

“When the recipe is more important than the ingredients”; A qualitative comparative analysis of negotiation process using fuzzy logic algorithm

By Maria Eleni Zormpa

Thesis

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Adviser: Ilias Kapoutsis



Abstract

This is a comparative qualitative study of the negotiation process using Qualitative Comparative Analysis methods with regards to the negotiation of a job offer and the relevant terms of salary of the perspective of a job applicant. In this study, an online survey was performed using a sample of 50 respondents via Prolific platform (<https://prolific.ac/>) aiming to understand and investigate the causal conditions of location, BATNA, genderpairing, emotional intelligence and time pressure and their possible beneficial combinations that could enhance the outcomes of the negotiation. Three different outcomes were examined which are the likelihood of the negotiation to be successful, the intention of the job applicant to negotiate and the request of the job applicant in terms of salary.



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Chapter I- Introduction

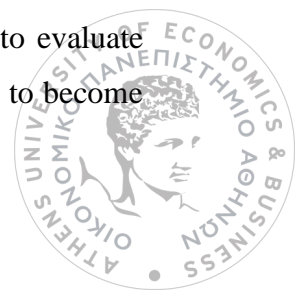
Why negotiations are important?

The art of negotiation is a very important skill as it ever has been. Having strong negotiation skills can make the difference between a beneficial compromise and a loss, since there will always be conflicts in life and the ability to solve them efficiently is absolutely useful in every aspect of life. That's why negotiating is very important, since it creates success. Furthermore, in the business world this could boost profitability, promotions and create opportunities in general. That is the reason why negotiation as a business skill is here to stay. The competitive nature and complexity of relationships of the interested parties of a business negotiation within a global marketplace, is calling for the businessmen to learn how to be sophisticated and collaborative negotiators. By understanding why negotiation is important in the business world, and prioritizing having good negotiators on your team, favorable environment is created for business success. Nevertheless, negotiation should not be approached as a competition but as a compromise in which every part is satisfied.

Moreover, in everyday life there is no shortage of disputes and there are established many ways for settling them like courts, regulations and of course negotiations. In many cases, progress is sometimes achieved by engaging individuals in a cause while the creation of tension and conflict may be a desirable organizing strategy (1). Regarding business world, competition as a force generates incentives that helps the system evolve efficiently. According to Professor Barney Jordaan, Program Director of Negotiation of the Negotiation skills course at the University of Cape's Town Graduate School of Business (GSB), “Any time spent in dealing with badly managed conflict is time which is not valued and does not contribute to achieving operational targets. Furthermore, he believes that “As conflict involves competition between any independent parties who perceive that they have incompatible goals, needs, desires or ideas- the same skill set needed to negotiate these internal conflicts are applied to external negotiations. Ideally, both circumstances are about achieving the most desirable end result for all parties involved” (3)

However, entering into a negotiation with no goal other than simply “to win” is a common phenomenon for those who haven't practiced negotiation skills and strategic thinking without focusing on the long term.

(4) Regarding business negotiations, there is a growing interest which originates from at least three perspectives: there are the practitioners, who do are involved in negotiations and aim to evaluate better their professional skills, the novices than lack experience and intend to train so as to become



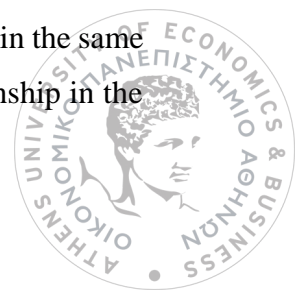
successful negotiators and there are also the researchers that are interested in business negotiation as a challenging example of how individuals interact verbally from theoretical and practical point of view. It is obvious that these three categories are interrelated. So far, few studies have been published that analyze business negotiations as a specific type of discourse, however business negotiation is one type of interaction in which it is more difficult to gain access. Business negotiation could be described as direct intercultural interaction and this is becoming more and more the case of today's business world. The economic interest of the business negotiations might be the most significant both for practitioners and novices and it is common that researchers focus on the output of negotiations and not on its process. Few studies have been published so far about the process and detailed analysis of the factors' mix and performance with regards to business negotiations.

Negotiation is an art but also can be approached scientifically. The scientific approach consists of the systematic analysis for problem solving. As far as the art of negotiating is concerned, all relevant interpersonal skills required so as to convince and be convinced and the ability to know how and when to use them have been well documented through the ages. On the other hand, the scientific approach is not yet development significantly and even if there are enough related research works, the practitioners are not often aware of(5).

The aim of the this study is to discover the most efficient mixes of skills and other attributes related with the negotiations by using data of survey conducted online with regards to negotiation scenarios that occur often in the commercial & business world. Moreover, for the data analysis and explorations the fuzzy logic method will be applied. The research methodology and the details of the online survey will be described thoroughly in the next chapters.

By acknowledging which mixes of skills and attributes are more powerful, an organization or even an individual could gain many benefits with regards to the negotiation process and outcome. Imagine a hiring manager of a sales department of a multinational company that is planning to hire new personnel as sales persons. By being aware of the alternative combinations of traits that a successful applicant should have, it is effortless to choose from a pool of applicants usually with similar characteristics and skill sets. What is more, the success rate of negotiations for an organization may increase by having not only the information of which elements and traits are important but also how these are correlated to each other.

Furthermore, the knowledge of the combinations of skills and traits that are useful in negotiations could overall have a positive impact in the business such as minimization of time consumption, simplification of processes and hierarchies and giving a greater responsibility to individuals while emphasizing in short-term and long-term goals. Sometimes the most difficult negotiation cases are not the traditional ones, between a buyer and a seller, but the ones between colleagues within the same organizations. That could be challenging, because it is essential to maintain good relationship in the



workplace and being able to negotiate effectively allows you to get what is desired without damaging any relationship. Additionally, in that case, it is crucial not only to have the ability to identify the skill set needed to achieve a win-win negotiation but also to detect the weaknesses of the other parties involved.

To sum up , any exploratory analysis related to the art and science of negotiations could highly benefit the modern world, the managers, the employees and every individual in general. As Christopher Voss wisely said “ The most dangerous negotiation is the one you don't know you are in”

Chapter II- Literature Review

“In business as in life, you don't get what you deserve you get what you negotiate”



Dr. Chester Karass

“Let's move from the era of confrontation to the era of negotiation”

Richard Milhous Nixon

Negotiation comes from the Latin word *neg* (no) and *otia* (leisure) and it was referring to business people who had no leisure time to consume in their industriousness. Thus, negotiations could be described as the process of combining divergent positions into a joint agreement under a decision rule of unanimity. The fundamental aim of negotiating is to resolve points of disagreement and to gain advantage for an individual, or to craft outcomes in order to satisfy different parties. Therefore, we could describe negotiation as a combination of decision analysis, behavioral decision making, game theory and negotiations analysis. Negotiation was defined by Zartman as “a process of combining conflicting positions into a common position under a decision rule of unanimity, a phenomenon in which the outcome is determined by the process.” Furthermore, Druckman (1986) adds that negotiation pass through stages that consist of agenda setting, a search for guiding principles, defining the issues, bargaining for favorable concession exchanges and a search for implementing details and transitions between stages are mentioned as turning points. It is unsurprising that formal definitions of negotiations reflect the variety characteristic of the functional, conceptual origins of the frequently diverse theories that developed to explain it

By the end of World War II, there was an urge for developing more “scientific” methods of conflict management, mediation and negotiation that led to the re-invention of more “rational and acceptable forms, however, the history of negotiations as a process has always been disregarded as irrelevant. The awareness of the evolutionary development and history of negotiative behavior, however, could assist in the creation of new approaches which would be critical for the conflict management, especially in the modern world of technology, trade and finance where the need for developing mechanisms and skills in order to manage daily exchanges is crucial. What is more, the evolution in neuroscience, data analytics and cognitive psychology could contribute significantly to the complex decision making scientific research area.

Negotiation theories may be prescriptive, descriptive or normative in nature. Theorists and practitioners from various areas have developed and utilized a variety of approaches and levels of analysis so as to improve their understanding of particular aspects of negotiations. These theories might be diverse and it is frequent to highlight salient concerns from the perspective of the disciplines from which they came (7).

Basic concepts, strategies and approaches of negotiations

It would be helpful having a general overview of negotiation concepts, approaches and strategies



before turning out our discussion to the most significant variables that affect negotiation. As far as strategy is concerned, it could be described as “a high-level plan to achieve one or more goals under the conditions of uncertainty” (8), while with regards to tactics “an action or strategy to achieve a specific end” could be a proper definition.

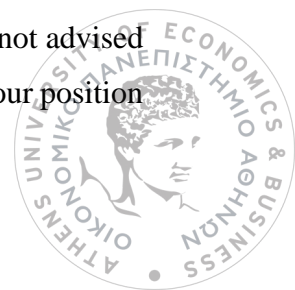
A fundamental assumption is that negotiators are strongly influenced by their general orientation to the negotiation (10). Additionally, researchers have separated the negotiation strategies into distributive (or competitive) and integrative (or collaborative) and have argued that the differences in orientations result in different goals, strategies and tactics. (11). The most common division of negotiation styles is: competing, accommodating, collaborating, avoiding and compromising (Volkema 1999, 60-69; Lum 2010, 149-153)

Distributive negotiations also known as “win-lose” or “zero-sum” are based on the competitive view of negotiating and are designed to secure the biggest slice possible of the pie for one side while leaving the other side with the smallest helping possible. The tactics used in distributive negotiations aim to provide help to the users to claim value for themselves while defending against the efforts of an opponent to do the same. These strategies are also described as destructive, because of their “win-lose” nature.

The “self defense” negotiation conflict style, also described as “I lose-you win”, is the opposite of competing in cases where the relationship is very critical (13). Accommodating profiles believe that the route to winning people over is to give them what they want. This strategy could be used in case that, you are in a very weak position and maybe the best option is to give in gracefully. However, if the negotiators of the other party are highly competent, it is possible to be taken advantage of. Giving away value too early in negotiation, can leave you with a poor hand to play in the rest of the negotiation process.

Another style of negotiating is the avoidance “I lose-you lose”, where it is usually described as “passive aggressive” due to the fact that it is preferred from people that really dislike conflict. This style could be a typical reaction to high compete negotiators and could be used when the value of investing time to resolve the conflict outweighs the benefit, in cases where the issue under negotiation is trivial to both parties, or when you are not prepared for entering the negotiation.

Furthermore, another frequent style of negotiating is the one that could be described as “I lose/win some-you lose/win some” usually referring to this as compromise. Compromising outcome is frequently an end position of about half way between both party's opening positions. It could be a suitable option in cases when there is time pressure and there is mutual trust between the negotiating parties. Nevertheless, without quality training, preparation and proper negotiating skills, a compromise seems an appealing option. If the outcome of the negotiation is critical, it is not advised to compromise on things that you absolutely must have and to make concessions within your position



with no strong rationale.

