futile, for your efforts only bring disappointment. \_\_\_\_\_
- 10
- 4–A. Being dealt with in a fair way stimulates you to perform better in academic affairs. \_\_\_\_\_
- 4–B. You are inspired by attaining good academic results. \_\_\_\_\_
- 10
- 5–A. A harmonious family and/or class environment has a positive influence on you in relation to getting good grades at the university. \_\_\_\_\_
- 5–B. You think that challenging academic activities enthuse you. \_\_\_\_\_
- 10
- 6–A. Being motivated depends on the academic activities being relatively easy at first and more difficult later. \_\_\_\_\_
- 6–B. Whether you are motived chiefly depends on the difficulty of academic activities. \_\_\_\_\_
- 10
- 7–A. You are likely to continue (or spend more time on) working at a task that \_\_\_\_\_



you have succeeded in before. \_\_\_\_\_

7–B. You are likely to stop working (or spend less time) on the successful task and move on to a different one for a new challenge. \_\_\_\_\_

10

8–A. You are capable of performing your academic activities. \_\_\_\_\_

8–B. Your instructors and peer students are proficient at helping you with your learning process. \_\_\_\_\_

10

9–A. You would achieve better results with regard to academic activities if your efforts were more. \_\_\_\_\_

9–B. You would achieve better outcomes in academic activities if you had more luck. \_\_\_\_\_

10

10–A. You are naturally lazy, dislike work and taking responsibilities; you must be forced to do academic activities. \_\_\_\_\_

10–B. You are the kind of person who would like to do academic activities and take accountability so as to facilitate your learning progress, experience and attainment of good grades at the university. \_\_\_\_\_

10

### Section III – Participant's basic information

Name and surname \_\_\_\_\_

Personal contact

E-mail Address \_\_\_\_\_

Mobile phone number \_\_\_\_\_

Gender

Female

Male

Age (in years) \_\_\_\_\_

Academic major

Agricultural Sciences

Anthropology

Architecture and Environmental Design

Art and Design

Biological Sciences

Business and Economics

Chemistry

Communications

Computer Science

Culture and Society

Engineering

Environmental Studies and Sciences

Health and Physical Education

History

Humanities

Languages and Literature

Mathematics

- 
- Media or Film and Television
  - Performing Arts
  - Philosophy
  - Physical Sciences
  - Physics
  - Political Science
  - Psychology
  - Sociology and Social Sciences
  - Teacher Education
  - Undeclared

Religion (How would you describe yourself)

- Agnostic
- Atheist
- Moderately
- Religious
- Very religious

Number of years of university education (in years)

Country or region in which you have lived the longest

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## Appendix 2 – Locus of control scale scoring key

The scoring key is reproduced below. Score your answers from the above test using the key below. Give yourself one point each time your answer agrees with the keyed answer below. Your total score is the total number of agreements between your answers and the ones on the key.

1 .	Yes	9 .	No	17 .	Yes	25 .	No	33 .	Yes
2 .	No	10 .	Yes	18 .	Yes	26 .	No	34 .	No
3 .	Yes	11 .	Yes	19 .	Yes	27 .	Yes	35 .	Yes
4 .	No	12 .	Yes	20 .	No	28 .	No	36 .	Yes
5 .	Yes	13 .	No	21 .	Yes	29 .	Yes	37 .	Yes
6 .	No	14 .	Yes	22 .	No	30 .	No	38 .	No
7 .	Yes	15 .	No	23 .	Yes	31 .	Yes	39 .	Yes
8 .	Yes	16 .	Yes	24 .	Yes	32 .	No	40 .	No



