"Minimising Clients' Surprise"
Case Study: The Lofos Edison

By

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I would like to thank my tutors at University College London, and especially Stephen Pryke who supervised my research. His support patience guidance, and advices were essential in the development and completion of my subject.

Abstract

The first goal of every firm is to achieve the satisfaction of its clients and through this to increase their reputation in the market that results a larger share of the total market sales. Construction is a services industry (Winch 1999). Services output usually is not physical and therefore the need to achieve this reputation is far greater for every firm operating in the services sector compared to product industries. This paper is trying to present and justify a very important theory that Winch developed in 1998. The key concept of this theory is the minimisation of clients' surprise in a construction project that results the satisfaction of the final buyer of the construction output identifies the reasons that cause the existence of this phenomenon and its effects. At the same time in a later stage with a very successful case study that is the "Lofos Edison Project" shows how a consortium of contractors of the most reputable Greek companies deal with this phenomenon and at the same manage to satisfy their clients.

The analysis examines in a descriptive and at same time practical format that the theoretical principles of the examined theory, finds application in this particular project and at the same time identifies its validity. Finally it proves that if a company decide to apply the theoretical principles in a project contributes to its success.

1.1.Key words: Minimisation of Client's Surprise, Client Satisfaction, Moral Hazard, Information, Briefing Problem.

Word Count: 10,992

Chapter 1 – Introduction

This paper deals with the concept of the minimisation of the clients' surprise and will be based on a case study "The Lofos Edison Project". It comprises six different chapters. This first introductory chapter will make a short overview of what follows. The introduction will summarise the issues raised in this dissertation. The second, contextual chapter will focus on analysing the Greek construction market. This is necessary due to the fact that the analysis of a case study requires the awareness of the environment in which the company is operating. Chapter two will be divided into two different time periods. The first will deal analysing the last few years situation that is the pre Olympic era, and the second the current post Olympic era. Chapter three will deal with the analysis of the theoretical background of the project. In this chapter a detailed and in depth research of the methods that can contribute to minimise the surprise of the clients and the reasons that can cause it. It will identify the concepts of moral hazard, the project information flow between the parties that are involved in the construction of a project, and the concept of the gap analysis approach. Also it will deal with the briefing problem and the reasons that are associated with it and at the same time the measures that can solve it. All these are some of the steps that Graham Winch as identified in its theory concerning the minimisation of the client's surprise. Chapter four will analyse the research methods that will be used. Eleven interviews will be conducted, ten with some

buyers of the property and one with a company's executive. These are necessary so as to identify the application of the theory in the actual business environment. Chapter five will analytically describe a case study ("The Lofos Edison project) that will make the reader more aware of its characteristics and features. Chapter six will deal with the findings of the research as will include the results of the interviews and a comparison of all findings of both types of interviews that will contribute to evaluate the overall performance of the project. Finally the project will finish with the summary and conclusion chapter (seven) based on the findings of the previous chapters and the analysis of the market. It will give a clear image of what a company can do in its effort to satisfy its clients meets their expectations and minimise their surprise and which are its prospects within the contemporary Greek environment.

Chapter 2 – Contextual Chapter – Literature Review

2.1. The Market Structure

This chapter will present the Greek Construction and property development Market. In order to simplify for the reader the analysis and enrich its knowledge about the Greek market situation it is necessary to mention how the largest and most successful firms usually operate. In most of the cases construction firms belong to larger group of companies that deal with most of the property related transactions. At the same time the construction divisions bring to their holdings the largest portion of the turnovers and profits. For the same reason Table 1 presents the 6 most successful companies in the Greek construction industry that together form the 71.30 % of the total share of the Greek construction output.

Table 1 Construction: Competitive position Market Share (Greek Market)

Rank	Company	Market Share (Turnover) 2003
1	Aktor	23.30 %
2	J & P - Avax	13.60 %
3	Gek	10.70 %
4	Aegek	9.60 %
5	Mohlos	8.60 %
6	Pantechniki	5.50 %
	Total	71.30%

Source: Based on www.terna.gr

2.2.The Market Environment

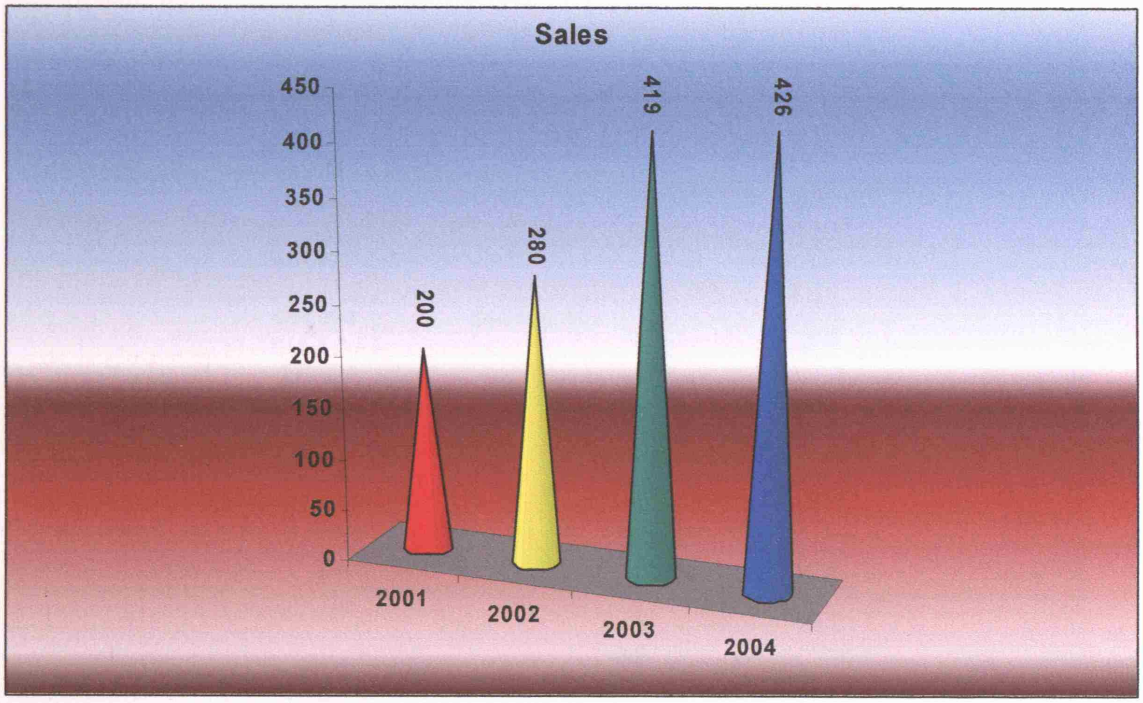
The Greek market place has been through two main phases the last few years due to the latest Olympic Games organised in Athens. In the effort to examine this market place there will analyse the market while the project started November 2001 and the 1st of July of 2004 delivered to the Organising Committee for the Olympic Games. At the same time there will shortly analyse of the current market situation of the first quarter of 2005. The reason that required to do a separate analysis of the two periods is the huge differences in the construction market place between the preparatory for the Olympics period and the post Olympics period.

2.2.1.The Pre Olympic Era

It is normal that the countries that undertake the responsibility to organise Olympic Games to observe in the preparatory period a construction "boom" and therefore the prosperity of the construction firms. This phenomenon is due to the high demand for expensive public construction project also appeared in Greece the last years. From the begging of 2001 until the end of 2004 construction firms observed prosperity in their in their operations and financial figures. An obvious example of this rule is GEK Group. The group is active in all kind of projects and GEK is a large company offering a wide range of services that include the construction sector, the energy production sector, the

real estate development sector, the industrial sector and the B.O.T. sector. According to the statistics found in the company's web site the group observed a huge increase in its figures from 2001 to 2004. Turnovers (before taxes) increased from about 200 million euros in 2001 to about 426 million euros in 2004 that is more than 100% increase.

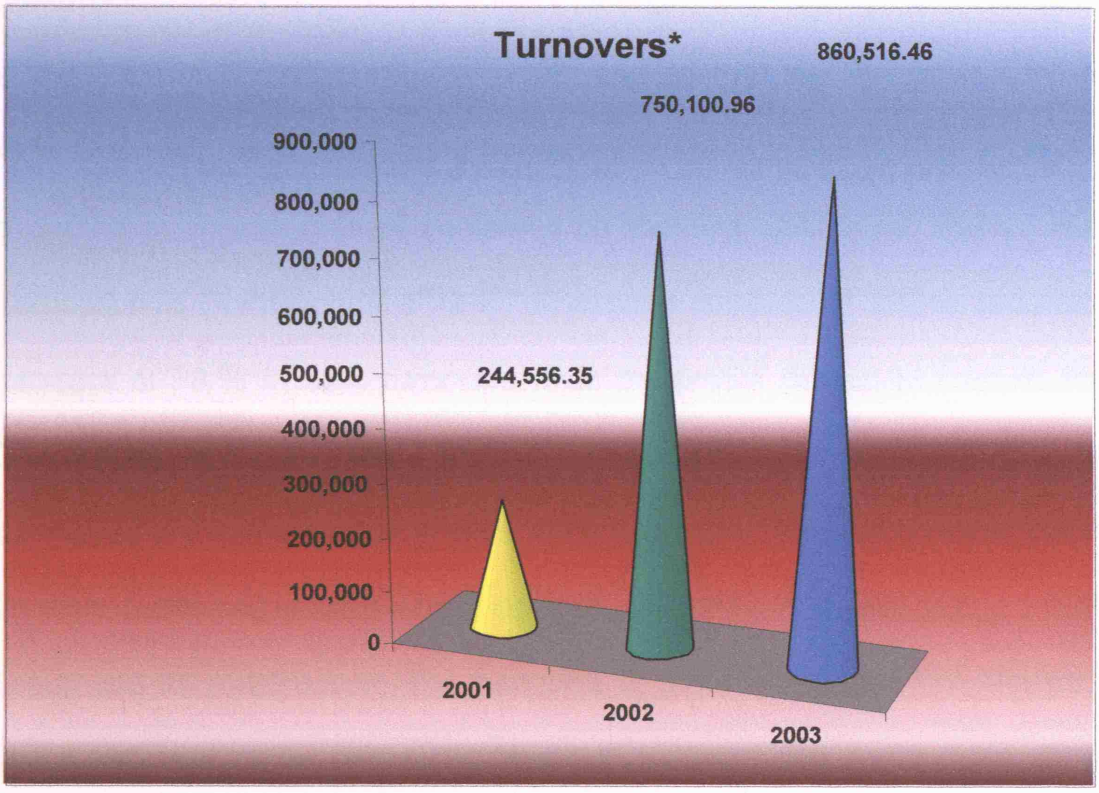
Chart 3.1: Gek's Turnovers 2001 – 2003



*Consolidated data, in million euros Source www.gek.gr

The same trend characterised Aktor Construction Company. According to the company's web site the total turnovers more than tripled between 2001 and 2002 from 244.556,35 to 750.100,96 million euros and reached the amount of 860.516,46 million euros in 2003 (Chart 2)

Chart 3.2: Aktor's Turnovers 2001 – 2003



*In Million Euros Source www.altor.gr (9)

2.3.2.The Post Olympic Era

Today the market situation is highly diversified compared to the situation of the last few years. The largest construction firms are observing substantial decline in their key financial figures. Most of the construction firms observed a large fall in their key financial figures in the first quarter of 2005 and the situation is likely to continue the rest of the year. One of these cases is the holding company Elliniki Technodomiki Tev Group of companies that is "a powerful entrepreneurial core of project management, holdings and concessions in the fields of infrastructure, real estate and energy" and its construction firm Aktor that together constitute the largest construction group in Greece observed a decline in their turnovers compared to the first quarter of 2004. Elliniki Technodomiki (Naftemporiki 1st July) observed a decrease of 39,9% and Aktor a decrease of 38,% in their turnovers while the profits decreased from 41,96 to 30,4 million euros and from 35,65 to 23,21 million euros respectively. Both companies are quoted in the Athens Stock Exchange. The same rule applies for an other public and second largest company operating in Greece that is J P Avax Group and its construction. The turnovers of the construction firm dropped at about 28% and profits decreased from 8,5 millions in the first quarter 2004 to about 221.000 euros in the same period in the current year while at the same time the turnovers of the group declined at about 6% and profits 38,8% (Naftemporiki 1st July).

The situation is even worst for one more public company. Mohlos observed a loss in the first quarter of 2005 (Hrimatistirion 1st July). If someone compares this to 18.6 million euros profits before taxes in the first quarter of 2004 can easily how dramatic is the situation. Gek Company according to their 29th of June Press release observed large decline in the turnovers at around 33.5% in the first quarter of 2005 compared to 2004. This is due to the decreased demand for construction activity. Finally Pantechniki (Hrimatistirion 1st July) one more of the six largest construction firms observed a decline in the turnovers the first quarter of 2005 from 49,7 in 2004 to 44,16 million euros. This decrease in the turnovers of the company would be even greater if the energy sector did not perform as good as it did this year's first quartet that brought to the company revenues 10,3 million euros compared to the last year's 2,2 million euros.