Last but not least, there is the collaborative negotiation style often describes as “ I win- you win”. This style's goal is to assure that both parties have their needs met, and as much mutual value as could be created is created. In the 1980s, the way in which people thought about negotiation changed significantly. Millions of people came to believe that win-win negotiation is an improvement on the dominant win-lose mindset, mostly thanks to Bruce Patton's bestseller “Getting to Yes:Negotiating Agreement without giving in (Penguin, 1981). Win-win negotiation involves working so as to get the best deal possible for yourself, while also ensuring that the other parties' needs are satisfied too by thinking creatively about how you can get more of what you want by assisting the other side to achieve its negotiation goals. In cases that it is significant to understand the feeling and deeper interests or motivations of all parties involved in a negotiation, then collaboration is the best option that could also contribute positively in building and maintaining long term relationships.

Negotiations Process

Negotiation is a process in with some defined steps and phases from which every negotiator should go through. The three basic phases that are included in general in every negotiation are : the preparation, the bargaining phase and the decision or the finalization of the deal. Furthermore, some sources divide the bargaining phase into more detailed steps.

The initial phase of preparation is essential in all negotiations aiming to success in the process of bargaining. The phase of preparation involves three general abilities: self-assessment, assessment of the other party, assessment of the situation. Thomson (2001,10) states that before entering negotiations the most important questions a negotiator need to ask himself are: “What do I want?” and what are my alternatives?” so as to set a target or aspiration and to define the ideal situation for him. Moreover it is fundamental to set a Best Alternative to a Negotiated Agreement (BATNA). BATNA is a term coined by Robert Fiscer and William Uri in their 1981 bestseller “Getting to YES: Negotiating without Giving In”, unwittingly duplicating the game theory concept of a disagreement point from bargaining of a disagreement point form bargaining problems pioneered by Nobel Laureate John Forbes Nash decades earlier (14) and it is considered to be the key focus and the driving force behind every successful negotiator.. Detailed information about BATNA could be found BATNA onward. To sum up, before every negotiation it is essential to thing through and define in advance the expected goals, the potential trades, the alternatives, the relationships between the parties involved, the expected outcomes, the consequences, the assumed power of each party and the possible solutions based on the considerations above.

The essence of the negotiation process is the actual bargaining and arrangement phase, where the



concessions should be made between the involved parties. Initially there is the debate aiming to discover the other party's needs, usually following by the proposals revealing the “signals” of the elements each party is willing to trade and finally the bargain step in which each party states specifically what is about to trade. Moreover, Adair and Brett (2005) proposed negotiation model that consists of the following stages: relational positioning, identifying problems, generating solutions and reaching agreement. (16)

In the stage of relational positioning the attention is focused towards on influencing the other parties with respect and power. Moving to the step of identifying problems the main focus is in exchanging any useful information regarding opportunities, options and issues. In the stage of generating solutions, the negotiating parties use strategies aiming to achieve their goals so as to reach the final stage of reaching an agreement. During the negotiating phase, making offers and counter offers is a crucial part and the importance of first offer is shown to by many scholars.

Last of all, there is the closing stage of the negotiation process sums up the opportunity to capitalize the opportunity on all the work done in the previous phases. It includes the sealing of the agreement combined with the gathering of all useful information gained during the process. The review of the negotiation is also important during this phase so as to identify areas of improvement.

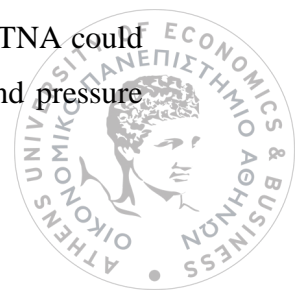
Negotiation variables

Negotiation is a rather complex issuer that takes place in almost every form of human interaction and is affected by numerous factors. In the next pages, the factors that will be examined in our research will be briefly analyzed and the relevant literature review will be provided.

Best Alternative to a Negotiated Agreement- BATNA

It is stated that “ A BATNA determines the point at which a negotiator is prepared to walk away from the negotiation table. In practice, this means that negotiators should be willing to accept any set of terms that is superior to their BATNA and reject outcomes that are worse than their BATNA.” (Thompson 2001, 11).

Knowing your BATNA is very useful for a negotiator for many reasons. Firstly, the negotiator is able to protect himself from the attempts of the counterpart aiming to intimidation and the effect of difficult tactics of the counterpart could be minimized.. Furthermore, knowing you BATNA could provide assurance to the negotiator and has favorable effect in controlling the stress and pressure

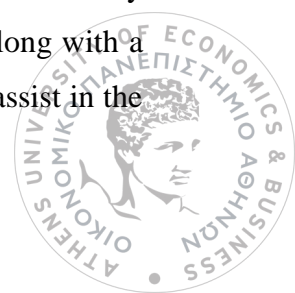


within the negotiation process. As shown in many negotiation studies, the negotiators that have a more tempting BATNA, usually are more powerful during the negotiation process which leads to obtaining more beneficial outcomes from the negotiation. On the other hand, negotiators without BATNA obtain lower outcomes from negotiations (Joan F. Brett, Robin L. Pinkley, Ellen F. Jackofsky,(1996)"ALTERNATIVES TO HAVING A BATNA IN DYADIC NEGOTIATION: THE INFLUENCE OF GOALS, SELF-EFFICACY, AND ALTERNATIVES ON NEGOTIATED OUTCOMES",International Journal of Conflict Management,Vol. 7,Issue: 2, pp.121-138)

Additionally, a successful negotiator should consider BATNA's counterpart, WATNA that stands for Worst Alternative to a Negotiated Agreement and this could assist in minimizing the loss or make the best of an unfavorable situation. WATNA represents one of the several paths that could be followed if a resolution cannot be reached. Being acknowledged of your WATNA, is one alternative that could be used so as to compare again other options along alternative paths in order to make more informed decisions at the bargaining table. The estimation of the negotiated agreement is a complex issue and requires good knowledge of the market, the competition and other types of research. Typically, the negotiating parties are not aware of each others BATNAs with a satisfactory degree of accuracy, while working on improving their own. Furthermore, identification of BATNA could assist in dealing with uncertainty, evaluating personal strengths and weaknesses in the face of conflict while learning to manage your bargaining tendencies.

Time Pressure

In negotiations, time pressure could be described as focusing on closing the agreement on the table as soon as possible. Time pressure could result in minimizing the time available for reaching into an agreement, usually by setting strict deadlines. Nevertheless, almost in every negotiation there is a form of time pressure either strict or more loose. Typically, time pressure increases during the process of an ongoing negotiation. It is more often when the parties are fatigued and it is regarded as a constraint that affects negotiation strategies, tactics and outcome. Furthermore, time pressure affect the ability to process effectively the information obtained during the negotiation process and leads to uncertainty with regards to the quality and the sustainability of the agreement, if reached. (Zakay, 1993) .In cases that there is adequate time available for the negotiators, Based on literature, in cases that the negotiators' time is adequate , they have the ability to search for alternative choices. On the other hand, when time is limited , there is higher possibility for the decisions to be influenced by emotions and the state of hyper-vigilance may exist (Janis, I. L., & Mann, L. (1977)) along with a stronger intention to compromise. Additionally, high time pressure is believe that could assist in the



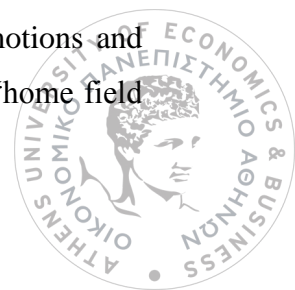
development of cooperative behavior between the counterparts (Stuhlmacher, Gillespie, and Champagne 1998) (21)..In studies with regards to the impact of time pressure in negotiation process and outcome it is shown that in cases where there are time limitations there are more concessions for the negotiated parties and less information exploration. (Alice F. Stuhlmacher ,Matthew Champagne , November 2000) (22). In cases that time pressure is unbearable for the negotiators, it is possible for them to walk away from the negotiations' table.

Location

The locations is consider to be a significant factor with regards to the process, outcome and strategies to be implemented during a negotiation. Typically, the parties involved in a negotiation make long discussion in order to set the location that the negotiation is going to take place whether it is a meeting between companies' representatives, a conflict resolution between nations or even simple everyday negotiations between individuals. Based on the literature, the outcome of the negotiation is affected remarkably by the location. (Martin, & Herbig, 1998 (24),Griffin & Daggatt, 1990 (25)). This could be easily understood even based on examples of our everyday life, since most of us prefer to negotiate in a familiar environment in which we feel more relaxed and confident. In sports industry this is called the “home field advantage”, which has many applications not only in that competitive area. Additionally, surveys has shown that sports teams are 50 %mmore likely to win a game when they are playing in their home (Courneya & Carron, 1992) (26). As far as negotiations field is concerned, negotiating in one's home field could have favorable impact to the host, promotes confidence and comfort in this party and allows control over the layout and information (Lewicki & Litterer, 1985) (27). Additionally, negotiating in one's home field provides the sense of security and boosts negotiator's performance. In that aspect, it is typical to choose a neutral location for the negotiation so as minimize this effect.

From the finding of Graham Brown and Markus Baer experimental research in 2011 (28), where people negotiated in favorable, neutral and unfavorable territories, it is shown that the location could have remarkable impact on the negotiation outcome with regards to the way the participants are claiming value during the process. The residents of the the territory seem to enjoy advantageous position in the negotiation and this could be incorporated in applying existing negotiation and strategies about “setting the table”.

To sum up ,despite the fact that location is a crucial factor affecting negotiators' emotions and negotiations outcome, there is still plenty of room for research so as to understand the “home field



advantage” phenomenon, aiming to identify the relevant underlying psychological mechanisms.

Emotional Control-Emotional Intelligence

Human beings apart from taking into account their rationale for decision making, they could also be driven by emotions especially in situations that include interaction with other people like negotiations and conflict resolution. In spite of that, the traditional negotiations approach was to “separate the people from the problem” (Fischer & Uri, 1983) but still in many negotiations people may be a cause of the problem.

A savvy negotiator should be able to indemnify the play of emotions and how to response properly. Furthermore, it is really important to be identify the emotional state of the other party. For negotiations that are more than a transaction and apply to long term relationships, understanding and controlling emotions is even more important. However, while an emotional awareness is strategically critical, the avoidance of excessive display of emotions during the negotiation process is also highly recommended.

Emotional intelligence (EQ or EI) is a term popularized by Dan Goleman (1996) and could be briefly described as the ability of an individual to recognize, understand and control his/her emotions in parallel with the aptitude to understand and even influence the emotion of others. The four principal pillars of emotional intelligence are self-awareness, self-management, social awareness and relationship management as outlined by the model of Bradberry & Greaves, (2009) (31)

In their book “Beyond Reason: Using Emotions as You Negotiate” (2005) introduce a framework consisting of five concerns that negotiators should consider with regards to their preparation about the emotional aspects of a negotiation which are appreciation, affiliation, autonomy, status and role and each one of the above plays a significant role in affecting the emotions of the parties involved. Additionally, Fisher and Shapiro claimed that positive emotions could have a favorable impact in the negotiation process and outcome highlighting the importance of the role of emotions in negotiation.(29).