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Section II																			
1-A	1-B	2-A	2-B	3-A	3-B	4-A	4-B	5-A	5-B	6-A	6-B	7-A	7-B	8-A	8-B	9-A	9-B	10-A	10-B
3	7	5	5	6	4	7	3	5	5	7	3	7	7	3	8	2	3	7	
3	7	7	3	10	0	4	6	6	4	8	2	6	4	8	2	10	0	2	8
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Gender	Age (in years)	Academic major	Religion	Number of years of university education (in years)	Country or region in which have lived the longest
Male	22	Business and Economics	3	4	Ecuador
Female	21	Business and Economics	3	4	Ecuador
Female	19	Engineering	5	1	Ecuador
Female	19	Political Science	3	2	Ecuador
Female	23	Psychology	1	4	Ecuador
Female	24	Business and Economics	5	3	Ecuador
Female	22	Undeclared (Gastronomy and Hospitality)	4	5	Ecuador
Male	22	Engineering	4	4	Ecuador
Male	21	Engineering	4	4	Ecuador
Male	22	Engineering	4	4	Ecuador
Female	24	Architecture and Environmental Design	3	3	Ecuador
Male	26	Biological Sciences	1	7	Ecuador
Female	21	Undeclared (Gastronomy and Hospitality)	4	3	Ecuador
Female	22	Health and Physical Education	4	5	Ecuador
Male	23	Art and Design	1	3	Ecuador
Male	21	Architecture and Environmental Design	2	3	Ecuador
Male	21	Business and Economics	3	4	Ecuador
Female	18	Psychology	1	1	Ecuador
Male	18	Engineering	3	1	Ecuador
Male	20	Biological Sciences	2	3	Ecuador
Male	24	Engineering	3	2	Ecuador
Female	20	Communications	3	3	Ecuador
Female	20	Communications	3	2	Ecuador
Female	18	Political Science	1	1	Ecuador
Female	19	Health and Physical Education	3	1	Ecuador
Female	22	Communications	3	4	Ecuador
Female	21	Health and Physical Education	1	3	Ecuador
Male	20	Political Science	4	3	Ecuador
Female	20	Sociology and Social Sciences	4	2	Ecuador
Male	21	Political Science	4	3	Ecuador
Female	22	Architecture and Environmental Design	4	4	Ecuador
Male	23	Architecture and Environmental Design	2	4	Ecuador
Female	22	Architecture and Environmental Design	4	4	Ecuador
Male	19	Engineering	3	1	Ecuador
Female	19	Engineering	3	1	Ecuador
Female	18	Engineering	2	1	Ecuador
Female	19	Political Science	3	1	Ecuador
Male	29	Political Science	3	5	Ecuador
Female	21	Teacher Education	4	3	Ecuador
Female	22	Communications	4	5	Ecuador
Female	21	Health and Physical Education	3	3	Ecuador
Female	19	Biological Sciences	4	1	Ecuador
Female	19	Sociology and Social Sciences	4	1	Ecuador
Female	18	Biological Sciences	4	1	Ecuador
Female	22	Political Science	3	4	Ecuador
Female	19	Business and Economics	4	1	Ecuador
Male	21	Business and Economics	4	4	Ecuador
Male	20	Political Science	4	3	Ecuador
Female	20	Political Science	3	4	Ecuador
Female	19	Health and Physical Education	3	2	Ecuador
Female	18	Undeclared (Gastronomy and Hospitality)	3	2	Ecuador
Female	20	Undeclared (Gastronomy and Hospitality)	1	2	Ecuador
Male	21	Undeclared (Gastronomy and Hospitality)	1	2	Ecuador
Male	20	Business and Economics	2	2	Ecuador
Female	21	Communications	4	3	Ecuador
Female	21	Art and Design	1	3	Ecuador
Male	20	Performing Arts	2	2	Ecuador
Female	19	Engineering	1	1	Ecuador
Female	18	Engineering	2	1	Ecuador
Male	17	Engineering	4	1	Ecuador
Male	18	Health and Physical Education	4	1	Ecuador
Male	20	Communications	1	3	Ecuador
Female	23	Art and Design	3	3	Ecuador
Female	18	Political Science	1	1	Ecuador
Male	18	Business and Economics	3	1	Ecuador
Male	23	Performing Arts	3	3	Ecuador
Female	18	Health and Physical Education	5	1	Ecuador
Female	19	Health and Physical Education	4	2	Ecuador
Male	19	Business and Economics	3	4	Ecuador
Female	20	Psychology	3	3	Ecuador
Male	21	Political Science	4	3	Ecuador
Male	18	Architecture and Environmental Design	3	1	Ecuador
Male	18	Architecture and Environmental Design	2	1	Ecuador
Male	23	Business and Economics	3	4	Ecuador
Male	23	Political Science	3	4	Ecuador