The truth is that these are only some examples that visually describe a general trend that characterises the contemporary Greek construction market shown by the literature review. There is no need to further discuss how each single construction firm large or small performed but to show that this is a phenomenon that characterises generally most companies (both large and small) operating in the construction market. But the every day reality is even worst. Imagine if these so large and public companies face so many and so hard to overcome difficulties how more challenging is the situation for the small and

medium sized firms. That is the reason why a large number of them is terminating its operations in a daily basis. An everyday observation in the Greek newspapers will show that construction firms are closing down in a daily basis. (Naftemporiki 11th May, 30th May 1st June etc). This image seems to be supported also by a recent research conducted by PESEDE [(Panhellenic Union of the association of entrepreneurs for Public Construction Projects an English free translation) that represents the sector in Greece] (Naftemporiki17th June). According to this study a number, of about 7.500 small and medium sized construction firms, is estimated that the next short term period will face the danger of the lock down. This might also due to the fact that the Greek construction output reached the maturity point on the product's life cycle (Naftemporiki17th May).

Within such an environment Greek construction and property related firms in their effort to maintain their profitability are forced to find new markets so as to sell their product. Most of theme and especially the larger ones decided to expand their operations in the underdeveloped economically Balkan and Eastern European countries. This is a trend that characterises many other contemporary Greek firms that are operating in every business activity.

Terna (Hrimatistirion 1st July) (the construction division of which is Gek) undertook the responsibility to construct a 11,8 kilometres length part of the peripheral motorway between the cities of Orizari and Sarai in the Former

Yugoslavic Republic of Macedonia (FYROM) at a total budget of 48,4 million euros. At the same time (Naftemporiki 14th June) the same company won the competition of bids and is responsible to realise a rail network project between Krumovo and Parvomai in Bulgaria of a budget of 85.7 millions.

An other example of this trend is the construction of a road that would give access to the frontier of Stroumiani and Berovo between Bulgaria and FYROM awarded to Proodeftiki (Naftemporiki 1st of July). This is a project of a budget estimated in Ten million euros that is. An other project by a Greek construction firm in a Balkan country (Naftemporiki 13th June) is the so called «enhancement works for Constantza railway station», awarded to Athina A.T.E. and is about the reconstruction of the existent building of the Rail Station in Constantza Romania and the development of two new buildings for passengers and merchandises. The estimated budget of the project is 7,653,980 euros plus VAT and the maximum construction time is 36 months. Moreover J&P Avax signed a contract with the municipality of Gliwice in Poland for the construction of the project that is called «renovation post - industrial area Nowe Gliwice»(Naftemporik20th May). The estimated budget is about 13,7 million euros, and it is planed to complete within 18 months. The project is about the dismantlement and the reconstruction of four modern buildings with a total surface of 6.743 m^2 that will be used by the local university as classrooms in respect of the overall project that is to transform the old territory of the closed

Gliviche coal mine in a fully functional and modern educational and university area. It also includes the landscape gardening works that should be done for the transformation of the area the electrical and drainage works and a parking of 650 places. Finally J&P Avax undertook the reconstruction of 15.5 kilometers of the current road between Argyrokastro and Tepeleni and its transformation to motorway (Naftemporiki 26th May). The project will also include the reconstruction of two bridges of 36 and 15 meters length respectively. The total budget is 18,6 million euros and need to end within 540 days.

The literature review above demonstrates that most of the large construction firms operating in Greece are just starting to realise the reality of the contemporary Greek Market. These examples are only a small sample that is presenting the current situation, which is characterised by the trend of the Greek construction firms to enter in new Markets. All these projects are delegated the last two months. The reality is that there re many more cases that that can prove the fact that Greek construction firms are operating in the Balkan and Eastern European countries. There many conclusions that can be derived from the above very representative sample of cases. One is the fact that in these new markets Greek construction companies in most of the cases are trying to undertake the responsibility to construct public projects. This might due to their past Greek experience. It is true is that the Greek construction companies having the know-how for large public projects makes their experience valuable

asset in all these developing countries that following their recent democratisation need to renew their infrastructure. One more derived conclusion from the above mentioned cases is the fact that most all these public projects are rather small in contrast to those that most of these companies undertook in the pre Olympic era in Greece. The only exception is Gek recent projects in Bulgaria and in FYROM. This might due to the fact that the economies in Balkan and Eastern European countries are still underdeveloped and have not yet the strength to support larger projects. An other reason is the lack of influence in these new markets of the (foreign for the market) Greek companies that would allow them to undertake larger projects. Please note that due to low living standard, the corruption is very high and high government influence is very important in order a company to undertake a major public project.

2.3.Summarry

Until the mid 2004 Greek construction firms especially the larger ones in their effort to profitably operate and expand their sales based their strategy in trying to undertake as many large public projects as possible. The situation that followed the Olympic era of the reduced construction activity is highly diversified and is due to this lack of demand for new public projects. Most analysts do not seem at all optimistic about the prospects of the industry. In this so challenging situation companies are trying to find solutions in order to maintain their position

in the market and sustain their financial figures. This research also proved that the Greek construction firms need to stop relying in the Greek public sector hoping that will contribute the largest share of their companies' profitability but diversify their operation through other markets and other activities. An example of this is the Lofos Edison Project realised by R.E.D.S. This project that will analytically examine in a later chapter as a case study is so successful (180 of the 202 already sold) that the company decided to repeat the effort with a similar (but at the same time smaller project) in an area close to Lofos Edison. The new project is being planned this period and the construction is about to begin the next September. Many other construction firms are also operating development companies within their holdings. Some of these recent projects are the Designer Village designed by Themeliodomi Company, Ilida project by the Lamda Development, and the N. Filothei Village of the Copelouzos Real Estate. This kind of projects gives the opportunity to companies to change the way that the business is conducted. The Greek market has still potentials and that the companies operating in this industry need to alternate the way they perform their business. The following analysis will examine the theoretical framework that this paper is going to deal with. This is the concept of the minimisation of the clients' surprise.

Chapter 3 – Theoretical Framework

A very important aspect of every construction project that in many cases determines its success is the effectiveness of the contractor (or in our case the consortium of the contractors) in minimising the client surprise. Winch (1999) believes that the minimisation of the clients' surprise is synonymous to the project's success and that in order to achieve this there are too many parameters that one company needs to meet. The purpose of this chapter is to link the minimisation of the clients' surprise and hence the clients' satisfaction with respect of the completeness of information that is shared in a project and the reasons that cause this incompleteness of information. When it is referred in the completeness of information there is no interest in examining the flow of information between the parties that are involved in the construction of a project and most specifically the contractors, the sub – contractors and the suppliers but the exchange of information between the developer of the project and the final client of the property. This chapter deeply examines the minimisation of the clients' surprise, based on different works developed by Graham Winch (1994, 1998, 1999, 2004). This is due to the fact that he is a pioneer and perhaps the only theorist so deeply involved in design a logical sequence that included the works of many writers that a construction firm needs to follow.

3.1.The problem of Moral Hazard

The analysis will begin with the examination of the problem of Moral Hazard. This is necessary since the phenomenon can cause severe problems (problems that will described later) in every industry and most specifically the dissatisfaction of the clients. Imagine how grater become these effects in an industry like the construction where the output that "is sold to the client is not a product but a capacity to produce". Winch (1999) believes that there are only few "information – perfect markets" and that construction is not certainly one of them. He says that in the majority of the construction projects, at the time that the agreement that two parties reach, the "contract" that those parties sign concerning this particular project is "incomplete" and lacks of information. Logically it is derived that this is a management problem that the construction industry faces. This problem is called by the author as "the problem of moral hazard" and exists after the signature of the contract.

There is an entire bibliography that is dealing with the problem of moral hazard. Thurner and Kotzian (2001) say that the term moral hazard originated in an other services industry that is the insurance. The UCL's School of Public Policy states in their web site that the "Moral Hazard is the form of post-contractual opportunism that arises because actions that have efficiency consequences are not freely observable and so the person taking them may choose to pursue his or her private interests at others' expense" and arises

"when buyers cannot easily monitor the quality of the goods or services that they receive, there is a tendency for some suppliers to substitute poor quality goods or to exercise too little effort and care in providing the services." Concerning moral hazard Hart & Holmström (1986), Dutta & Radner (1993), and Salanié (1998, chapter 5) see moral hazard as "hidden action", that cannot be included or monitored and by the contractors participating in a contract. Next it will be discussed the reasons that cause the problem of moral hazard.

3.2.Reasons that cause the problem of Moral Hazard

There many reasons causing the existence of the problem of Moral Hazard. Winch (1999) raised the following points in order to explain these reasons that cause this phenomenon:

- "Suppliers have information that is critical for effective client decision making, but are not motivated to fully share that information
- Byers cannot easily monitor the quality of the goods or services received and so suppliers are tempted to substitute lower quality goods or be less than diligent in the supply of services.

- Clients find it difficult to clearly measure the relative performance of the contractually separate members of the project coalition.
- Uncertainties regarding the utility of the facility mean that the client may wish to make changes in its functionality as new information become available through the project life cycles."

The stimulus that motivated to briefly examine "the problem of moral hazard" and quote the above mentioned reasons that cause its existence is the fact that the problem itself and the reason that cause it are both closely associated with the information that is shared between the different parties that are involved in a construction project (including also the clients). Having in mind those reasons that cause "the problem of moral hazard" it can be observed how important is the flow of information between the two parties in the post contract stage.

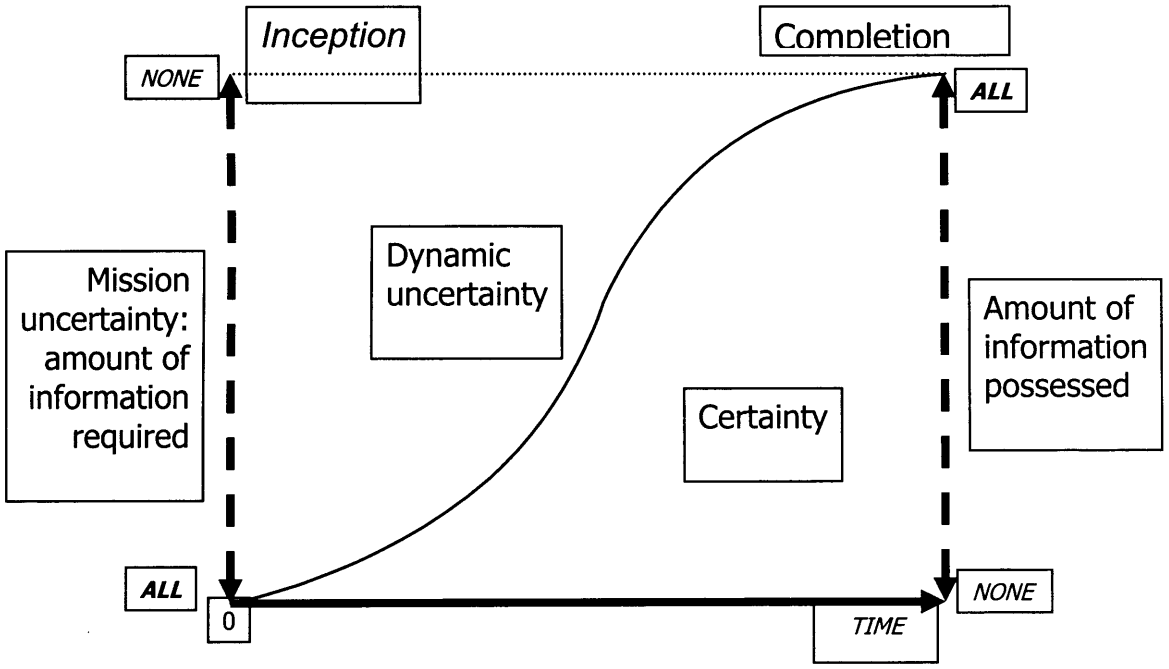
3.3.Completeness of Information

The previous paragraph proved that that the completeness and the flow of the information that is shared between the client and the constructor is crucial and determines if the construction project will managed to meet clients' expectations and needs. The next paragraphs will present the exchange of information that is shared between the developer of the project and the buyer of the property. In order to be able to do show there will be developed a short analysis of the project information flow and of the Gap Analysis Approach that will drive to a combination of the gap analysis model for total project quality that will include both the project information flow and of the Gap Analysis Approach. This is important in the effort to show exactly these reasons that can result a successful or an unsuccessful project. Next paragraph will present the reasons that cause the incomplete information that is shared between the two parties of a construction project.