Emotions like happiness, comfort and acceptance could energize a negotiation, enhance decision making, while negative emotions such as anger, anxiety , envy and guilt could promote win-lose bargaining, decrease the desire for cooperation and sabotage the will for mutual concessions affecting respectively the outcome of the process. (30)



Gender pairing or gender per se?

A plethora of scholars have conducted research and experiments with regards to the differences of the negotiation style, strategies and tactics used as far as gender is concerned along with the stereotypes that (used to) accompany each gender and its role to the society in general (Kray, 2007; Kray, Galinsky, & Thompson, 2002; Lax & Sebenius, 1986 ; Lax & Sebenius, 1986 ; Kray & Thompson, 2005; Stiffe, 2014). Nevertheless, there is plenty of room for research regarding the impact in negotiation of the gender pairing and in decision-making in general.

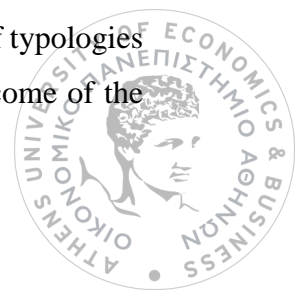
Based on the study “Gender pairing and bargaining-beware the same sex!”(32), it could be claimed that there is a difference in the outcome of negotiation in cases that there is gender pairing, comparing to the situations where the negotiators have the same gender (gender per se). Specifically, it was found that gender per se has not a significant impact in bargaining behavior. On the other hand, there was evidence that gender pairing could possibly affect the intention to cooperate with the other party , increase competitiveness and lower the negotiators' overall efficiency and no significant differences were found between inter male and inter female bargaining experiment. Nevertheless, it is critical to mention that this study focus was the bargaining stage and any relevant findings refer to one-to-one bargains.

There is still much more to be revealed as far as gender pairing is concerned, hence it will be considered as a factor to be further investigated with regards to its impact in negotiation's outcome in this thesis.

Chapter 3 Methodology

Introduction

As described before, the objective of this research is to investigate further the existence of typologies in the complex and multidimensional field of negotiation with regards to the final outcome of the



process. Typologies are attractive due to the fact that they rely not only on a single variable but on the relationships and complementarities between the attributes. For that reason, they can provide us with linking and structure of the characteristics that form causal relationships. Additionally, it is significant to mention that being acknowledged of the various types of favorable combinations of attributes that could lead to more successful negotiations, could assist any negotiator. This could also be an application of the 'equifinality' which is a term that gained popularity the last decades in the management literature (33) and according to this it is possible that various choices or paths could all lead to the same expected outcome. In our case, these various choices are the combinations of the attributes that all lead to the desired negotiation outcome.

An overview of Qualitative Comparative Analysis (QCA)

This study employs an approach based on fuzzy set Qualitative Comparative Analysis (QCA). Fuzzy set QCA method could provide us with reliable results regardless of the sample representativeness and in general reduces sample dependence compared to traditional statistical methods like regression analysis.

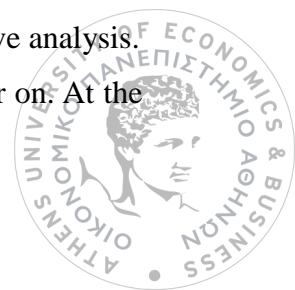
Fuzzy set QCA is a set theoretic analysis that focuses on the set-subset relationship by using Boolean algebra so as to end up to a limited set of configurations that lead to the outcome. It was initially developed as a research methodology in the 1970s by Charles Ragin. This methodology has the significant advantage of the causal complexity reduction. To sum up QCA is used by researchers so as to capture the fundamental aspects of causal complexity, conjunction, equifinality and causal symmetry.

As far as conjunctural causation is concerned, it could be viewed as a way to form “causal recipes” based on attributes combinations (34). As stated by Ragin (2008:109) “to think in terms of recipes is to think holistically and to understand casually relevant conditions as intersections of forces and events”.

With regards to equifinality, while classic linear regression analysis techniques may not be able to cover to explore the possibility of equifinality, QCA focuses on unveiling whether one or more recipes could lead to the same outcome.(34).

Additionally, set relations are considered to be asymmetrical in QCA, which means that the presence or the absence of an attribute in a recipe may not alter the outcome, depending on the combinations of the other attributes of the recipe.(34) To sum up QCA is designed to cope with complexity and the influence of context and manages to bridge qualitative and quantitative analysis.

The process of QCA includes three basic phases which will be briefly described later on. At the

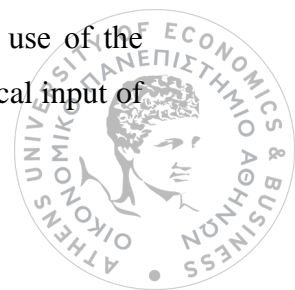


first phase, the expected outcome should be identified along with the relevant cases that epitomize it, which are the positive cases. Afterwards, the negative cases, meaning the cases that did not lead to the desired outcome, should also be identified. The set of the analysis consists of all the positive and negative cases as described above. The next step is to identify, based on the positive cases, the fundamental causal conditions along with the various combinations that could result in the expected outcome. After that and based on the case knowledge the researcher might try to streamline the causal conditions if possible and maybe combine two of them into one.

At the second phase, there is the construction of the truth table. This matrix consists of 2^k rows, where k shows how many causal conditions are included in the analysis, where all cases of possible logical combinations of causal combinations are considered even the ones without empirical instances. The consistency of the cases per row is assessed as far as the outcome is concerned. A simple measure for that, often used for crisp sets, is the percentage of cases in each row that display the outcome, e.g. a percentage of 0.5 displays perfect inconsistency. The next step is the identifications of any contradictory rows, which are the rows with consistency score different to 0 or to 1. In case that these cases included in a contradictory row could be explained based on the circumstances this step could be avoided. Then, the cases within contradictory rows should be compared so as to identify decisive differences between positive and negative cases and if necessary the truth table should be revised.

The third phase consists of the analysis of the truth table aiming to specify the variety of conditions' combination linked to the desired outcome with regards to the features of positive cases that distinguish them consistently from the negative ones. The analysis of the truth table could be performed with specialized software like fs/QCA (<http://www.compasss.org/software.htm#fsQCA>) that will be used for the purpose of this thesis. The first step of the analysis using fsQCA algorithm is the row comparison of the truth table so as to identify any matching pairs and the process of bottom-up comparisons stops at the point that there is no room left for any simplification. Only rows with the same outcome are paired and only one condition is different between the pairs. The condition that is different between the pairs is eliminated. The rows without cases ("remainders") may also be used for auxiliary for the simplification of the process and based on theoretical knowledge to assume what the outcome would have been if these cases existed and to proceed with the pairing, in the same way it was performed with the empirical cases, providing with a logically simpler configuration.

Hereupon, fsQCA algorithm selects the list with the minimum number of causal combinations that will cover all the positive instances of the outcome. Eventually, there are three solutions for every truth table, which are the following: a) the "complex" solution in which any rows without cases-"remainders" are avoided, b) the "parsimonious" solution where remainders are used if they lead to simpler (or fewer) recipes and c) the "intermediate" solution that permits the use of the remainders only if they passed the counterfactual analysis which is based on the theoretical input of



the user. In most cases, the intermediate solutions are considered to be better than the other two.

At the fourth phase, the results of the analysis should be evaluated. Firstly, the combinations should be examined logically, to check if they make sense and if they are related to the existing theory or it is possible that they might even challenge it. Subsequently, the researcher should identify the cases that fit the requirements of each causal recipe. Finally, the last step is to perform additional in depth analysis on a case level since causal processes should only be studied at that level so as to be evaluated properly. It should be mentioned that the most significant test of any QCA result is the level of connection with the cases.

Description of the negotiation scenario

A negotiations negotiation scenarios was given to the participants of the survey. The scenario describes the situation where an applicant is negotiating with a small but growing company about of the terms of a job offered. The human resources department gave information to the applicant about the likely salary, based on what the previous person in that position earned. The salary might be acceptable to the person, which in the scenario is the respondent of the survey, but it is considerably lower that what similar people make in similar positions (15% lower). In case that the job applicant would like to negotiate about the salary, should contact the vice president of the administration, as advised from the HR representative.

After reading the scenario, the participant should provide answers related with his/her intention to negotiate, his/her requirements in terms of salary and about how possible it seems from his/her point of view to achieve the desired outcome in this negotiation. Furthermore, the participant should rate some statements, which are related with the attributes and conditions of the negotiation's scenario, based on his/her level of agreement. These statements are related with the significance of the location, the BATNA time pressure application from the one negotiation party, the level of emotional intelligence and control and the impact of gender pairing both for men and women negotiators.

Sampling-Data collection

As mentioned in the previous section, two negotiation scenarios were provided to the participants along with some statements to be ranked based on their potential significance with regards to the



negotiation's outcome, aiming to identify the combination of attributes with the most advantageous impact. The survey was designed using Qualtrics online platform (<https://www.qualtrics.com/>). Afterwards, Prolific platform (<https://prolific.ac/>), which is a platform that connects researchers to survey participants all over the world, was used so as to upload the questionnaire and collect the relevant data from the participants' answers. The sample size is decided to be 50 participants regardless of their gender, location, education background and financial status aiming to reduce the selection bias in the sampling. Furthermore, the age range in the sampling was set to 18-65 so as to include the age bands that currently participating in the workforce or have the potential to work.

Description of the survey

As mentioned before, the questionnaire was designed using Qualtrics platform. The firsts three questions are considered to be outcomes of the negotiations with the regards to the likelihood of the negotiation to be successful for the job applicant, the intention to negotiate and the request in terms of salary. Afterwards, there are statements evaluating the significance of the in scope attributes that could possibly enhance the negotiation outcome for the job applicant and the participant should rate them from 1 (for strongly disagree) to 5 (strongly agree) based on his/her level of agreement.

Specifically, there are two statements with regards to the significance of location, then two statements with regards to the significance of having competitive alternative options to consider, one statement regarding the impact of time pressure, two statements about the significance of emotional control and intelligence and last but not least two statements to be rated that refer to the importance of having the same gender with the other party in a negotiation. Additionally, the participants are requested to submit demographic information as far as their gender, age, educational level and working experience is concerned.

The questionnaire was uploaded to Prolific platform (<https://prolific.ac/>) aiming to receive answers from participants all over the world aged from 18 to 65 years old. Prolific platform is well known for empowering reliable research coupled with high quality and trustworthy data collections by providing access to the researchers to diverse people willing to participate in paid surveys around the globe. The size of the sample was decided to be 50 participants.

Chapter 4-Results



Demographic profile of respondents

In this sections,the demographic profile overview of the respondents is presented using descriptive statistics with the purpose of providing a better understanding of the sample received.