Female	19	Engineering	4	1	Ecuador
Male	18	Health and Physical Education	2	1	Ecuador
Female	18	Health and Physical Education	4	1	Ecuador
Female	18	Undeclared (Gastronomy and Hospitality)	1	1	Ecuador
Male	19	Architecture and Environmental Design	4	1	Ecuador
Male	22	Business and Economics	4	4	Ecuador
Male	21	Business and Economics	3	4	Ecuador
Male	21	Business and Economics	4	4	Ecuador
Female	19	Biological Sciences	4	2	Ecuador
Female	19	Health and Physical Education	3	1	Ecuador
Male	24	Engineering	4	5	Ecuador
Female	18	Biological Sciences	3	4	Ecuador
Female	20	Biological Sciences	4	1	Ecuador
Female	20	Performing Arts	2	2	Ecuador
Female	17	Political Science	3	1	Ecuador
Male	21	Health and Physical Education	1	2	Ecuador
Male	19	Architecture and Environmental Design	3	2	Ecuador
Male	19	Architecture and Environmental Design	3	2	Ecuador
Male	18	Health and Physical Education	4	1	Ecuador
Male	23	Physics	4	5	Ecuador
Female	22	Art and Design	3	2	Ecuador
Male	24	Performing Arts	1	4	Ecuador
Male	21	Engineering	3	4	Ecuador
Male	19	Engineering	4	1	Ecuador
Female	18	Biological Sciences	4	1	Ecuador
Female	18	Biological Sciences	5	1	Ecuador
Female	23	Teacher Education	4	4	Ecuador
Female	20	Teacher Education	5	4	Ecuador
Female	19	Teacher Education	4	1	Ecuador
Female	21	Teacher Education	4	3	Ecuador
Female	19	Teacher Education	5	2	Ecuador
Female	22	Teacher Education	1	3	Ecuador
Female	21	Teacher Education	3	3	Ecuador
Female	22	Teacher Education	4	4	Ecuador
Female	27	Teacher Education	4	3	Ecuador
Female	21	Psychology	3	4	Ecuador
Male	28	Performing Arts	3	6	Ecuador
Female	21	Psychology	4	3	Ecuador
Female	23	Teacher Education	2	4	Ecuador
Female	23	Teacher Education	5	4	Ecuador
Female	21	Teacher Education	3	4	Ecuador
Female	23	Teacher Education	1	3	Ecuador
Male	18	Biological Sciences	3	1	Ecuador
Female	20	Business and Economics	3	2	Ecuador
Female	20	Communications	4	3	Ecuador
Female	20	Communications	3	3	Ecuador
Female	22	Engineering	4	5	Ecuador
Male	24	Business and Economics	3	4	Ecuador
Male	19	Engineering	4	1	Ecuador
Female	22	Teacher Education	4	2	Ecuador
Female	57	Teacher Education	3	2	Ecuador
Female	19	Teacher Education	4	1	Ecuador
Female	20	Teacher Education	2	2	Ecuador
Female	19	Teacher Education	1	1	Ecuador
Female	18	Teacher Education	4	1	Ecuador
Female	18	Teacher Education	4	1	Ecuador
Female	19	Teacher Education	4	1	Ecuador
Female	22	Psychology	3	4	Ecuador
Female	21	Teacher Education	1	2	Ecuador
Female	22	Teacher Education	3	4	Ecuador
Male	21	Engineering	2	3	Ecuador
Male	24	Communications	3	4	Ecuador
Male	24	Performing Arts	4	4	Ecuador
Male	22	Engineering	3	4	Ecuador
Female	20	Teacher Education	4	4	Ecuador
Female	20	Teacher Education	5	1	Ecuador
Female	19	Teacher Education	4	4	Ecuador
Female	18	Teacher Education	4	4	Ecuador
Male	19	Business and Economics	4	2	Ecuador
Male	22	Business and Economics	2	3	Ecuador
Male	21	Business and Economics	1	2	Ecuador
Male	20	Engineering	1	2	Ecuador
Male	18	Business and Economics	4	1	Ecuador
Male	19	Biological Sciences	2	2	Ecuador

#### Appendix 4 – Survey population data requirement

Sra. Paula Córdova  
Decana de Procesos  
Comité de la Ética  
Universidad San Francisco de Quito  
Distrito Metropolitano de Quito  
25 de febrero de 2014  
Presente. –

#### SOLICITUD DE INFORMACIÓN

De mis consideraciones:

Yo, **Daojun Zhang**, con el código del estudiante 00105241 y C.I. 175010133-7, estoy realizando la tesis de pregrado para la obtención del título en Lic. Administración de Empresas en mayo del año en curso. Por motivo de investigación, al realizar las encuestas, yo personalmente necesito determinar el número de la población de la investigación, que es el número total de alumnos que se encuentren actualmente estudiando en la Universidad San Francisco de Quito. Consiguientemente, le pido el favor de facilitarme dicho proceso. Si se requiere cualquier otra información, favor de comunicarse conmigo a través del contacto indicado abajo en momento dado.

Con la atención brindada al presente, anticipo mis agradecimientos.

Atentamente,

Daojun Zhang  
Estudiante del Colegio de Administración para el Desarrollo  
Universidad San Francisco de Quito  
Correo electrónico: daojun.zhang@estud.usfq.edu.ec / ddarrenzhang@live.com  
Teléfono móvil: (593-0)939224157