3.3.1.Project Information Flow

Winch (1994) believes that the production of goods and services basically is a "flow of information". "This project information flow" (Galbraith 1978) causes to reduce uncertainty as time passes and as the project reaches its completion the level of uncertainty decreases and the level of certainty increases. This is presented nicely in the figure 5.1 of Winch et al. (1998).

Figure 5.1 The project process: the information Flow



Source: Winch et al. 1998

Figure 5.1 in a very efficient way is presenting graphically the trend that exists in construction projects, that as time passes and as the project is constructed and we move towards the end of this project, the process of the

"information flow" between the parties in construction project increases and consequently there is a fall in uncertainty and increase in certainty. This is a very important point raised by Winch et al. (1998). The authors are trying to prove that "as this information flows through time, it passes through a number of screens (Wheelwright and Clark 1992), which represent the major decision points at which the flow is narrowed and uncertainty significantly reduced." This point is crucial since it proves us that an important problem faced by the construction industry is the high level of uncertainty in the beginning of the project. At the same time proves that the continues flow of information between the parties involved in the project can reduce uncertainty at an earlier stage.

3.3.2.The Gap Analysis Approach

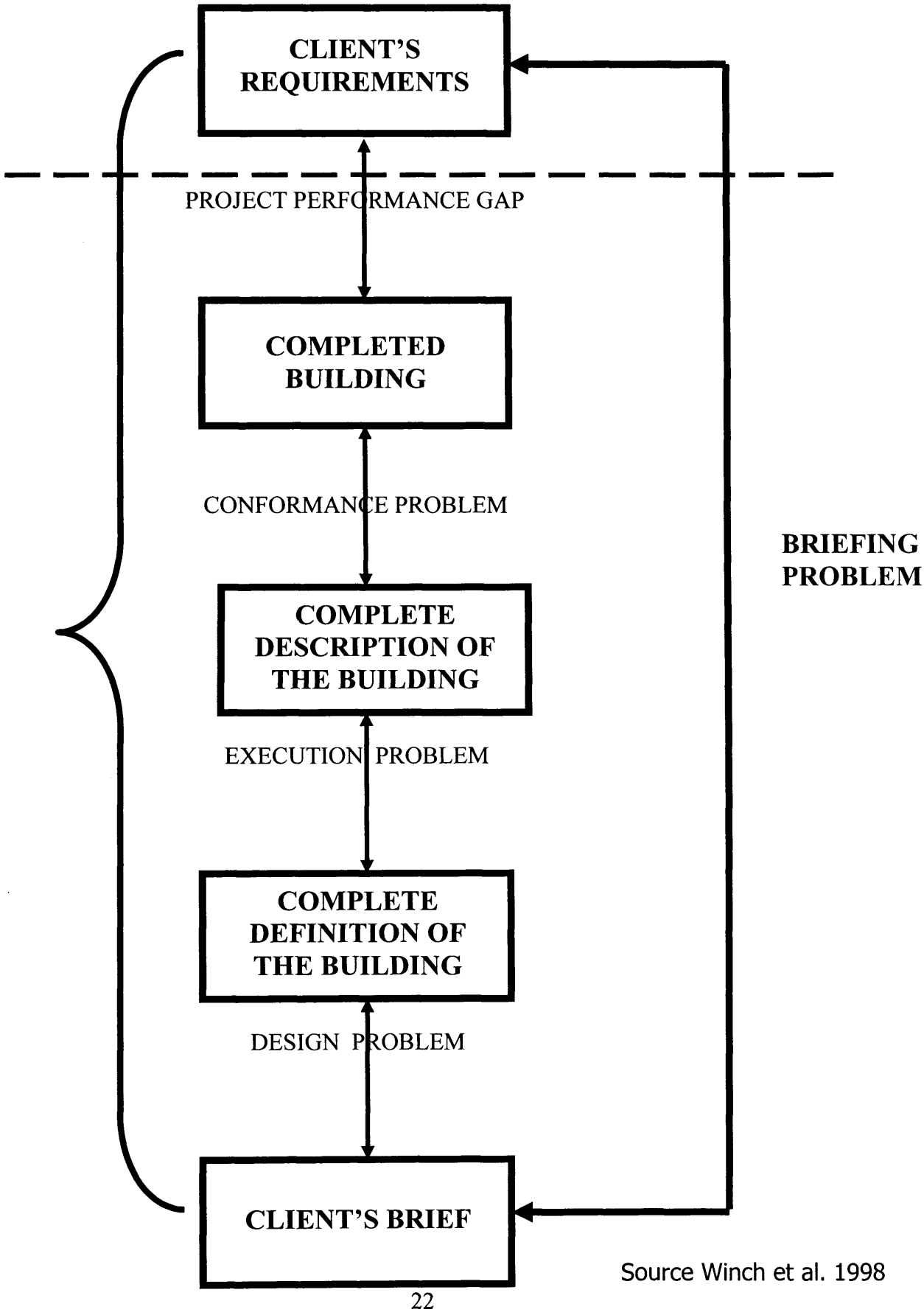
Following the project information flow the next identified problem is the difference "between the service that consumers expected that they were going to get, and their perception of what they actually got" (Winch et al. 1998) that need to minimised or even elaborated. In the construction this analysis is even more demanding since the influence of this phenomenon is even greater due to the fact that it is a service industry but at the same time its output that "is sold to the client is not a product but a capacity to produce" than none can guaranty that will succeed to produce. Due to this difference Parasuraman et al., (1985) developed the "gap analysis approach". According to this approach the

authors identified five different main gaps and in order to point out exactly these "gaps of perception ... in the delivery of consumer services in general."

3.3.3.The gap analysis model for total project quality

These "gaps of perception and having in mind that usually the probability that a construction project will not meet its customer's needs is tremendously greater compared to any product industry (and even to most service industries)made necessary the creation of "the gap analysis model for total project quality" that is analysed in this chapter. In figure 5.2 as it found in Winch et al. (1998) we can observe a useful "development" of the "gap analysis model" that includes "the model of the project as an information process" for a "project – oriented business to business (B2B)" industry that is the construction.

Figure 5.2: The Gap Analysis Approach



Source Winch et al. 1998

We can observe that there are four different "gaps" (problems), the "clients' brief", the "complete definition of the facility", the "complete description of the facility", the "completed facility" that need to fill before reaching the "clients' requirements". Those "gaps" constitute the "briefing problem" and cause the "project performance gap" and are actually the difference between what the client wanted and what he actually receives (from his point of view). According to Winch there is a positive relation between the "performance gap" and the level of "client surprise" and a negative relation between those two and the "level of client satisfaction". This is very important since it helps derive the conclusion that every construction firm needs to aim at the minimisation of the performance gap that will result in the minimisation of the surprise for the client and hence the increase of the clients' satisfaction.

3.4.The briefing problem

At this point it is discussed the briefing problem and its solution. This is due to the fact that all four "gaps" before we reach the "clients' requirements" depend on the "briefing problem", something that is presented in figure 2. Consequently the solution of the "briefing problem" would result in the minimisation of the performance gap and hence with the increased satisfaction to the client (that is has been said earlier are directly related).

In general the limited flow of information between the two parties and most specifically the information that is finally provided from contractors to clients cause the "briefing problem". This is the first (and maybe the most important) step that the two parties need to overcome and solve so as to reach an agreement that will contribute to a successful project. Ma & Chan (1998) seem also to support this view and suggest that the most important task that the project manager needs to undertake is to approach the client for a brief and ask him for some feedback. This is a useful ingredient for the authors that results in the success of the project. This is a very important point since for one more time is linked the exchange of information between the client and the contractor with the success of the project.

According to Winch (1999) the "briefing problem is the process of turning the clients' desire for a facility to into a clear brief. In other words is the process of defining the project mission ... and turning it into a brief against which

resources can be mobilised." Winch believes that the centre of the "briefing problem" is the fact that there is a long distance between the clients' perspective that is a strong will for a particular property that will meet his expectations and at the same time will meet the "technical and regulatory" restrictions. Also the designer on the one hand is not fully aware of, and many times he cannot comprehend, what are the actual requirements of the client while at the same time the client might not understand the "project mission" for him and "the range of options open to him". Moreover, due to the fact that the information might circulate in the "high levels of uncertainty" it is very possible to face the problems of "misunderstanding" between the two parties. This is a problem that needs to be solved for every construction project in order to provide the clients what they actually want and at the same time manage to deal will all the limitations and with the budget constraint.

3.4.1.Solving the Briefing Problem

This paragraph will try to analyse the measures that a construction company can take in order to face all these earlier analysed constraints in its operations. In general the solution in that kind of problems is the continual flow of information between the two parties the contractor and the client. This can achieved with continual meetings and exchange of information between the parties. In these meetings both parties will have the incentive to discuss analytically the needs and aspirations of the client and the same time their "technical and regulatory" restrictions. In Figure 3 we can observe Barrett's and Stanley's Johari Window that in a very efficient manner graphically summarises the above mentioned dilemmas and at the same time separates the different types of information of a particular project in respect of the

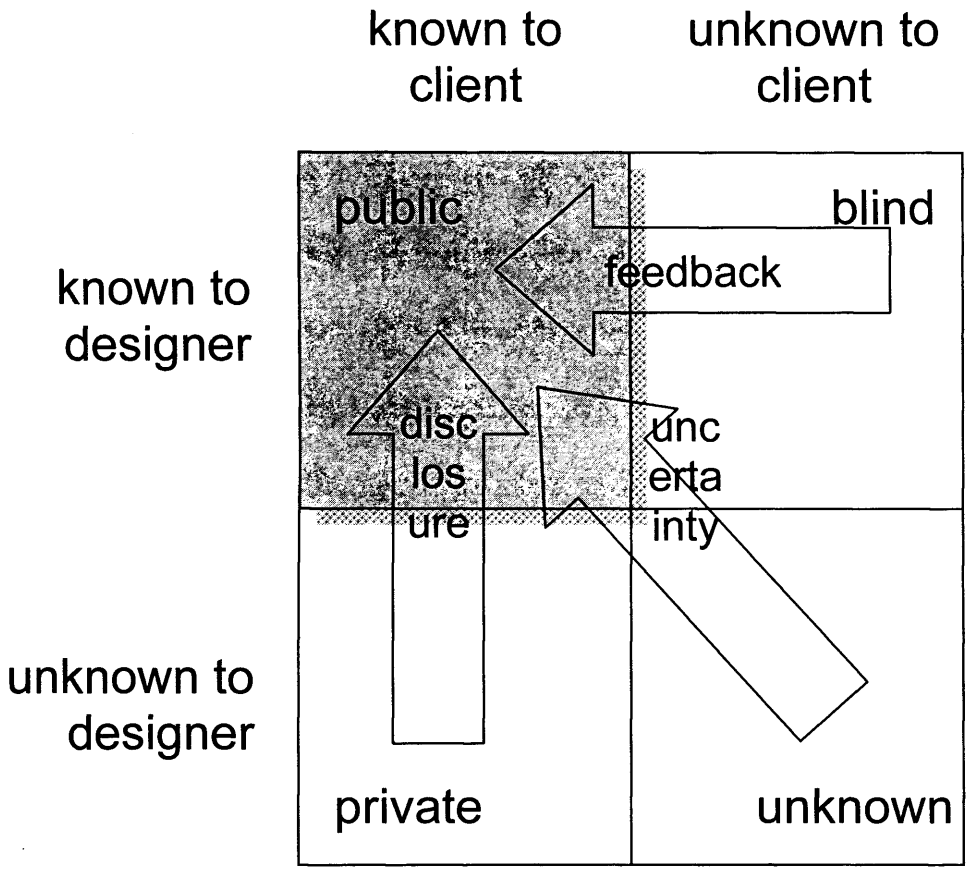
"distribution between the client and its designers or (indeed any other agents):

- public information is both available and commonly understood by both parties, i.e. it is shared and not opportunistically manipulated;
- Private information is known by the client but is communicated to, or understood by, the design team;
- Blind information is known by the design team but not communicated to, or understood by, the client

- Unknown information is not available to any of the parties – this is the zone of uncertainty"

Winch (1999)

Figure 3: The Johari Window



Source: Barrett, P. and Stanley C. 1999)

The solution of the briefing problem is the continues flow of information between the two parties. Graham Winch names that as the "disclosure and feedback" and he gives the following definition for the two terms:

- "Feedback is the process by which the design team communicates with the client regarding potential design solution, and hence shift the client from the blind to the shared state as indicated by the horizontal arrow."
- "Disclosure is the process by which the client releases information to the design team, allowing it to share in information privately held by the client, as indicated by the vertical arrow" in the Johari window

According to Winch (1999) in cases that there is "high level of mission uncertainty of the project" the processes of the feedback and the disclosure become even more demanding. This also happens and maybe at a greater degree in the case that the client is not knowledgeable of the market based on the construction industry's output. This point becomes even more important and the threats for the clients even greater in the case of the "Lofos Edison Project" due to the fact that the purchaser of the developed property is not the first occupier of the project.