Age clusters

The users of Prolific should be aged from 18 to 65 so as to be eligible to participate in the survey. As it is presented in the frequency table below, 24% of the participants ranged in age from 18 to 24, 42% ranged from 25 to 34, 22% ranged from 35 to 44, 8% ranged from 45 to 54 and only 2% of the participants ranged from 55 to 65.

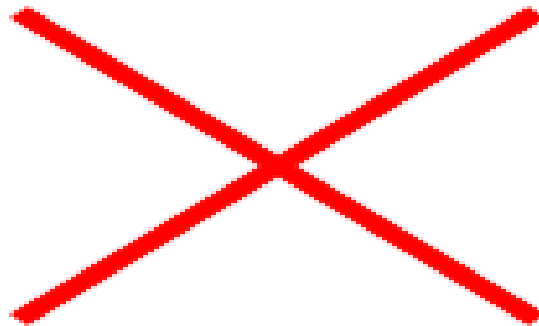
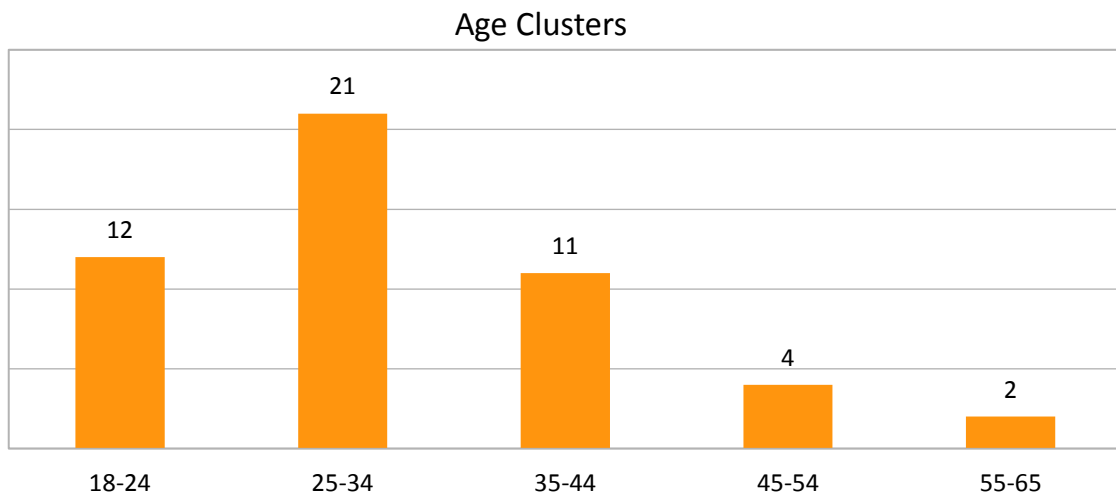


Table 1-Age Clusters of participants



Graph 1-Bar Chart of Participants' age clusters

Gender

Regarding the gender of the participants, 26 out of the 50 are males and 24 are females.



Table 2-Participants' sex distribution

Educational Level

There was no prescreening applied with regards to the educational level of the respondents, so as to explore the thinking of people with diverse educational background.

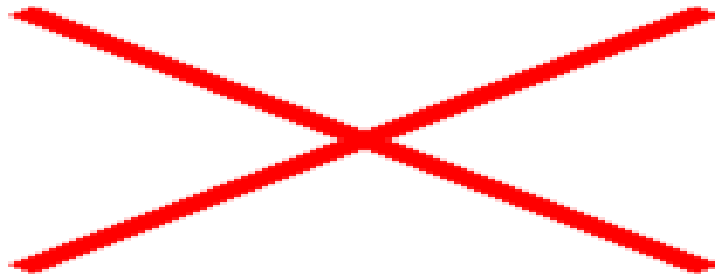
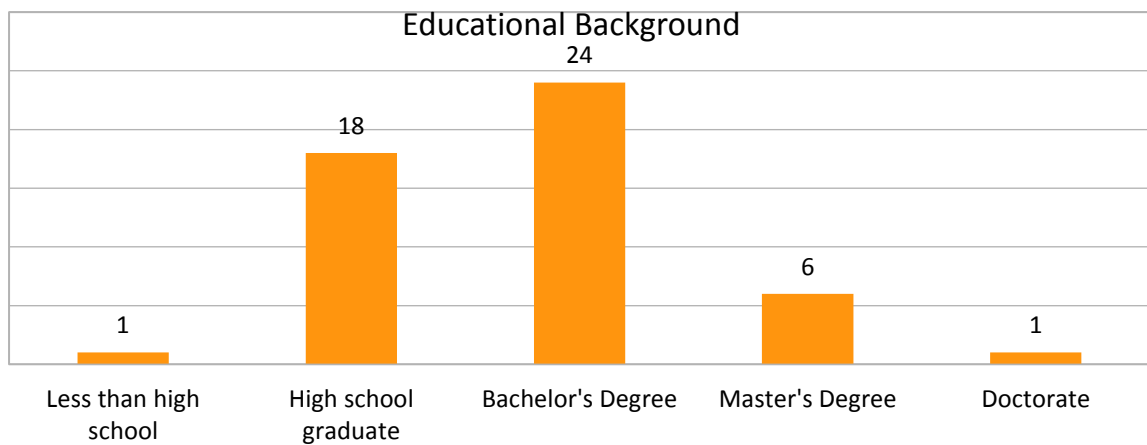


Table 3-Educational background distribution



Graph 2-Bar chart of educational background

Working Experience

There was also no prescreening applied with regards to the years of working experience of the respondents, aiming to include respondents with and without experience and to avoid any related bias.

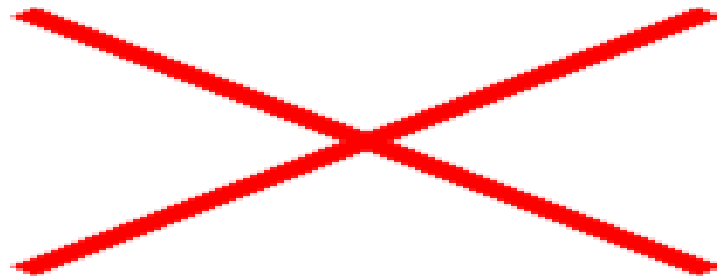
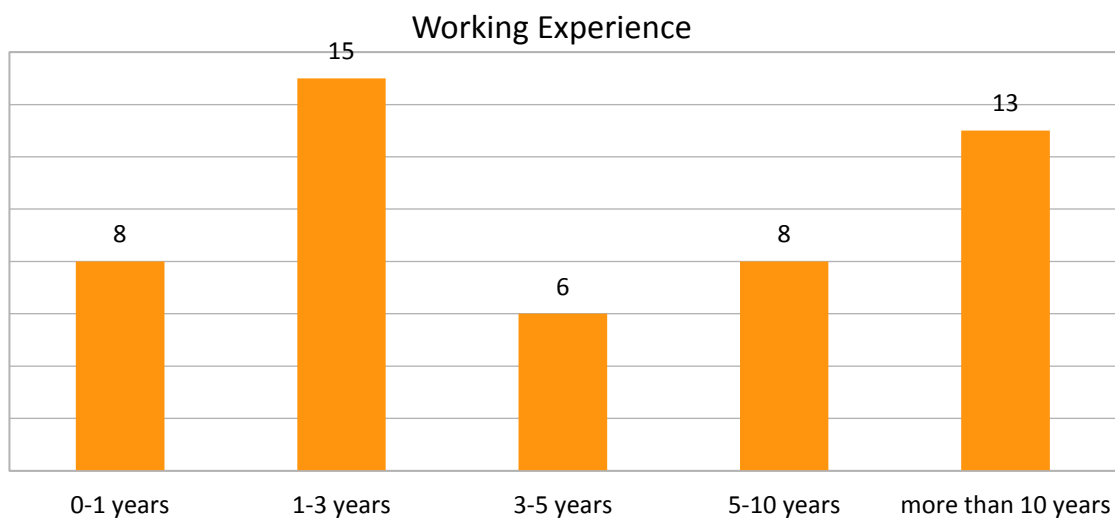


Table 4-Working experience clusters



Graph 3-Working experience clusters bar chart

FsQCA analysis-Results

The next phase is to perform the Qualitative Comparative Analysis using the fsQCA software. Before that, we should prepare and calibrate the raw data of the survey. As mentioned before, for some attributes in scope there are two statements to be ranked by the participants. For these variables we will use the average value of the two statements per participant and this average will be considered to be the one to be entered into the truth tables measuring the relevant causal conditions (e.g. location).

The next step is to enter the new dataset at the fsqca software. In order to perform the QCA method, the categorical data should be calibrated. The use of calibration is an essential transformational process applied to the categorical data so as to set membership scores, based on a certain number of qualitative anchors and careful calibration allows to interpret the scores directly. For the purpose of this analysis, three thresholds per variable are used for the calibration to fuzzy sets, which are the 0.75 Percentile, the mean and the 0.25 Percentile for each variable. These three thresholds were

selected in order to calibrate the data in relation to the actual responses and aiming to counterbalance the skewness seen in some variables in the data. Furthermore, it is recommended by Ragin (2008) as highly significant to combine the researcher's theoretical knowledge with the empirical knowledge of the data so as to decide about the most suitable calibration anchors. The table below includes the three thresholds per variable used for computing the calibrated dataset in fsqca software.

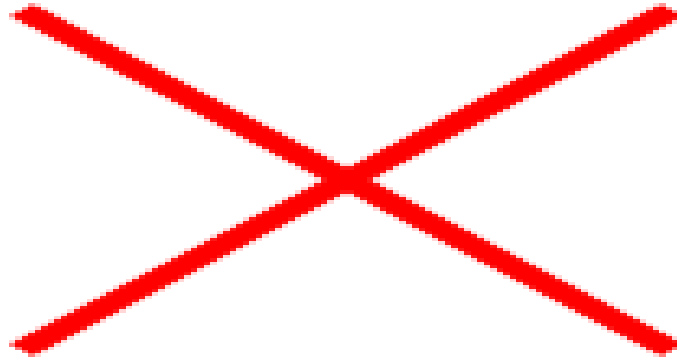


Table 5-Percentiles & Means of causal conditions

Truth table analysis

In this section the procedure of creating the truth tables along with the results will be presented. The analysis of fuzzy data sets revolves around the truth table. Each row of the truth table represent a combination of causal set. Truth table is used so as to identify which combinations of causal conditions lead to the outcome.

The analysis was performed three times, each time considering as outcome variable one of the following a)likelihood of the negotiation to be successful for the job applicant (this variable will be mentioned from now on as “negotiation's success likelihood”), b)intention of negotiation and c) request of negotiation so as to explore the causal condition relationship with all three possible outcomes in depth and separately.

It should be mentioned that sometimes not all logically possible configurations have empiric cases. In case that configurations do not have empirical cases, there is a problem of limited diversity and these configurations are known as logical remainders. The analysis of the logical remainders could be performed based on the research priorities. In this analysis, in order to generate the most conservative solution term, it is decided to include only configurations with more than one empirical cases. Furthermore, it is required in fsQCA analytical method to set a minimum number of cases (frequency cut-off) for the configuration of causal conditions to be considered in the analysis, a threshold of consistency between a configuration and the outcome considered sufficient to establish a systematic pattern. In this study the consistency threshold used is 0.75 and the frequency cut off

used is 1 case.