Finally the diagonal arrow in the Johari Window shows the decrease in the "dynamic uncertainty" that as information is shared between the different parties. There many reason that cause the existence of the unknown information between the two parties. One more is the fact that both parties might purposefully hold information. The analysis of the reasons for the purposeful hold of information will overdue the requirements of this paper.

3.5. Summary

This chapter identified the importance of the minimising the clients' surprise is a necessary task that every construction firm needs to take into account in its operations in order to satisfy it clients. At the same time it is a demanding task that requires several steps to achieve. For this purpose the most important steps that every construction firm needs to follow in the development of a project have been identified. These are mainly based in the theory that has been developed by Winch (1994, 1998, 1999, 2004) but also expanded to other authors in the effort to examine deeply each of these steps that are identified by Winch.

In order to check the validity and application of the theory in the actual project environment eleven different interviews were conducted. The first ten with a sample of ten and one more was conducted with a company's executive. The interview questions have a logical sequence and are directly related with the

development of this chapter. The analysis of the interviews will be discussed in the following chapter.

4.Methodology

The set of interviews with the buyers was necessary since it helped identify how a sufficient sample of buyers observes the overall construction project and if the company was successful in meeting the clients' needs and minimising his surprise. On the company's side of the coin the reason that made the interview crucial is the fact that it can contribute in identifying if the measures that the company took in this project in order to minimise the clients' surprise and therefore increase his satisfaction were successful and at the same time compare these measures, with the theory examined in the previous chapter. Consequently will prove if the appropriate theory has been used in the development of this project and identify both sides' (the client and the selling company) view of how they observe their developed before during and post contract stage.

In order to simplify the analysis two questionnaires were designed giving the opportunity to the interviewer to fill in most of them with sentence - word answers of the interviewee so as to give the incentive to the author of this dissertation paper to visually present the findings of all interviews. Moreover the will contribute in showing the different way that the two parties perceive the project's facts and compare the findings of the two types of interviews in a similar way.

The first two questions of both questionnaires are trying to identify the awareness of the buyer of the fact that the property was going to be used as a media village during the Olympics. If the clients have not been informed before signing the contract of the fact that their purchased property would be accommodated before them by journalist that were covering the Olympic Games would resulted a huge surprise and a great dissatisfaction for the property that they purchased. Moreover there is no question regarding how they feel about this phenomenon, since the objective of this paper is to deal with the surprise of a client concerning a particular project and not with the reason that motivated him to buy a particular property

Questions three, four and five of both questionnaires are trying to identify a common problem in the construction industry that is examined in the first paragraph of the theoretical framework of this dissertation that is the problem of moral hazard. But let's now take them one by one.

Question three on the buyer's questionnaire is "did you notice any "hidden action" in the side of the company while the project was constructing if yes please can you name them?". The first part of the question is trying to identify if the buyer came across to any kind of "hidden action" that is according to Hart & Holmström (1986), Dutta & Radner (1993), and Salanié (1998, chapter 5) the basic reason that cause the problem of "moral hazard". Before posing this question the definition of the term provided to the interviewer. On the other

hand the second part of the question is trying to identify in the possible case that this phenomenon exists which where these "hidden action" so as to see what went wrong on the project. On the seller's questionnaire given the fact that the company provided truthful answers the third question that is "did you purposely keep any "hidden action" in your side in the post contract stage?" is trying to compare the results of the two sides and at the same time find out if the problem of moral hazard arouse in this particular project.

On the buyers questionnaire question four are "did you notice any poor quality materials in the property you have purchased that couldn't be included in the contract that you have signed" is trying to examine if the buyer has any complains about the materials used in the property that he purchased. In question five on the buyers questionnaire that is "have you been able by the contracting company to "monitor the quality of the goods or services received" and the development of the project while it was being constructed?" Rate how easy was this process" with a range of option the interviewer is trying to identify if the buyers was able to monitor the development of the construction process of the property that he purchased. This is important since according to the theory and the second point raised in the theoretical background chapter of this dissertation the quality of the goods that the project is constructed and the freedom by the buyer's side to monitor the quality of the services received are

directly linked with the problem of moral hazard and therefore the satisfaction or the dissatisfaction of the client.

At the same time in questions four the designer is asked "Have you been forced to use quality materials that haven't been the appropriate and the ones you would prefer in the project due to budget constraints" and in question five "were the buyers able to "monitor the quality of the goods or services received" and the development of the project while it was constructing? If so How?" These question are very important since it provides the incentive to learn from the company side firstly which was the quality of the materials used in the project and secondly is trying to search which was the level of the ability of the buyer to monitor the development of his property. Both are closely associated with the problem of moral hazard and at the same time compare the answers between the two parties and to prove if the buyers views are justified or not.

Question six of the buyers questionnaire that is "Did you find yourself in a situation where you wished to make changes in the functionality of the project as new information become available" through time (the project life cycles") is fallowed by an explanation of the term functionality of a project. Question six of the designer's questionnaire is "Did your buyers wish to make changes in the functionality of the project as new information became available through time (the project life cycles.) The purpose of asking these questions is to check if the buyers were about to make any alteration in the property as he

became more aware of the property that was going to receive and at the same time, to prove the examined theory in the previous chapter of this dissertation paper concerning the information flow. According to this as time passes and more information for project becomes available the level of uncertainty decreases.

Questions seven eight nine ten eleven and twelve of the buyers questionnaire and questions seven eight nine ten and eleven of the designers questionnaire are dealing with the gap analysis approach and the briefing problem of a construction project.

Question seven on the buyers questionnaire that is "have you been approached by the project manager or anyone else in the company for a project brief? Did they ask you for any feedback?" and question seven on the designer's questionnaire that is "did your project manager or anyone else from your company approach the buyers for a brief about the project?" are trying to learn from the buyer perspective and confirm the information from the designer if the company used the most appropriate according to the theory solution to the briefing problem. This is to approach the client for a clear brief that he was going to analyse his requirements, wills and perception of the property he was going to receive.

Question eight on the buyers questionnaire that is "Did you request some features from the company that faced "technical and regulatory"

restrictions?" is followed by an explanation of the term technical and regulatory" restrictions. Question eight on the designer's questionnaire is "did you have any requests from the buyers side demanding futures that faced "technical and regulatory" restrictions? If so when have they been expressed?" Both questions compare the answers of the two parties and find out whether the clients have a will for a property that the company was unable to provide them. The answers contributed to help realise if clients had requests that could not apply practically in the project. This is a very important question set for since it helped prove if the brief that between the buyers and the Lofos Edison Company was effective. This is due to the fact that a successful and effective brief can prevent such issues. Question nine of the buyer's questionnaire that is "if yes when did you express them?" is directly linked with the previous question under a range of options is trying to identify the time that these requests arose. Questions, nine ten of both questionnaires and eleven of buyers questionnaire are trying to identify how the two parties perceive and rate their communication about the project. The scope of asking this kind of questions is dubious. In the one hand it is tried to compare the answers and arrive in a conclusion of the frequency of meetings between the two parties and at the same time will help understand how the information flow between the two parties was, something that is exactly what this project is all about. More specifically those question are ten "how you would rate your communication with the company? Please choose one of the

following:" and question eleven on the buyer's questionnaire "how often did you have meetings with the construction team? Please choose one of the following:" On the company's questionnaire, question nine is "Please choose one of the following concerning how you rate the final communication with the buyers" and question ten is "How often did your construction team have had meetings with the buyers?"

Question twelve of the buyer's questionnaire that is "did the design team communicate with you regularly regarding any kind of potential problems and if so did the design team give you the expected design solution?" and question eleven of the developer's questionnaire that is "Did your design team communicate with the clients regularly regarding any kind of potential problems? How often was that?" identify if the process of feedback is used in the construction process. Even though the feedback process is controlled by the design team the question's motive was to compare the provided answers by the designer and give the incentive to evaluate better his answers in respect of whether the feedback process is used or not.

Question thirteen of the buyer's questionnaire that is "did you release information to the developer's design team, allowing it to share any information privately held by you?" is dealing with the process of disclosure. This is obvious since the question is trying to identify if the client kept any private information

concerning this particular project that this is according to Winch the definition of the "disclosure"

Question twelve of the designer's questionnaire that is "did you have any "blind information" that was known to your design team but did not communicated to the client?" that is followed by a explanation of the term "blind information" is trying to identify if the design team purposely kept unknown information from the client for its interest.

Obviously on the buyers questionnaire the purpose of the last two questions is "is there any significant negative difference between the property you expected to receive and the property you finally received?" and "please rate the level of your satisfaction for the property that you have purchased in scale one to five?" will identify how the buyer perceive the property received in respect to his expectations. Moreover is trying to identify his satisfaction for the property and also is an effort to prove Graham Winch's theory (1999) that the satisfaction of the client in a construction project depends directly with the minimisation of the client surprise.

On the designer's questionnaire the last two questions that is 13 "are you aware of the term minimisation of clients' surprise?" and 14 "Do you think you managed to minimise it in this particular project or you think that the buyers have been surprised by the property that they have received?" are trying to identify if the company is aware of this particular term and in case they are if

they were successful in minimising it. This is done so as to check if the company successfully managed a particular construction problem and if in their try to avoid this phenomenon used the appropriate theory or they based their decisions in a previous empirical knowledge and at the same time will give help monitor the effects of this theory in an actual project.

Concluding both questionnaires are divided in five sub sets of questions. The first is dealing with the Olympic use of the property the second is dealing with the problem of moral hazard, then one question is dedicated with the project's life cycles, a fourth set with the gap analysis approach and the briefing problem and finally the fifth set with the minimisation of clients' surprise all of which have been derived by the previous theoretical chapter. The next chapter will deal with the description of a case study while chapter six will analyse the findings of the interviews.

Chapter 5: Case Study – The Lofos Edison Project

For the purpose of this dissertation paper is necessary the discussion of a case study. This needs is necessary before the analysis of the findings of the interviews. This case study is "The Lofos Edison Project" This is crucial in the effort to identify if the examined theory found application in one of the largest construction companies in Greece and at the same time to prove this theory in practise. The Lofos Edison project (where in English means the Edison Hill Project) is a construction project that developed in Greece the last four years. The interesting thing that forced its analysis is the dubious role of the project. When it is mentioned of the dubious role of this project it implies the fact that the company was responsible to make the necessary transformations so as to create a property designed to be sold as private homes while at the same time to create one of the five Olympic Media Villages. A media village is a fully functional A class hotel with high quality and comfortable "hotel rooms" that would satisfy the needs and wills of Journalists that were responsible to cover the recent Olympic Games and is created for only a short period of time. The company very successfully managed to "transform" the large apartments and Maisonettes to medium sized hotel rooms for the needs of the Olympic Games.

The consortium of contractors has been consisted by some of the largest Greek companies that is the Athens Organising Committee for the Olympic Games, the Greek National Telecommunications Organisation (OTE) and the Reds Company the project is owned by Lofos Edison Company. OTE was the owner of the land and still reserves a 33% of the Lofos Edison Company. The remaining 67% belongs to R.E.D.S.. R.E.D.S. is part of the holding Elliniki Technodomiki Tev Group of Companies, the developer and the manager of the project and Aktor the constructor. Both Actor and Reds belongs to Elliniki Technodomiki Tev Group of Companies.

5.1.Description

The project is consisted by "18 types of apartments and six types of buildings" that ranging from 100 m^2 to 250 m^2. In a plot size of about 117.000 m^2 the 80 m^2 are green areas and only the rest 30.000 m^2 accommodate the residences. In the remaining area a communal park of 8500m^2 and 72 Private Use Gardens with an average size of 250m^2. Moreover for the smooth running of the estate a management office has the responsibility to maintenance the green and other communal areas. Its role is to ensure that the state's internal regulation are kept to and it clearly sets the obligations of the residences that at the same time ensures them a high standard of living, and protect their investment. The Reds

Company in its effort to maximise the satisfaction of the residents of the property offered them a large range of facilities and services that include":

- Health centre
- Under ground garages
- Pool (25m) (Picture. . .)
- Large Gardens
- Communal Park 8500m2
- 72 Private Use Gardens
- Children play area
- Restaurant
- Mini market
- Management office

In the effort to make the reader more able to visualise the image of the property and make him more aware for the developed project have been included pictures 1,2,3 as well as the floor plans of a one of the maisonettes and the plat of the area pictures 4 5 respectively.

Picture 5.1: The North West View

The consortium chose to build the project amphitheatrically on a hill "on a modern architectural sensitivity" based on the latest anti-seismic law of 2000 in a way that all properties would have a nice view of the communal garden and at the same time the surrounding mountains of Immitos Parnitha and Pendeli. Another characteristic is the high "specification functionality", with large living areas and balconies (see picture 5.6 floor plans) and the highest technology style and quality electronicomechanical systems and building materials.

Picture 5.2: The South View

Picture 3: The South East View

Figure 4.1: Facts of the Project

Location:	PALLINI
Plot Size:	116.730 m^2
GBA:	33.000 m^2
No of Apartments and Maisonettes:	202
Minimum Price	2000 Euros Per m^2
Maximum Price Per M^2	3000 Euros Per m^2
HouseFTypes:	Apartments ranging from 100 m^2. to 215 m^2
	Maisonettes ranging from 220 m^2 to 250 m^2

Source: www.lofosedison.gr

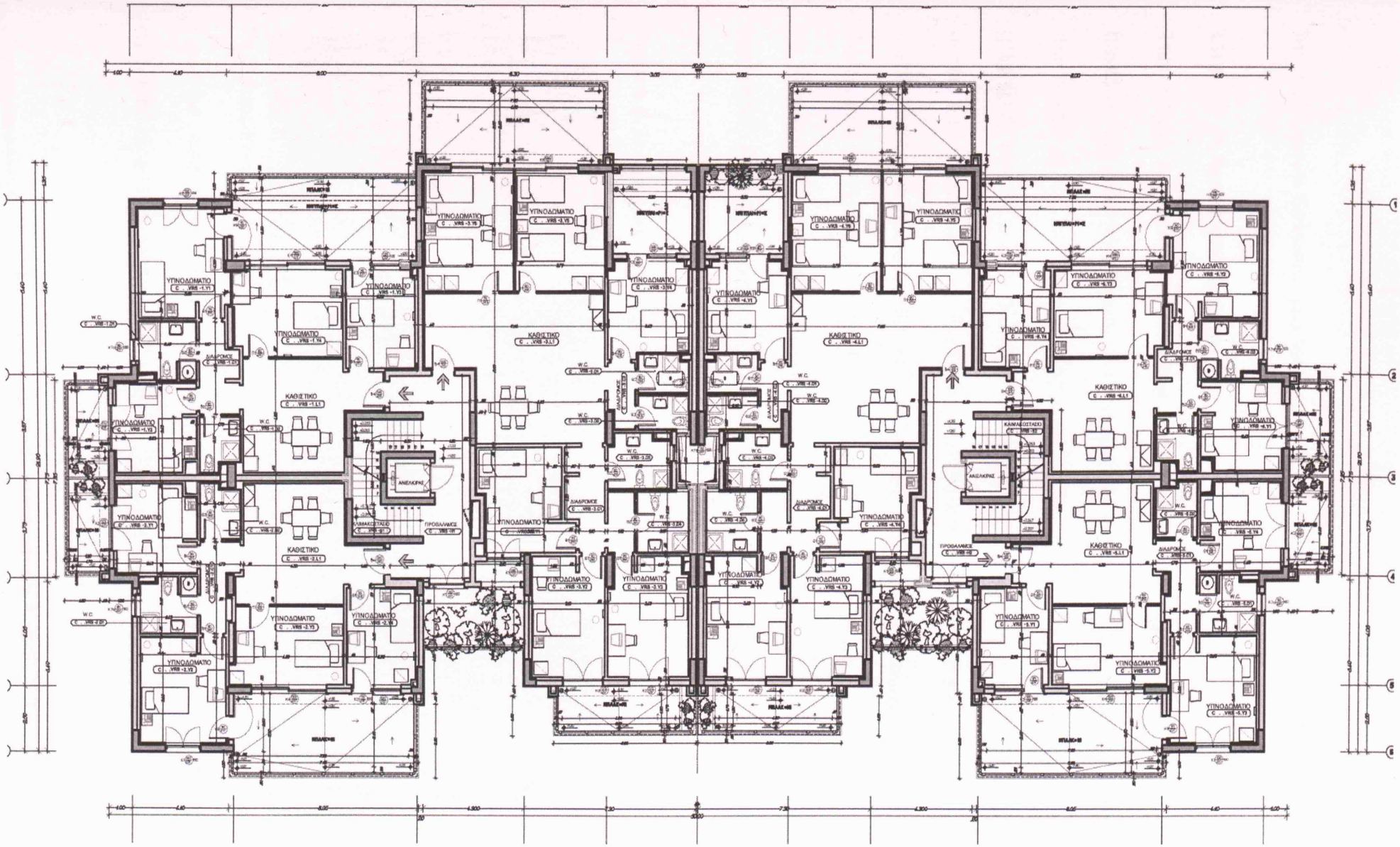
Picture 5.4: The Pool View

Also a 25 m Pool and a fully developed Health Club are some features of the property. Parking requirement can be fully meat with the designed underground garages and the specially designed outdoor areas next to the property.

In the next picture is presented the plat of the entire area of the project that includes the current view of the buildings. With green colour are presented the above mentioned large gardens of each property with an average size of 250m^2 as well the large communal park of the 8. 500 m^2 (in the lighter green colour)

Picture 4: The Green Areas

Picture 5.6: Simple Floor Plans – Central Building

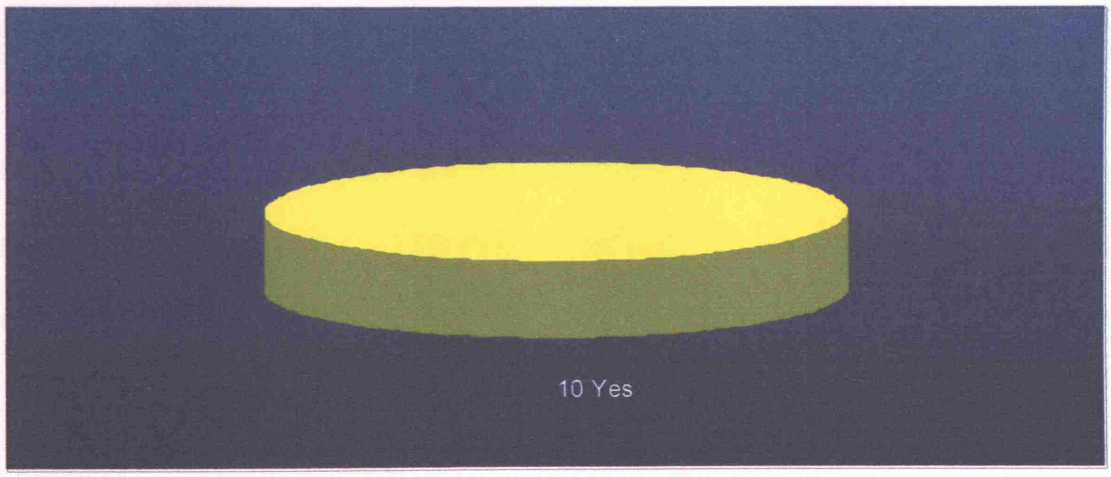


Chapter 6: Research Findings

This chapter will visually present the findings of the conducted research that is based on the interviews (found in the Appendix in the form of questioners). For the needs of this chapter the findings of the 10 interviews are presented graphically one by one in the form of pie charts followed by description of the results and comparison with the findings of the interviews with the company that are highlighted in Appendix II. The end of each sub set of questions will present the findings of the research that is related with each of these sub sets.

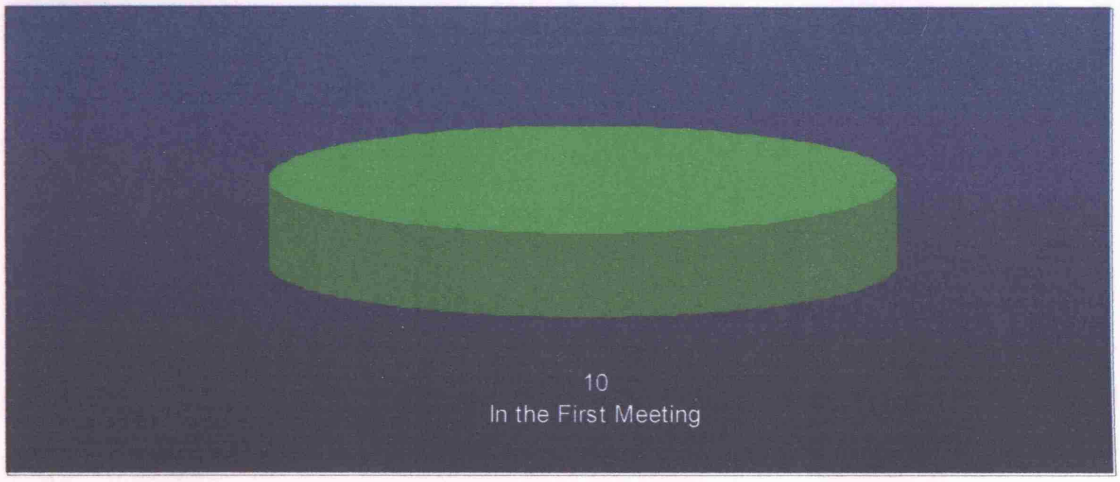
Mr Kontostanos provided the answers for the company. He is civil engineer, responsible for the planning and the construction of the project.

Figure 6.1: Responses to Question 1



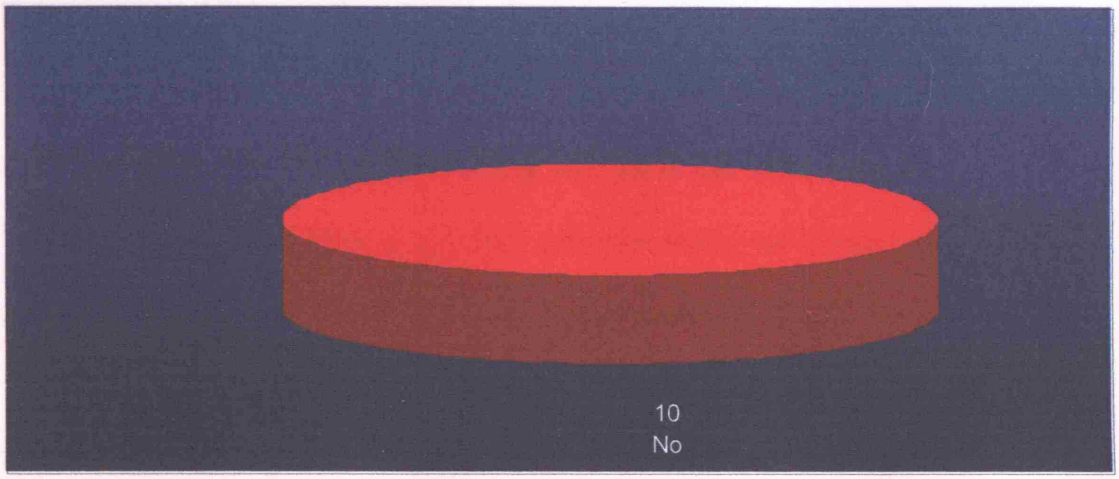
Mr Kontostanos said that all the buyers were aware of the fact that the project would be used as an Olympic venue during the Olympic Games. This view is confirmed by all the interviewed buyers of the property.

Figure 6.2: Responses to Question 2



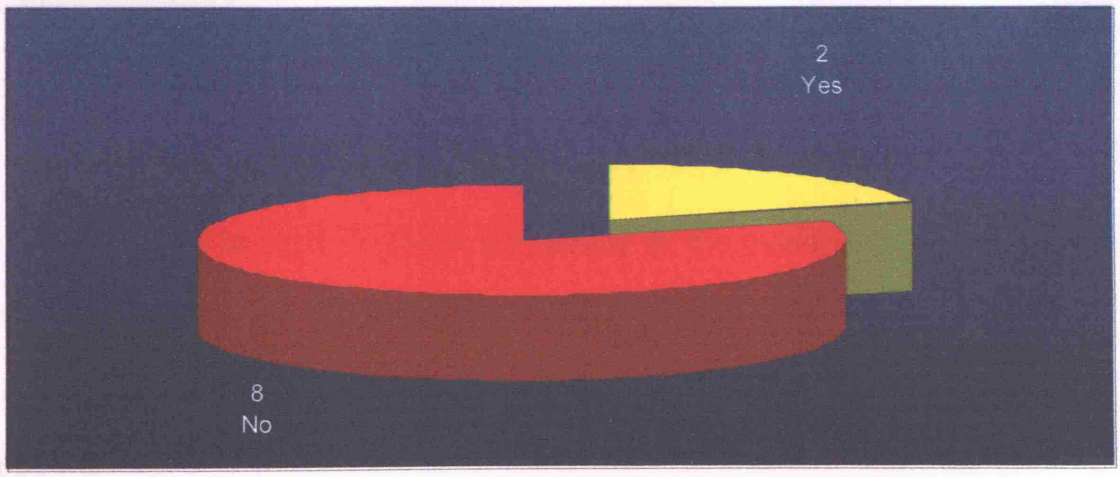
This homophony in the answers is observed in the second question. All the buyers agreed that were informed of this fact at the earliest possible stage that is during the first time that they got in touch with the company. This is also confirmed by the company. This question set proved us that the company did not try to hide from its clients one of the most negative facts of the project. This is its Olympic use which resulted that buyers weren't the first occupiers of their purchased property and consequently do not aggressively increase their surprise. As it is discussed earlier the next few questions are dealing with the problem of Moral Hazard.