Negotiation's success likelihood as outcome-QCA analysis

At the first QCA analysis, negotiation's success likelihood would be considered as the outcome and the causal conditions under investigation would be location, BATNA , time pressure, emotional intelligence and gender pairing. The model used for the analysis is the following

$$\text{Likelihood} = f(\text{Location, Time Pressure, Genderpairing, Emotional Intelligence, BATNA})$$

Fsqca software provides three solutions for each sufficient analysis, which are the complex, the parsimonious and the intermediate solution. In this study, both intermediate and parsimonious solutions are presented, however the interpretations are based on the intermediate solutions, since it is the most appropriate for interpretations in comparison with the other two available solutions (Fiss, 2011). The intermediate solution uses only the remainders that survive counterfactual analysis based on empirical and substantial knowledge. No simplifications were made regarding to the assumptions, leading to non inclusion of easy counterfactuals and eventually the complex and intermediate solution are the same. The parsimonious solution incorporates the use of any remainder that will yield fewer or simpler recipes. Additionally, the parsimonious solutions includes possible solutions that may not exist in the data or may be removed during the analysis, regardless their consistency with the theory. The configurations that are provided in the parsimonious solution include conditions that are deemed 'core', as these conditions were not minimized even in the face of difficult counterfactuals. The rest of the condition are characterised as 'peripheral'. (Fainschidt , proper citation later!)

It should be noted that this approach is applied to all three QCA analyses that were performed with regards to the three available outcomes that are taken into account in this study (likelihood, intention, request). At the tables below, there are the presentations of parsimonious and intermediate solutions accompanied with the truth table of the analysis.



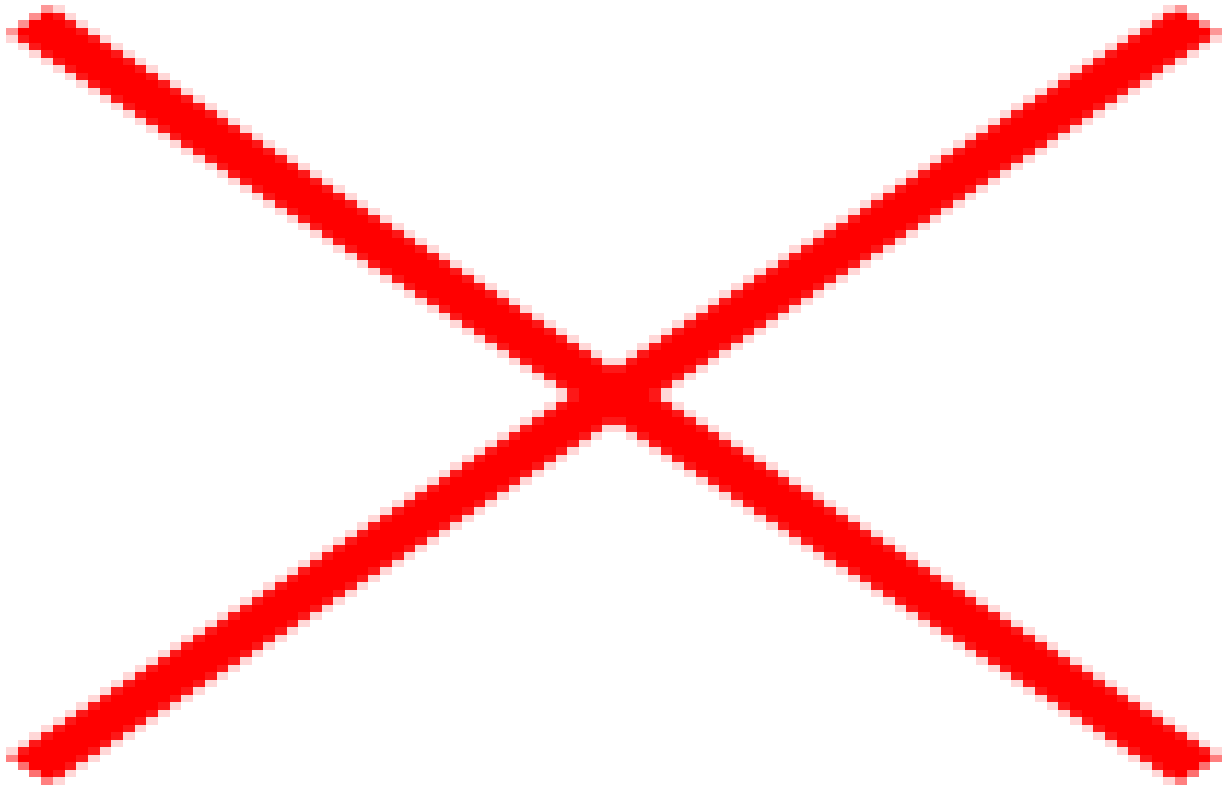


Table 6. Parsimonious Solution-Likelihood Outcome

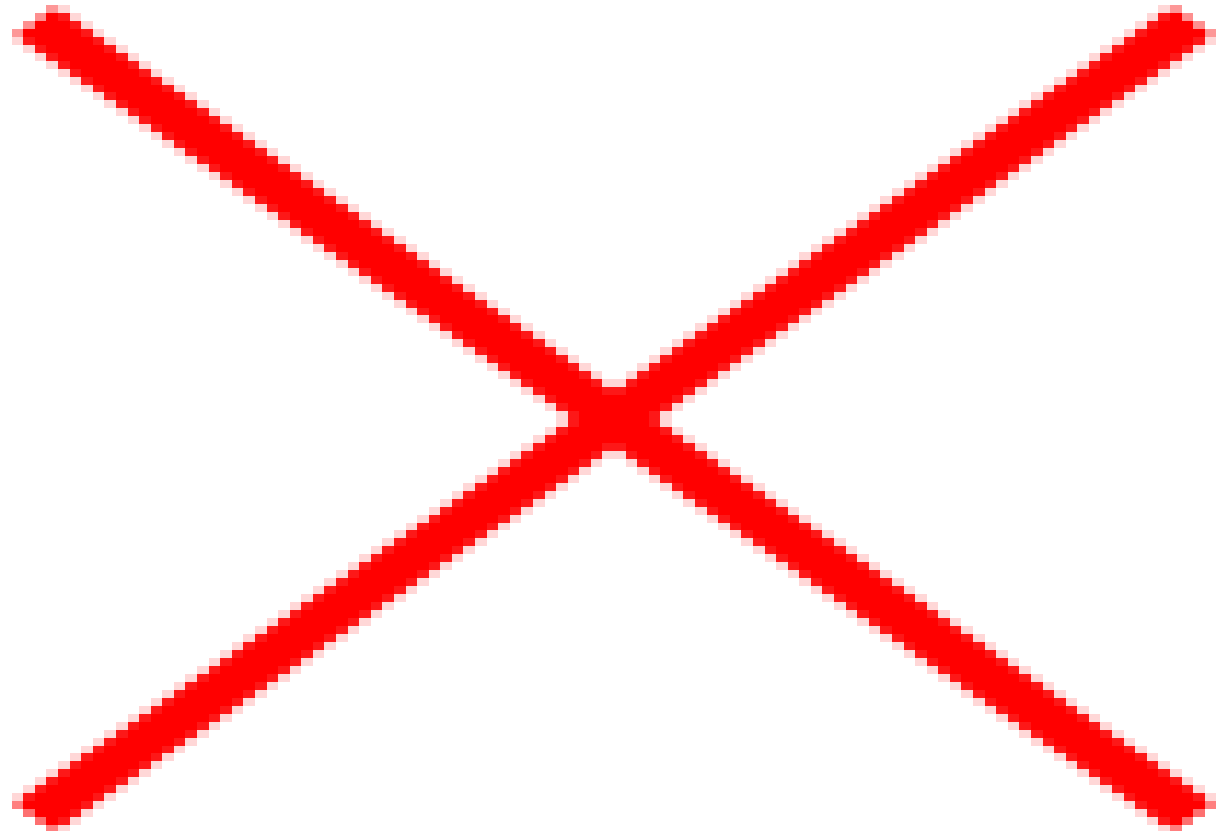


Table 7 Intermediate Solution-Likelihood Outcome



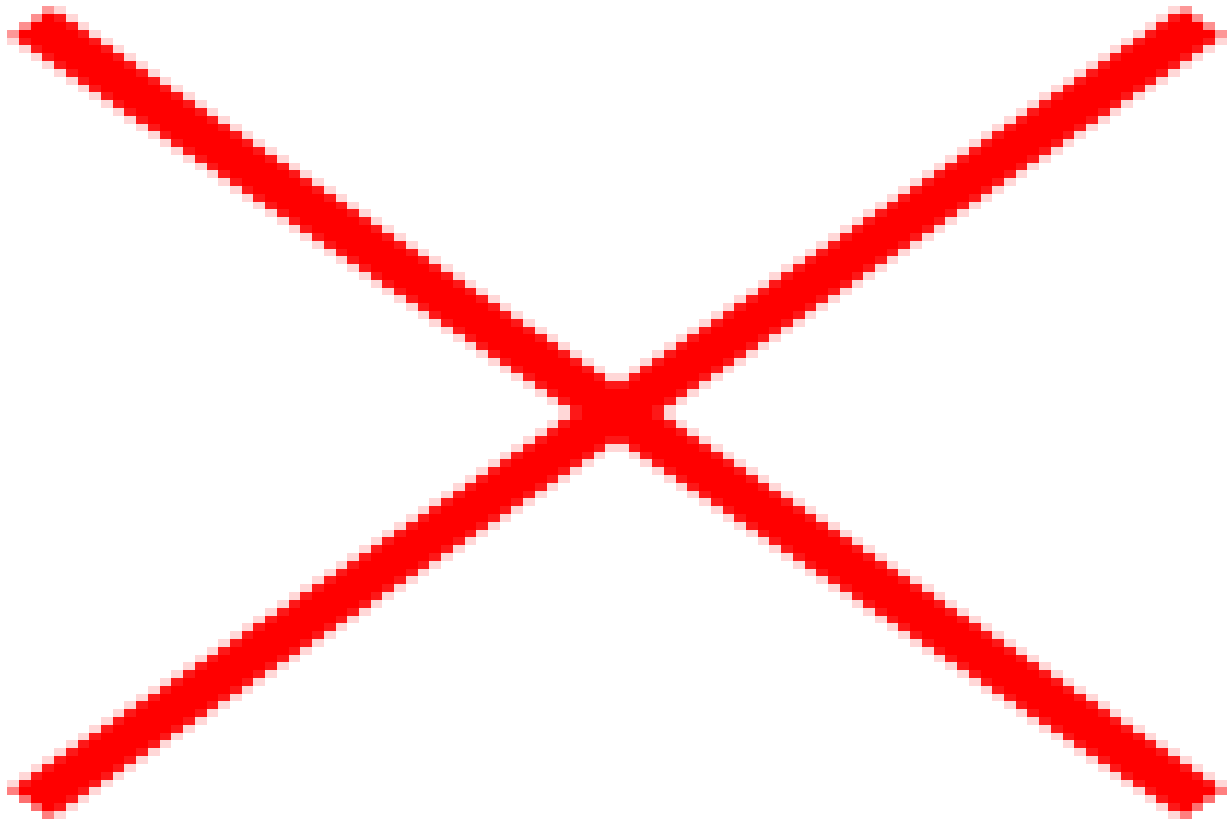


Table 8 Truth table-Likelihood outcome

As presented in the sufficiency analysis tables, both the solution coverage (0.51) and consistency (0.84) indicate that the configurations included in the intermediate solution lead to the presence of the likelihood of negotiation, which is considered the desired outcome and interpret a significant portion of membership in that condition. All configurations presented in the intermediate solution table are significant since their consistency is much higher than 0.75 which is the set threshold as mentioned before.