Figure 6.3: Responses to Question 3



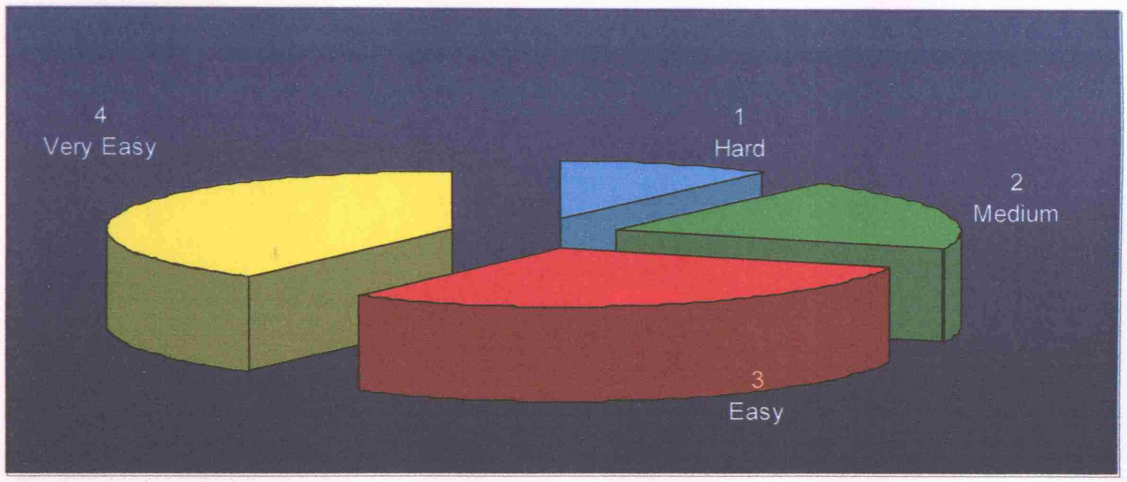
In question three all the buyers having explained them the term "hidden action" negatively replied that they haven't noticed any hidden action. From the company's side at the same time that this information is confirmed with a negative answer.

Figure 6.4: Responses to Question 4



The company also assured that they used the best possible quality materials in the construction of the project. At the same time the very sufficient 80% of our sample of the buyers verifies that the company didn't use poor quality materials and met their expectations concerning this particular part of the project. It can be assumed that the 20% unsatisfied with the materials buyers is a small figure of over – demanding buyers that their expectation could not be met.

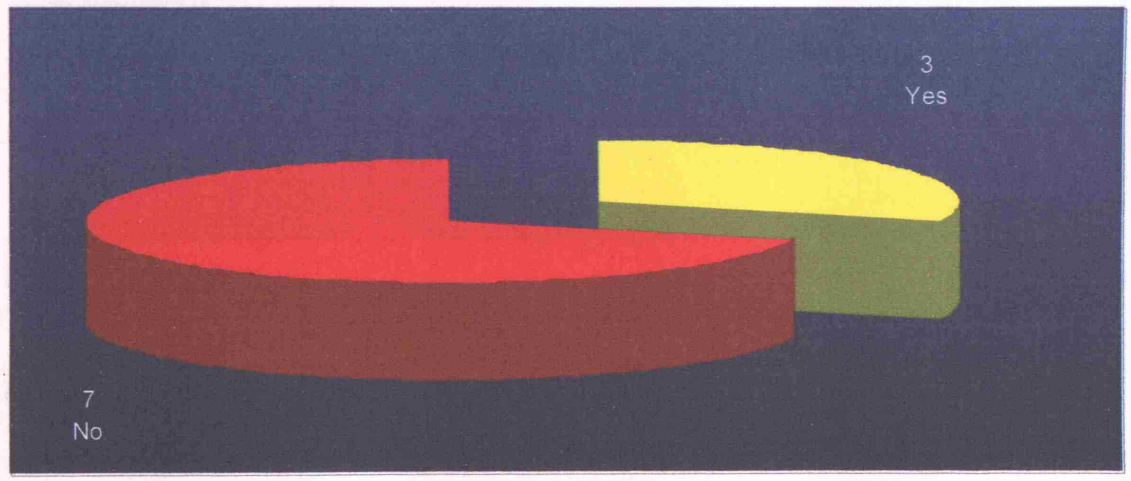
Figure 6.5: Responses to Question 5



70% of the buyers rate this process as easy or very easy, two find it medium and only one thinks that was hard. Consequently buyers were able and allowed by the contracting team to "monitor the quality of the goods or services received" and the development of the project while it was being constructed. This is also verified by Mr Kontostanos of the company who assured that this has been achieved by regular visits in the construction field and with meetings both with

the construction and design teams. Mr Kontostanos also said that the company was asking for feedback from the clients and was arranging meetings so as to discuss their views about the property on a monthly basis. This question set is dealing with the problem of moral hazard. It is observed by the provided answers of the company and confirmed by the answers of the buyers that while the project was constructing the company very effectively dealt with the problem of the moral hazard with the best possible way and according to the appropriate theory.

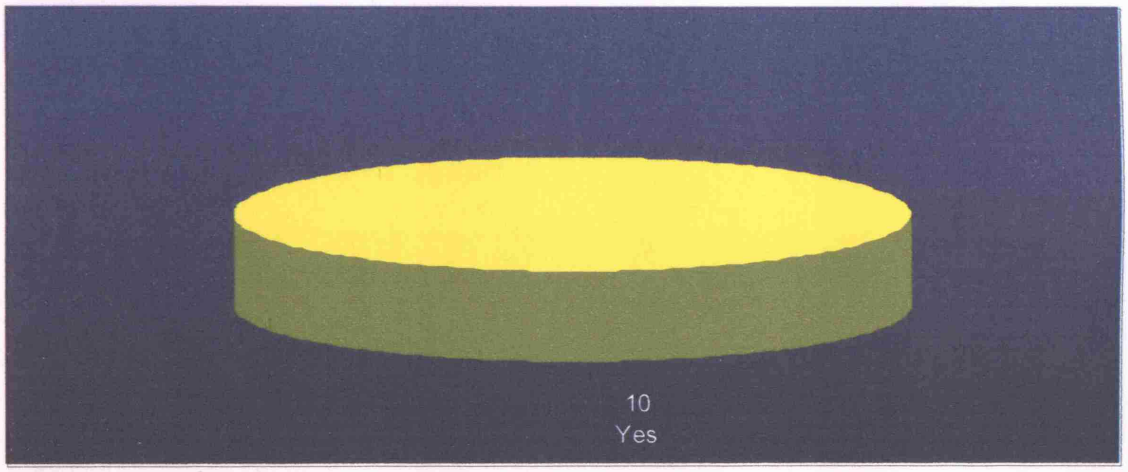
Figure 6.6: Responses to Question 6



Question six of both questionnaires deals with the project's life cycles. The provided answers show that a 70% of the buyers did not want to make changes in the project while new information was becoming available. The same negative answer provided by the company as well. It is obvious that the largest portion of

the buyers does not seem wiling to make any changes in the functionality of the property while the company says that only in a few cases faced that kind of requests. This is a very important point proving that R.E.D.S. managed to minimise new requests for the project from the very beginning and is due to the reduced uncertainty of the buyer.

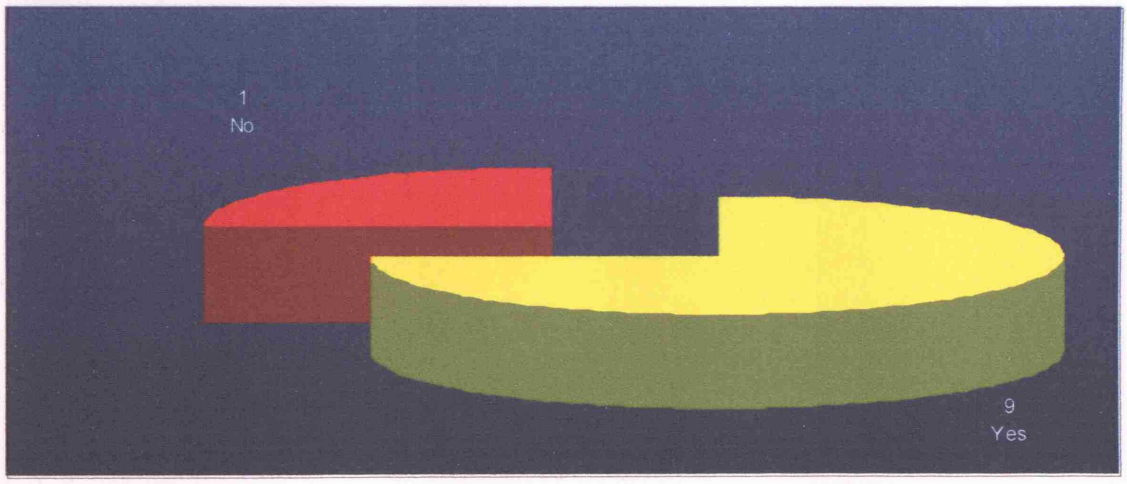
Figure 6.7: Responses to Question 7



As it shown earlier a brief is essential for the success of every construction project. All the interviewed buyers agreed that the company approached them for a brief and to discuss their wills, wants, and needs about the property. This is also confirmed by the answer provided by Mr. Kontostanos who also said that that the company and he personally were giving the brief to the clients. At the same time he made clear that they were informing the clients to a nicety about every single detail of the project. That is why they constructed a sample building

with the final look showed to potential buyers in order to present them in detail what they should expect for the property that purchased. Moreover during this brief the construction company was giving a number of options to the buyer in order to choose from, for the different facilities finally installed in the property. All these different alternatives were presenting in two specially designed show rooms that the clients were expressing their choices. At the same time the company was asking them to sign these choices so as to secure for possible alterations in their preferences.

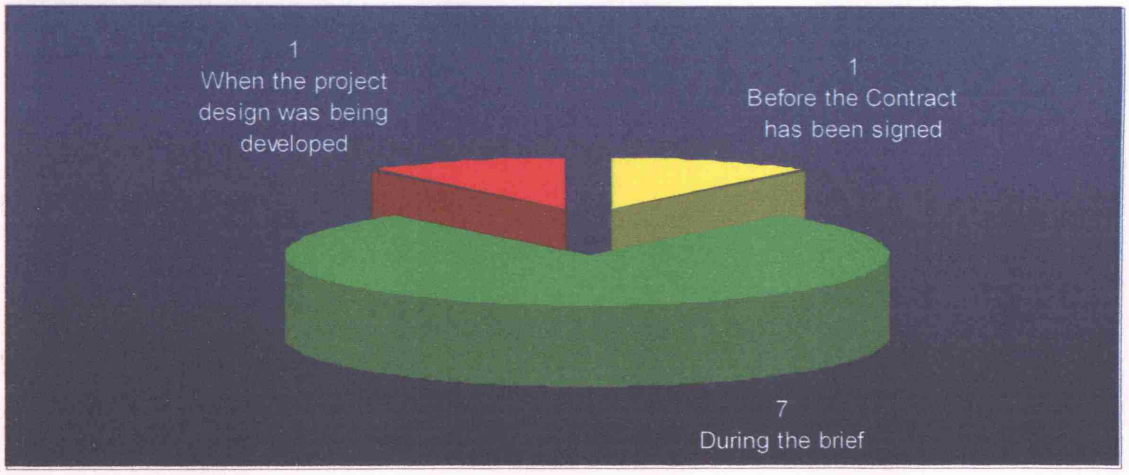
Figure 6.8: Responses to Question 8



In the next question (8) 90% of the buyers said that they had requested some features from the company that faced "technical and regulatory" restrictions. In general this is a normal phenomenon regularly presented in construction projects. The challenge of a construction company is to limit these requests and

make them clear during the brief. That is why question nine is asked only to the buyers that positively responded in question eight. The company's Mr. Kontostanos also confirmed that there were many cases where buyers demanding things that faced "technical and regulatory" restrictions but wasn't able to say an exact number of cases. At the same time he assured that this request in most of the cases arose during the brief. Following this brief the company said that most of these requests stopped.

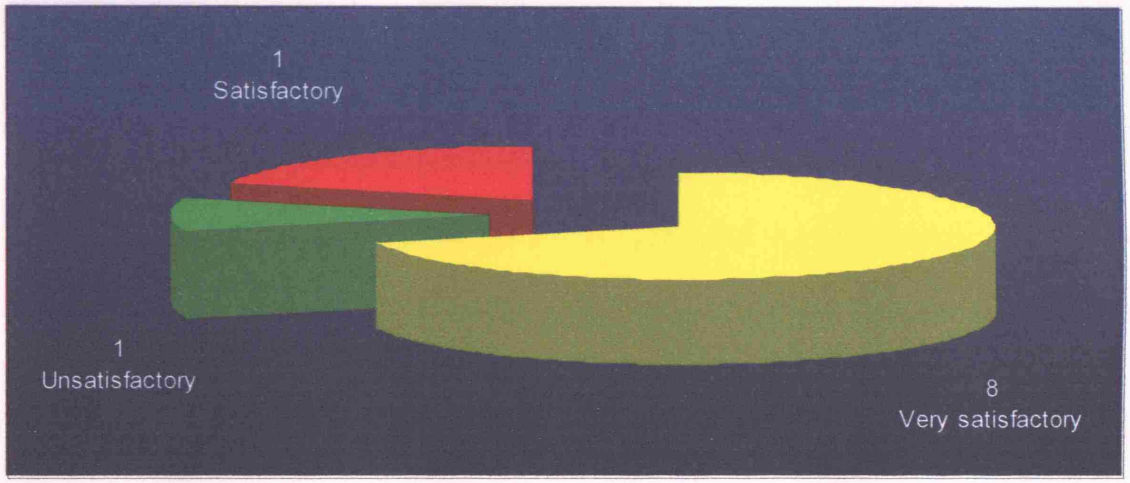
Figure 6.9: Responses to Question 9



10% of buyers said that their requests faced "technical and regulatory" restrictions were expressed even before they sign the contract and 79% said that this happened during the brief and only one during the development of the project design. This is a very important point since it shows us that an extremely large portion of our sample expressed all requests that faced "technical and

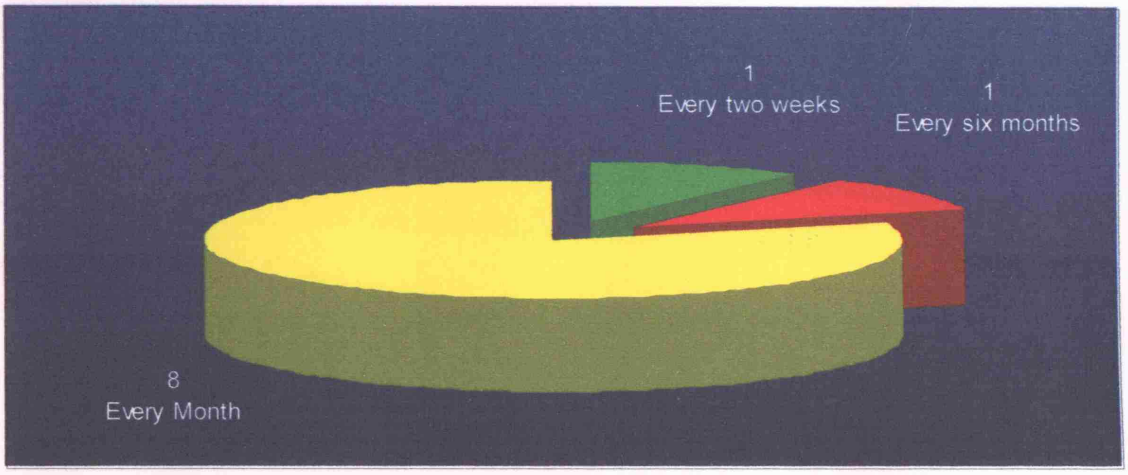
regulatory" restrictions during or before the brief. That means that the brief was really effective and managed by definition to eliminate, with the use of the most appropriate for the theory solutions, one of the main reasons that cause the briefing problem.

Figure 6.10: Responses to Question 10



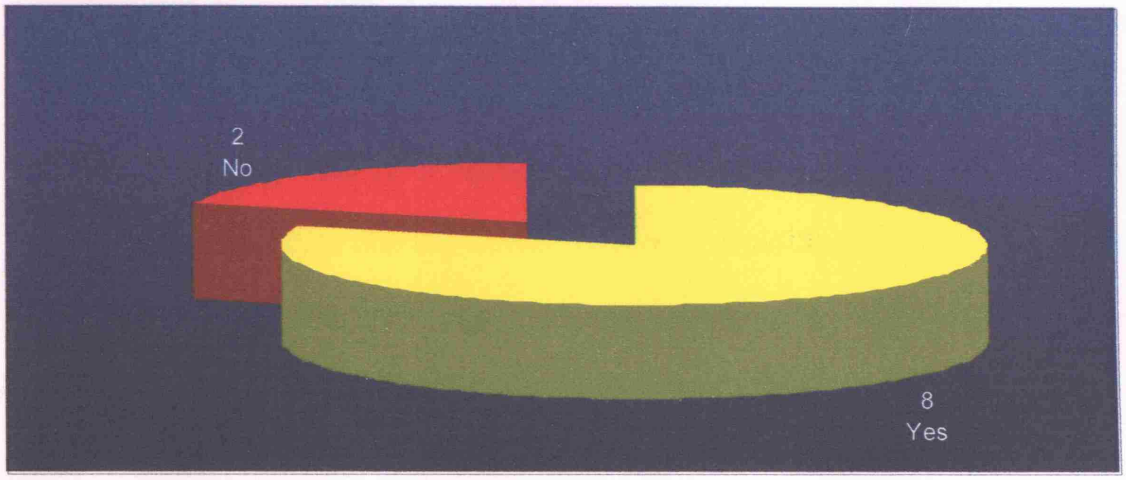
At the same time in question 10, 80% of the buyers judge very satisfactory 10% satisfactory and only 10% unsatisfactory the communication with the company. This is normal if we observe the answers provided in question 11.

Figure 6.11: Responses to Question 11



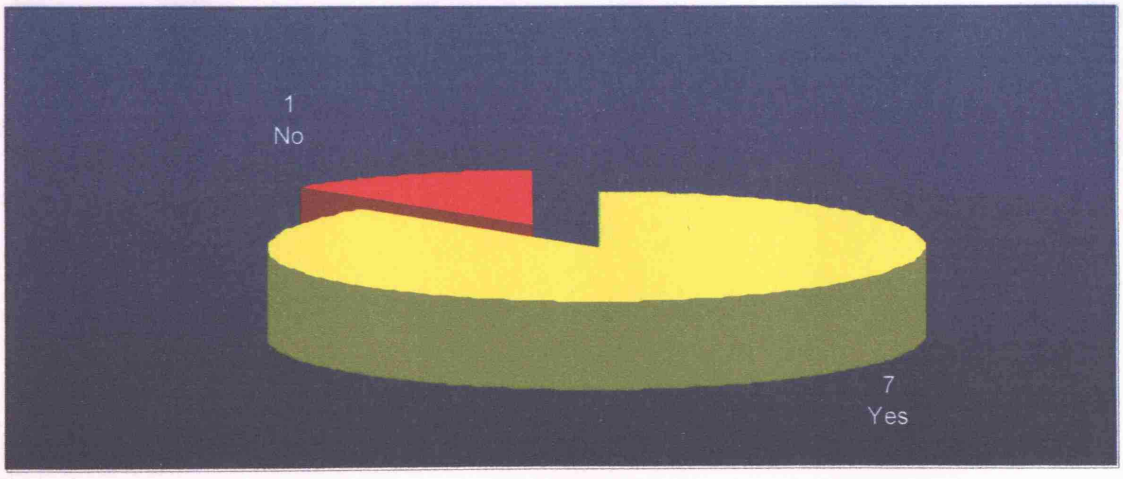
80% of buyers said that the construction team was communicating with them once a month. At the same 10% replied that meetings occurring every two weeks while at the same time only 10% that this was happening every six months. These answers verified by the Mr Kontostanos who also rated the communication with the clients as very satisfactory. This is normal since according to the company both the construction and design teams used to meet at least every month with the buyers.

Figure 6.12i: Responses to Question 12i



80% of the buyers said that the communication with the design team was regular while only 20% percent said that didn't communicate with them at the degree that they would prefer.

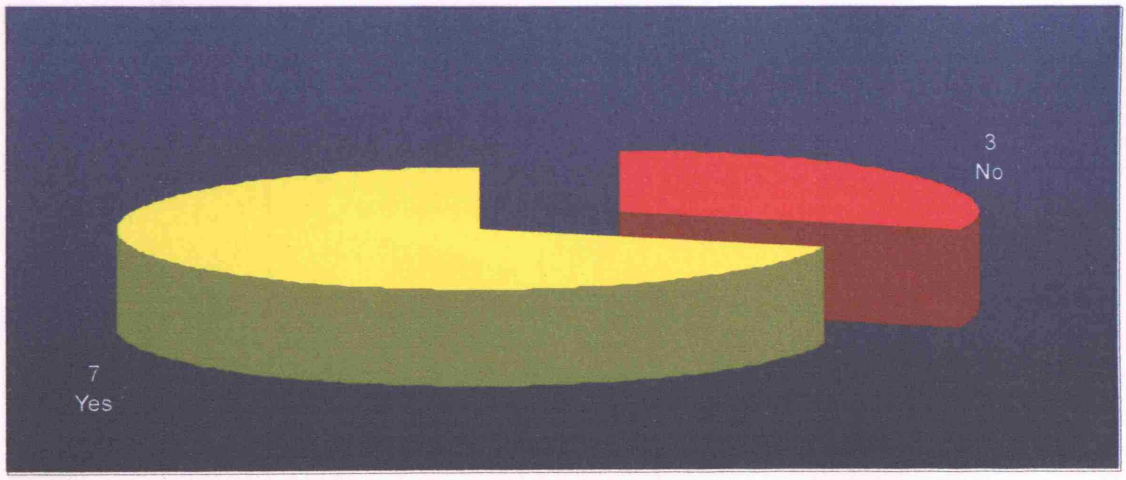
Figure 6.12ii: Responses to Question 12ii



At the same time of the 80% of the buyers that answered positively and believe that the communication with the company was regular in the first part of the question 88% said that the design team gave them the expected design solution and only 12% that did not.

At the same time the company agrees in this and says that both the design and construction teams communicated with buyers at least once a month. All these drove us to derive the conclusion that the exchange of information between these two parties participating in the project was satisfactory. And that is this paper is all about. To prove that the continues flow of information between the client and the developer will drive to a successful project.

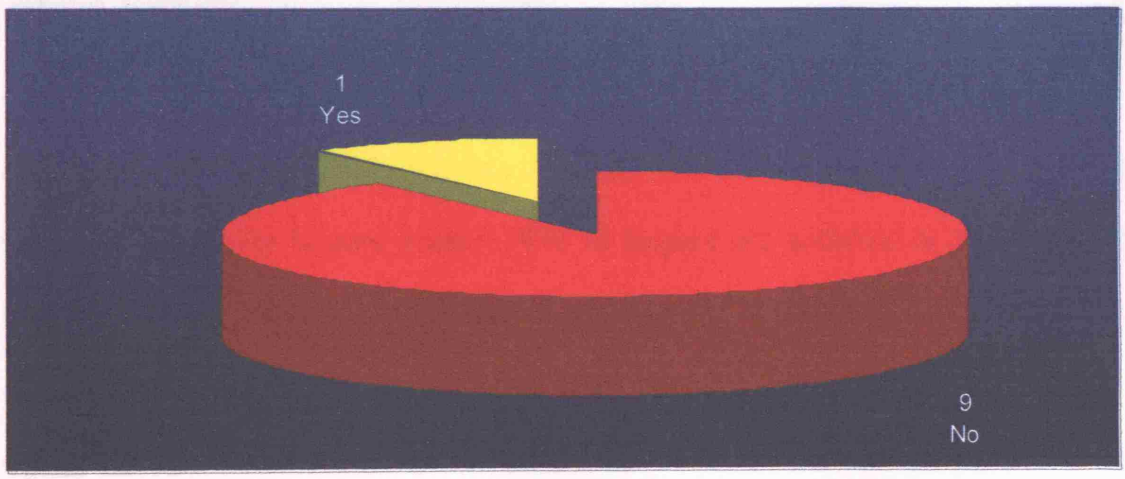
Figure 6.13: Responses to Question 13



At the same time a very satisfactory 70% of the buyers admitted they released the information privately held by them to the developer's design team. It can be