The differentiation of the consistency between the consistency of the six configurations is not significant, however Configuration F exhibits the highest value of consistency. According to F configuration, the presence of location, BATNA and emotional intelligence variables along with the absence of time pressure and gender pairing variables could be a recipe to enhance the likelihood of success in the negotiation with regards to the job offer from the perspective of the job applicant. In other words, a situation that incorporates a favorable location, no time pressure applied, having competitive options to consider, while being able to control your emotions along with understanding the emotions of the other party and without having the same gender with the other party could increase the possibility of success in the negotiation for the job applicant.

Moving on with the configurations' interpretation, configuration E is quite similar to F, with the only difference that time pressure is present and appears to contribute positively in enhancing the desired outcome. Turning our attention to Configuration D, which is the one with the second higher consistency and with the highest coverage, the presence of location, gender pairing, BATNA, time pressure assist to achieve an enhanced likelihood of success in the negotiation. In simple words, this means that having competitive alternative options to consider while negotiating in a favorable location with a party that has the same gender with you and achieving to set a strict deadline could lead to improve the likelihood of the success in the negotiation.

Furthermore, it could be noticed that the presence of location and BATNA could be found in five out of the six configurations which makes these conditions highly significant with regards to their contribution to the outcome. The condition of location is irrelevant only in configuration B which presents that the presence of time pressure, BATNA, gender pairing and the absence of emotional intelligence could lead to the increase of the likelihood of success of the desired outcome. On the other hand, configuration A displays a “recipe” to improve the likelihood of the negotiation's success by only managing to schedule the negotiation to a favorable location, without having competitive options to consider, without applying strict deadlines and without putting an effort to control emotions and understand the emotional state of the other party and regardless of the gender of the other party.

On top of that, emotional intelligence is absent in three out of the five solutions and irrelevant in four out of the eight configurations provided in the parsimonious solution, so probably could be considered insignificant in comparison with the rest causal conditions in order to achieve the favorable outcome.

As far as the condition of gender pairing is concerned, it is remarkable that the in two solutions its presence is important, in the other two its absence is also important and in the remaining two its presence or absence is not related with the outcome. It could be assumed that gender pairing is a peripheral condition leading to the conclusion that the gender of the other party could be a significant parameter depending on the combination of the other causal conditions with regards to the improvement of the outcome.

Intention to negotiate as outcome-QCA analysis

In this step of the study, the outcome will be considered to be the intention of the job applicant to negotiate. There was a question in the survey asking the participant if he/she would decide to contact the vice president of the company aiming to request a higher salary or telling the hr resources representative that he/she will accept the offer and the responses to this questions are considered as the outcome variable. The causal conditions that will be analyzed are BATNA, time pressure, emotional intelligence and gender pairing. The model applied to the QCA analysis is the following.

Intention=f(Location, Time Pressure, Genderpairing, Emotional Intelligence, BATNA)

At the tables below, there are the presentations of parsimonious and intermediate solutions accompanied with the truth table of the analysis. As mentioned previously, the frequency cut off is set to 1 and the consistency cutoff to 0.75.