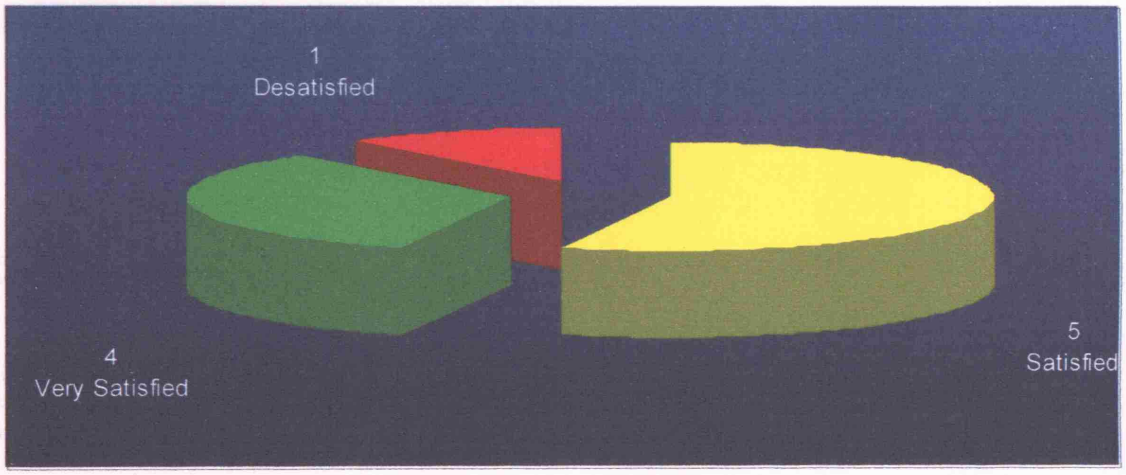
assumed that this is due to the very effective brief of the company that made clear to the buyers that a dual effort of both parties is necessary to solve the briefing problem. At the same time in question 12 the company said that did not keep any blind information that did not communicated to the buyer while any information that the buyers could not understand was extensively explained during the brief. Questions seven to thirteen of the buyers' and seven to twelve of the company's questionnaires are dealing with the briefing problem and the gap analysis approach. This set proved that the company dealt ideally with these issues. This is mainly due to the very effective brief where the company met all the requirements of the theory and even moved one step forward (with the show rooms and the pilot building).

Figure 6.14: Responses to Question 14



Let's now examine the surprise and the satisfaction of the clients in the last questions set of the questioners. Only 10% of the interviewed buyers replied that received a property that wasn't the expecting one. He was also the same buyer who said that the meetings with the company occurred every six months. The rest 90% said that there is no significant difference between the property they expected to receive and the property they finally received.

Figure 6.15: Responses to Question 15



At the same time the image concerning the satisfaction of the buyers for the purchased property is very good. 90% of buyers are satisfied or very satisfied for the property they received and only 10% are dissatisfied while no one is indifferent. This question set is important since it proved the validity of the theory introduced by Winch and directly relates the satisfaction of the client with the minimisation of clients' surprise. All nine buyers that replied that they

received a property that was the one they expected were satisfied or very satisfied for the property received and at the same time the one that he received a property that wasn't the one he was expecting is dissatisfied. At the same time with a 90% of satisfied clients is more than obvious that the majority of the buyers is happy with the property received. Finally the 13th question of the designer's questionnaire informed us that the company was not aware of the theory that this papers is all about, the minimisation of clients' surprise. Having briefly explained them the term the executives answering question 14 strongly believed that they were successful in achieving and applying it in practise. The analysis of the two questionnaires shows that even though the company wasn't aware of the theory it managed to apply its principles in this particular project but as they also explained in all other projects that are developed by the company.

Chapter 7: Summary and Conclusions

This last chapter of the dissertation is divided in three sections. The first will summarise the main issues raised in the paper. The second will include a short description of the potentials of the Greek firms in the contemporary environment while the third will recap the particular theory and the usefulness of minimising clients' surprise in the world of project management.

7.1.Summary

This dissertation began by giving an introduction of the main issues raised in the paper. The next chapter dealt with the structure of the market and the differentiation between the two periods that the contemporary construction has been through the last few years The Pre and post Olympic Eras. The third chapter dealt with the theoretical framework that the entire dissertation paper has been based on. Chapter four analysed the methodology that was used in concerning the issues raised in the paper based in the theoretical analysis of the previous chapter and followed by the analysis of the case study "the Lofos Edison" in chapter five. Chapter six tried to present the findings of the research conducted for the needs of this dissertation.

7.2.Conclusions Concerning the Market's Potentials

It has been found in the second chapter that the Greek construction industry tends to reach the decline stage of the economic and marketing life cycles in the post Olympic Era. This is the reason why most of the larger construction firms are trying to enter in foreign markets but also horizontally integrate within the Greek market. This analysis showed that construction firms still have the potential to keep their profitability. This can be achieved if they choose to alternate their policy. In this direction companies create real estate sections and land developing companies within their groups in order to invest the profits earned in previous years. Elliniki Technodomiki by its subsidiary R.E.D.S. (with the contribution of OTE) predicted the situation before the problem becomes visual and chose to expand its operations in other similar activities introducing Lofos Edison and other similar projects.

7.3.Conclusions Concerning the Minimisation of Clients' Surprise

There many conclusion that can be drawn upon the analysis. For the needs of this paper there will be paid emphasis on four main issues.

A first conclusion is presented at the end of the sixth chapter. The research's findings showed that the satisfaction of the client is negatively related with the minimisation of client's surprise. The smaller the surprise is the higher the satisfaction for the client. A second conclusion is that the "hidden action" that

can not be included by the contractors participating in a contract in other words the problem of "moral hazard" can cause sever problems in the construction of a project. The case study proved that if a company use the appropriate theoretical solutions can avoid the existence of this problem and decrease the dissatisfaction of the clients.

A third point that can be raised is that generally there is difference in perceptions concerning the products the clients expected to receive compared to the ones that finally receive. The appropriate solution of this problem is given in the third chapter of this paper by the Gap analysis model and the effective client's brief that needs to be shared between the client and the project manager.

A last but very important point that needs to be stressed is that the solution to the problems that are associated with the satisfaction of the client can be given by the continues exchange of information between the client and the designer. This has also been proved in chapter six where the only buyer that is dissatisfied for the property he receives is the only buyer that did not regularly meet the construction and design teams.

In the effort to generalise and at the same time quantify it can come up with a rule. This rule the more meetings the more satisfaction. So for example meetings on a weekly and monthly basis results very satisfied or

satisfied clients (respectively) and meetings on a six – month (or more) basis dissatisfied (or very dissatisfied) clients.

Finally the previous chapter showed that the examined case study very efficiently used the theory of the minimisation of clients' surprise. This has not been done purposely since the company was not aware of the appropriate theory. At the same time the construction company is the largest in Greece has the experience and the appropriate know – how to construct a project that meets clients' requirement even though the company is not aware of the theoretical principles. At the same time this paper proved that the theory that Winch introduced is very helpful in the contemporary world of the project management and the effects of its application in practise are substantial both for the developer of a project and the buyer. Satisfied buyer results increased reputation for the company within the market. Usually the effect of this in a services industry is significant and most important compared to a product's industry. This is due to the fact that service's output is not physical and therefore the need to achieve this reputation is far greater. Even though the construction output is physical it can not be physically visible every aspect of the entire services that is provided by a construction firm that is responsible for the development of a property. One more conclusion is that a project so nicely designed and managed like the Lofos Edison, even in a declining market

situation, as the Greek of the last few months can bring profitability to a company.

Additionally if such a large and successful company is not aware of the appropriate theory means that a further work is required. The theory needs to become popular so as every manager to be able to apply it in practise. Construction companies need to become aware of the fact that its introduction will result increased satisfaction of their clients and therefore higher reputation for their companies and consequently increase in their operations. This is also proved by the great interest to learn the principles of the theory that has been expressed by the company's official during the interview.

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Chapter 9: Appendix

11.1. Appendix I – Buyer's Questionnaire

Question 1. Were you aware of the fact that you would not be the first occupier of the building before you sign the contract?

YES NO

Question 2. If yes at which stage did you learn this information?

i. In the first meeting

ii. After you had expressed an interest for the property

iii. After the contract had been signed

Question 3. Did you notice any "hidden action"* in the side of the company while the project was constructing if yes please can you name them?

YES NO

Question 4. Did you find any poor quality materials in the property which to your expectations?

YES NO

*Hidden Action: is the action that can not be included or monitored and by the contractors participating in a contract

Question 5. Have you been able by the contracting company to "monitor the quality of the goods or services received" and the development of the project while it was being constructed? Rate how easy was this process

i. Very easy
ii. Easy
iii. Medium
iv. Hard
v. Very hard

Question 6. Did you find yourself in a situation where you wished to make changes in the functionality* of the project as new information became available" through time (the project life cycles.")

YES NO

Question 7. Have you been approached by the project manager or anyone else in the company for a project brief? Did they ask you for any feedback?

YES NO

Question 8. Did you request some features from the company that faced "technical and regulatory"** restrictions?

YES NO

* Functionality: is the ability to perform a job smoothly, efficiently, and correctly

** Technical and regulatory restrictions is any kind of barrier in the development of a particular aspect of a project that is due to technical or regulatory reasons and do not allow to the developer to proceed in this action

Question 9. If yes when did you express them? Please choose one of the following

i. Before the contract has been signed

ii. During the brief (if applicable)

iii. When the project design was being developed

iv. When the project was being built

v. Before you occupy the property

Question 10. How you would rate your communication with the company? Please choose one of the following

i. Very Satisfactory

ii. Satisfactory

iii. Unsatisfactory

Question 11. How often did you have meetings with the construction team? Please choose one of the following

i. At Least every week

ii. At Least every two weeks

iii. At Least every month

iv. At Least every six months

Question 12. Did the design team communicate with you regularly regarding any kind of potential problems and if so did the design team give you the expected design solution?

YES NO

Question 13. Did you release information to the developer's design team, allowing it to share any information privately held by you?

YES NO

Question 14. Is there any significant negative difference between the property you expected to receive and the property you finally received?

YES NO

Question 15. Question please rate the level of your satisfaction for the property that you have purchased in scale one to five?

i. Very satisfied the services I got is far better than the one I was expecting
ii. Satisfied the facility I received is better than the one I was expecting
iii. Indifferent the facility I received is the one I was expecting
iv. Dissatisfied the facility I received is worse than the one I was expecting
v. Very Dissatisfied the facility I received is far worse than the one I was expecting

9.2. Appendix II – Designers Questionnaire

Question 1. Did your company inform the buyers that the entire project would be used as an Olympic Media Village?

YES NO

Question 2. If yes in which stage did you provide them this information?

i. In the first meeting

ii. After the have shown an interest for the property

iii. After the sign of the contract

Question 3. Did you purposely kept any "hidden action"* in your side in the post contract stage?

YES NO

Question 4. Have you been forced to use quality materials that haven't been the appropriate and the ones you would prefer in the project due to budget constraints?

YES NO

*Hidden Action: is the action that can not be included or monitored and by the contractors participating in a contract

Question 5. Were the buyers able to "monitor the quality of the goods or services received" and the development of the project while it was constructing?

YES NO

If so how?:

Regular visits in the construction field and with meetings both with the construction and design teams

Question 6. Did your buyers wish to make changes in the functionality of the project as new information become available" through time ("the project life cycles.")

YES NO

Question 7. Did your project manager or anyone else from your company approach the buyers for a brief about the project?

YES NO

Question 8. Did you have any requests from the buyers side demanding futures that faced "technical and regulatory"** restrictions?

YES NO

* Functionality: is the ability to perform a job smoothly, efficiently, and correctly

** Technical and regulatory restrictions is any kind of barrier in the development of a particular aspect of a project that is due to technical or regulatory reasons and do not allow to the developer to proceed in this action

Question 9. Please choose one of the following concerning how you rate the final communication with the buyers

i. Very Satisfactory
ii. Satisfactory
iii. Unsatisfactory

Question 10. How often did your construction team have had meetings with the buyers? Please choose one of the following

i. At Least every week
ii. At Least every two weeks
iii. At Least every month
iv. At Least every six months

Question 11. Did your design team communicate with the clients regularly regarding any kind of potential problems? How often was that

i. At Least every week
ii. At Least every two weeks
iii. At Least every month
iv. At Least every six months

Question 12. Did you have any "blind information"* that was known to your design team but did not communicated to the client?

YES NO

Question 13. Are you aware of the term minimisation of client's surprise?

YES NO

Question 14. Do you think you managed to minimise it in this particular project or you think that the buyers have been surprised by the property that they have received?

YES NO

* Blind information: is the information that is known by the design team but not communicated to, or understood by, the client