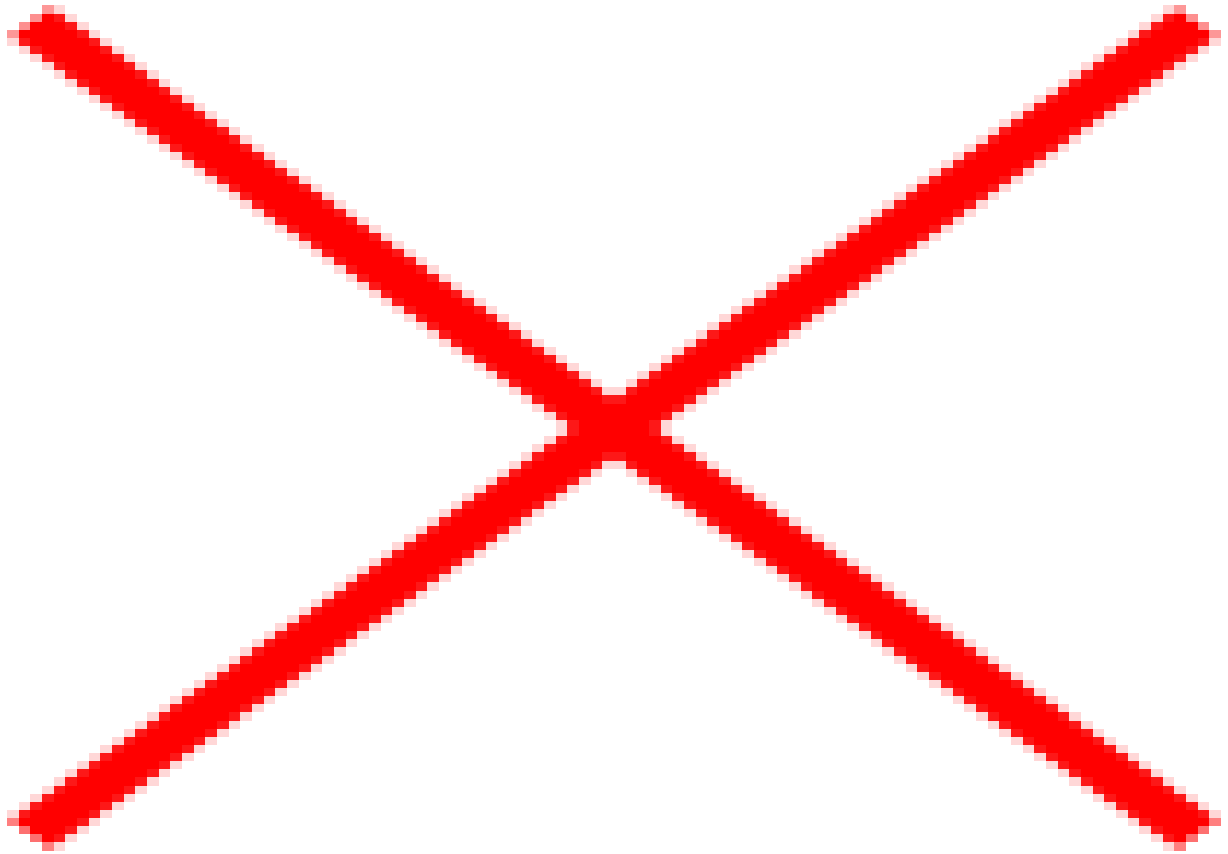


Table 9 Parsimonious Solution-Intention to negotiate Outcome

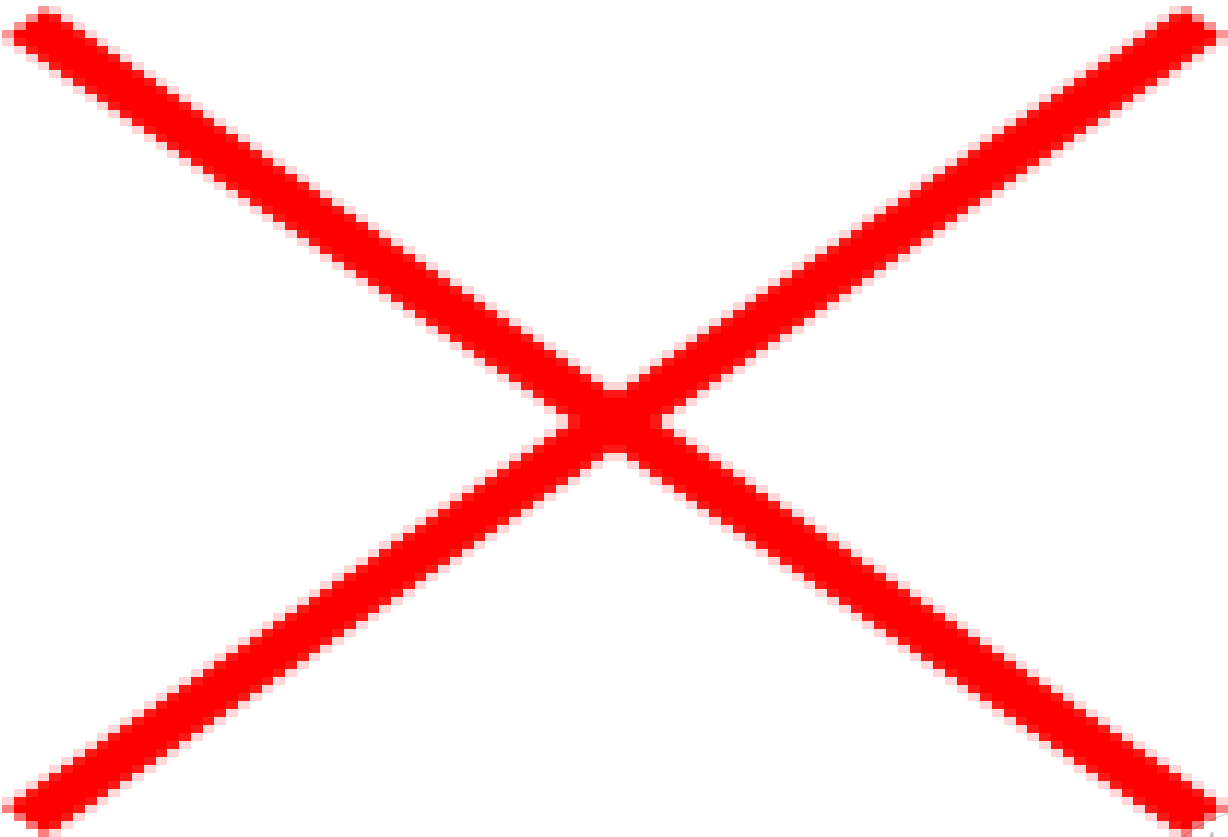


Table 10 Intermediate Solution-Intention to negotiate Outcome

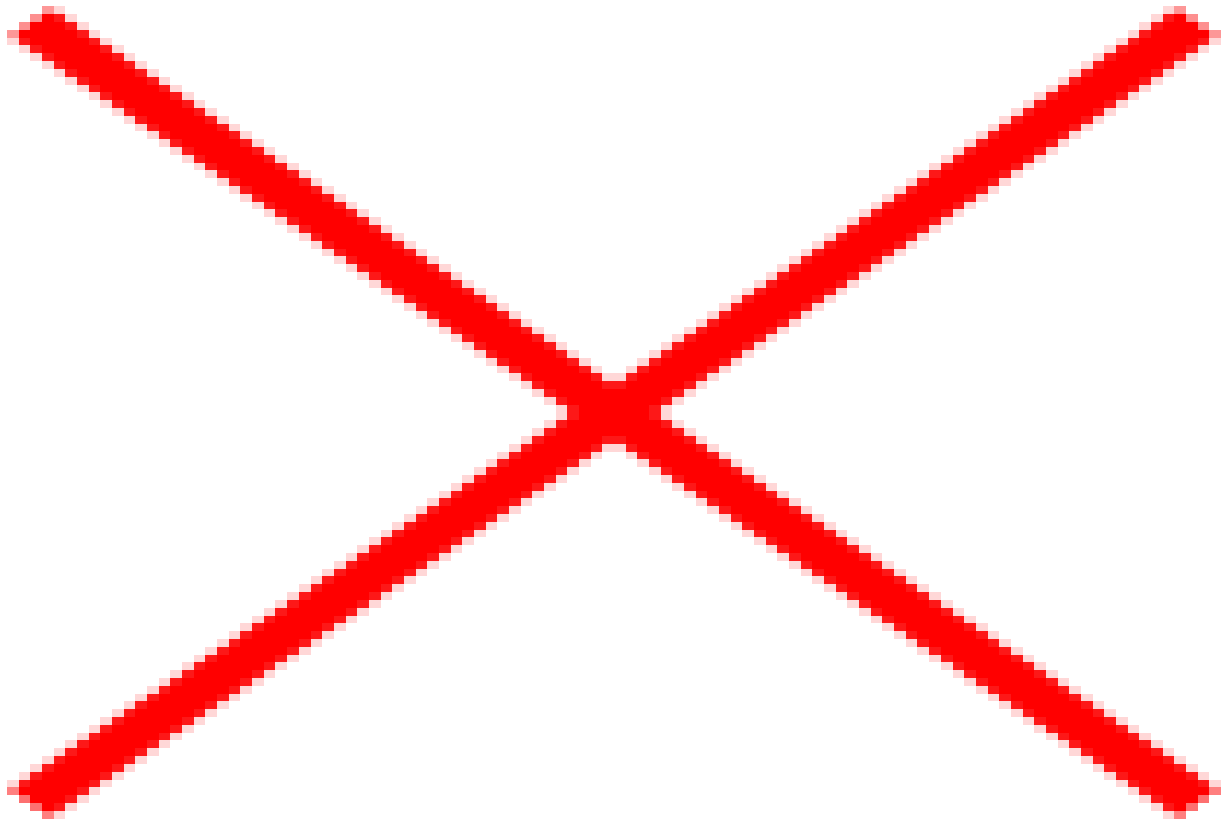


Table 11 Truth Table-Intention to negotiate outcome

The solution coverage (0.40) along with the consistency (0.84) allows to conclude that the configurations of the intermediate solution could lead to the favorable outcome, which is the intention to negotiate a higher salary for the job applicant, and interpret an important portion of membership in that condition. Additionally, all the configurations included in the intermediate solution are significant due to the fact that their consistency is higher compared to the threshold of 0.75 that was mentioned before.

Starting with the translation of the tables into meaningful results,, configurations D and B have the highest values of consistency, however the “recipes” they indicate for enhancing the desired outcome are quite different. According to configuration D, a favorable location is the only condition that could affect the intention to negotiate positively paired with the absence of the rest causal conditions. On the other hand, in configuration B location is an irrelevant condition with regards to the desired outcome. Based on configuration B, the initiation of the negotiation could be more likely to happen in case there is time pressure, competitive alternative options to consider while negotiating with a someone having a difference gender and regardless of your emotional ability to control your emotions and understand the emotional state of the other party.

Om the other hand, configuration C suggests that the absence of location paired with applying strict deadlines while negotiating with someone having the same gender with the job applicant and with having high emotional intelligence would enhance the outcome of the intention to negotiate about a higher salary. The presence or absence of a favorable location in the negotiation process is controversial with regards to the intention to negotiate since it is present as a causal condition in two configurations (D and E), absent in two (A and C) and it is an irrelevant factor in another one (configuration B), which could generate the conclusion that location could have a positive impact that

depends on the other factors combined with. For example, configuration E suggests that the job applicant would intent to negotiate in case that he/she applies no strict deadlines, while negotiating in a favorable location with the vice president having the same gender and while being able to have competitive options to consider and last but not least while having high emotional intelligence.

Furthermore, BATNA is the causal condition that is present in the majority of the configurations and it could be assumed that it is a core causal condition. For instance, in configuration A the presence of BATNA along with the presence of genderpairing condition regardless of the emotional intelligence of the job applicant and without applying time pressure techniques or negotiating in a favorable location could lead to positive intention to negotiate a higher salary for the job applicant.

To sum up, all all five configurations presented in the intermediate solution are important since their consistency is higher than the threshold set and the “recipes” recommended vary based on the combinations of the causal conditions. As far as the intention to negotiate is concerned as the outcome, all causal condition could be considered as core with the BATNA assumed to be the condition with the higher impact.

Request of the negotiation as outcome-QCA analysis

The third step of the analysis consists of the QCA analysis about the request of the negotiation on behalf of the job applicant in terms of job salary, as stated in the relevant question of the survey in which the answer options where the following a. not 15% lower but less what other people get, b) same as other people get and c) more than other people get. The causal conditions that will be analyzed are BATNA, time pressure, emotional intelligence and gender pairing. The model applied to the QCA analysis is the following.

Request=f(Location, Time Pressure, Genderpairing, Emotional Intelligence, BATNA)

At the tables below, there are the presentations of parsimonious and intermediate solutions accompanied with the truth table of the analysis. As mentioned previously, the frequency cut off is set to 1 and the consistency cutoff to 0.75.



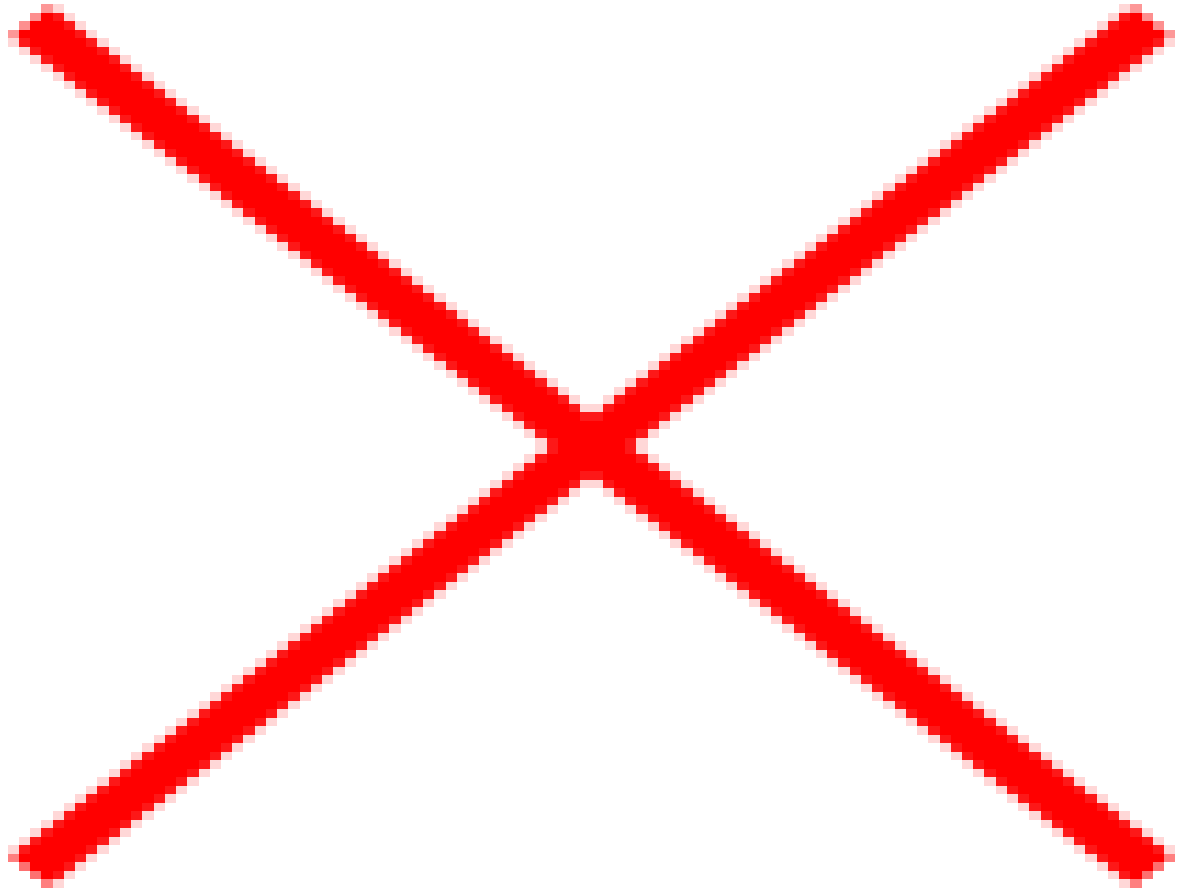


Table 12 Parsimonious Solution-Request of the negotiation as outcome

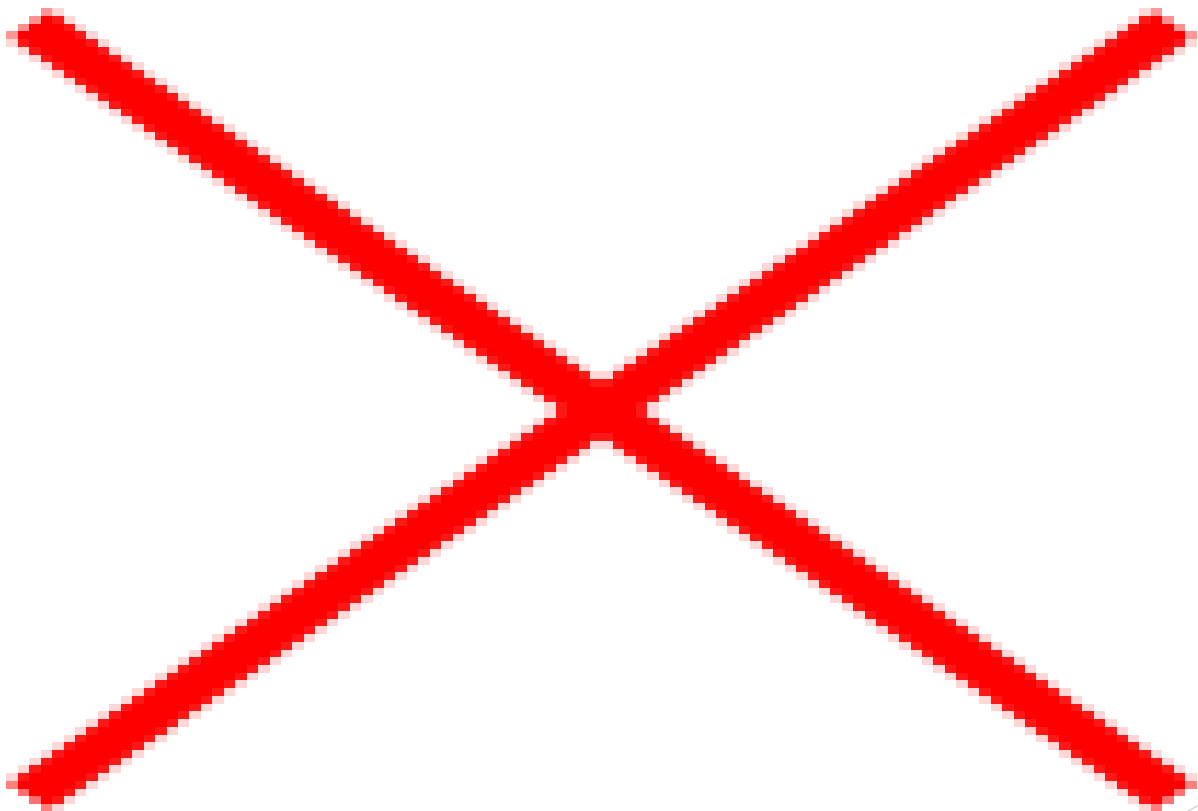


Table 13 Intermediate Solution-Request of the negotiation as outcome

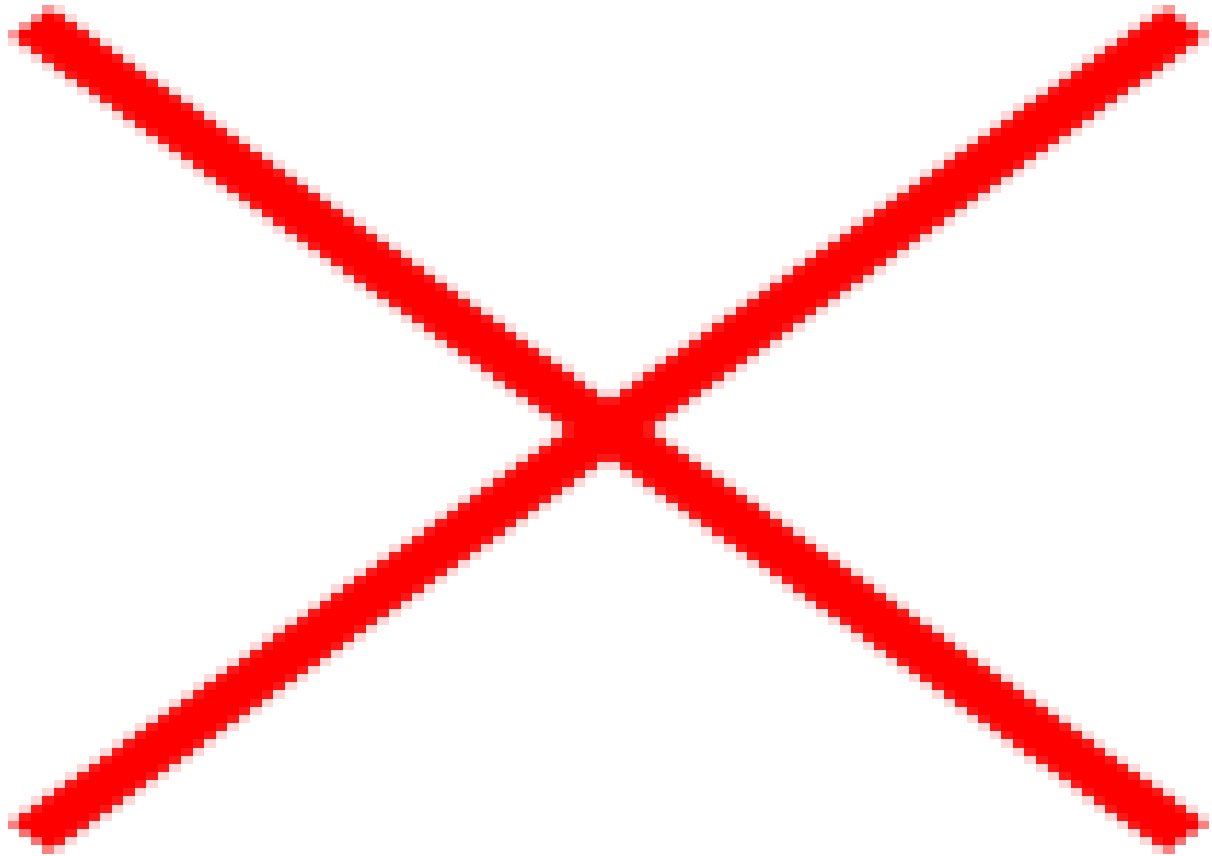


Table 14 Truth Table-Request of the negotiation as outcome

As far as the suitability of the solution is concerned, the solution coverage (0.16) and the consistency (0.88) are significant enough so as to conclude that the configurations of the intermediate solutions could be applied in order to enhance the outcome, which in this case is consider to be the request of the negotiation in terms of salary for the job applicant. On top of that, every configuration of the intermediate solution is noteworthy since they all have consistency higher than the set threshold of 0.75.

It is remarkable that in this case the configurations of the intermediate solution are fewer compared to the other two QCA analyses presented in the previous sections. The first configuration suggest that the negotiation in a beneficial location combined with the absence of time pressure, competitive alternative options, other party of the same gender and without having high emotional intelligence could lead the job applicant to request. Configuration A exhibits the highest consistency (0.937) among the two configurations of the intermediate solution.

Nevertheless, according to configuration B the presence of location paired with competitive alternative options for the job applicant, who will be able to understand the emotional state of the other party, without applying strict deadlines and with the absence of the causal condition of genderpairing could affect positively the outcome of request in terms of salary.

Comparing the results of the parsimonious solution with the ones of the intermediate solutions, it

could be observed that the causal condition of locations is present in every configuration, while the causal condition of genderpairing is absent in all the configurations. Further to this, it could be assumed that these are core causal conditions with regards to the request of the negotiation in terms of salary. In other words, negotiating at a favorable location with someone having different gender could head over to higher request in terms of salary for the job applicant.

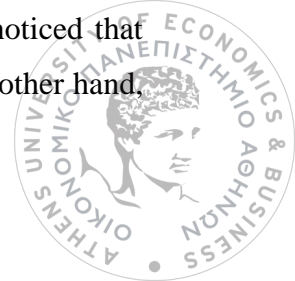
Chapter V- Conclusions and discussion

Conclusions

It is remarkable that the combination of the causal conditions, as provided by the intermediate solution, differentiate significantly among the three QCA analyses performed for each outcome. As far as the likelihood of the negotiation to be successful is considered as outcome, it should be mentioned that the relevant intermediate solution included more configuration in comparison with the other the other two analyses for the rest of the outcomes.

Furthermore, all the causal conditions that where selected based on their significance as mentioned in the relevant bibliography, are considered to be also significant in this study and to affect the negotiation process as far as the intention to negotiate, the likelihood of negotiation to be successful and the request in terms of salary are concerned. Additionally, the results of the study imply the presence of equifinality in the negotiation process about a new job offer and the relevant terms and conditions, since as it was presented in the sufficiency analyses, the job applicant may achieve or enhance the desired outcome by substantially different combinations of the causal conditions.

The core causal conditions are also different for each desired outcome. It could be noticed that negotiation's locations is a core causal condition for all the outcomes analyzed. On the other hand,



emotional intelligence could only be considered as a core causal condition as far as the outcome is considered to be the intention to negotiate. Furthermore, time pressure could only be assumed to be a core causal condition in the first QCA analysis performed with regards to the likelihood of the negotiation to be successful. On top of the above mentioned, at the table below could be found the core and peripheral causal conditions per outcome.

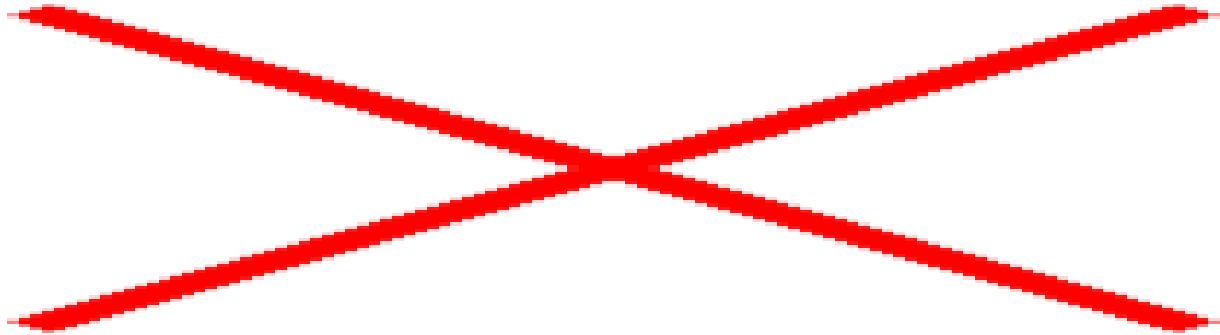


Table 15-Core and peripheral causal conditions per outcome

Discussion

Negotiations contribute significantly in forming relationships within a work environment between the employee and the employer. Conflict is a natural part of life, sometimes we negotiate even without realizing and finding a beneficial solution requires willingness and openness from all parties involved. Furthermore, negotiating as an employee is critical and sometimes equal to your satisfaction and success to the job. Having the skills to negotiate is a very good start, however being able to acknowledge the favorable combinations of conditions and apply them if possible, could be significantly useful so as to enhance the desired outcome.

On top of that, in today's complex and highly competitive job market opportunities are created for people that have the ability to negotiate skillfully the terms and conditions of their employment and a solid plan of that kind of negotiation could also include the analysis of the conditions of the negotiation process and their possible favorable combinations, in the way these were presented in this study.

On the other hand, the results of this study are considered to be useful to hiring managers so as to understand and further explore the combination of the causal and peripheral condition that are possible to be used or altered aiming to achieve a fair deal for both sides in case that a new hire is concerned.

Finally yet importantly, it would be interesting to further analyze and explore this scenario used in the survey by adding more conditions in the future like the age gap between the negotiators, the power of each party, the amount of information available prior to the negotiation initiation etc. Moreover, another alternative scenario could be built using a different negotiation situation for example a contract agreement in order to test if these variables used as causal condition in this study could lead to similar desired outcomes.

