

Quality Determinants of Client Satisfaction: A Case Study of Australian Consulting Engineers, Sydney, Australia

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Abstract—The construction industry is one of Australia’s fastest growing industries and its success is a result of a firm’s client satisfaction with focus on product determinants such as price and quality. Ensuring quality at every phase is a must and building rapport with the client will go a long way. To capitalize on the growing demand for Engineering Consulting Firms (ECFs), it is imperative to stress the implication of customer satisfaction and excellence in standards and performance. Consequently, the emphasis should be on improving employee skills through various training provisions. Clients seek consistency and thus expect that all services should be similar in respect to quality and the ability of the service to meet their needs. This calls for empowerment and comfortable work conditions to motivate employees and give them incentive to deliver quality and excellent output. The methodology utilized is triangulation - a combination of both quantitative and qualitative research. The case study - Australian Consulting Engineers (ACE) - was established in Australia in 1995 and has operations throughout Australia, the Philippines, Europe, UAE, KSA, and with a branch in Lebanon. ACE is affiliated with key agencies and support organizations in the engineering industry with International Organization for Standardization (ISO) certifications in Safety and Quality Management. The objective of this study, conducted in Australia, is significant as it sheds light on employee motivation and client satisfaction as imperative determinants of the success of an organization.

Keywords—Organizational behaviour, leadership, satisfaction, motivation, quality service.

I. INTRODUCTION

IN today’s market where competition is fierce, it is vital to analyse your clientele and understand what their requirements for satisfaction are. Once these are determined, then the organization can focus on its competitors to recognize any existing gaps that may hinder success. In other words, by evaluating customer preferences, firms can identify a niche and their competitive advantage and enhance loyalty. Accordingly, it is common practice for firms to conduct research [1] to discover client preferences. Organizations keep close watch on the priorities of the clients and monitor their satisfaction levels so that they can improve their services because there is a direct relationship between satisfaction and loyalty. Accordingly, employees of ECFs need the required resources, work conditions and professionalism to establish rapport and demonstrate positive attitude with clients.

Indeed, the client has perceived expectations and this affects

satisfaction [2]. Employees should be able to attend to clients’ needs and resolve problems efficiently and obviously motivated employees will produce better results in this respect in comparison to discontented employees. Engineering consultants deal with a variety of clients in their profession. Therefore, it is important that engineering consultants understand the determinants of client satisfaction in order to improve their likelihood of project success in the short-term and continual business opportunities in the long-term.

The determinants [3] of client satisfaction typically focuses on product determinants such as price and quality. However, research investigating the human resource (HR) determinants of engineering consultants and their impact on client satisfaction is limited. By understanding engineering consultancy from an HR perspective, decisions can be made more effectively to improve the likelihood of project success. The most important resources of an organization are its employees and thus their contribution to the company’s image is very crucial in terms of behaviour and actions.

Considering the proper functions of management [4], the factors involved constitute an appropriate style of leadership by motivating the middle and lower-level employees and developing a warm relationship. Such factors are crucial for direction and are considered as the ability of the driver to acquire performance on the part of subordinates on individual basis in an organisation. Employees should perform significant roles in earning clients’ trust. Companies are facing not only local but also international competition, and thus they must invest in implementing more sophisticated technology and developing new products to ensure approval.

In turn, to overcome the challenges that a firm may face in this 21st century, Human Resources Management “HRM” is a very crucial variable. It helps in making the firm more effective and efficient in its day-to-day activities and facilitates the acquisition of talented individuals through training and organizational development [5]. Thus, the conditions for an ECF to achieve client satisfaction are clear and open communication and professionalism of service. It is essential to understand the needs of clients which can be followed up by a Clients Care Manager “CCM”. Ensuring quality at every phase is a must and building rapport with the client will go a long way. All these exercises will result in client satisfaction. When the clients are satisfied, this will result in repeated business. Hence,

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new clients will be attracted due to 'word of mouth' and this will save marketing costs and ultimately, the firm's reputation will be enhanced.

A. Importance of Research

Most consulting firms depend on client satisfaction to achieve competitive advantage [6]. This is because with positive client satisfaction, consulting firms can enjoy increased loyalty, a reduced marketing effort through word of mouth and positive reviews. This also creates greater networking opportunities to grow the client base and builds a more attractive environment for recruiting the best talent [7]. In the consulting industry, clients have trouble perceiving a service advantage due to the intangible nature of the products [8]. An interesting challenge that ECFs face when trying to deliver client satisfaction is the double-edged sword of their pricing fees. Clients tend to prefer lower fees; however, lower fees provide the ECF with a smaller budget to perform their contract. With a smaller budget, it can be difficult to ensure the quality requirements that the client would prefer [9].

Without a doubt, strategies for training programs and employee engagement activities can help an organization to develop sustainable employee satisfaction. One study [10] shows that clients base their perceptions on employee intercommunication and the quality of services provided. An employee can build a relationship of trust and loyalty with the clients when they are satisfied with their jobs and are well aligned with the mission and goals of the organization [10]. In addition, another study [11], confirms the direct association between employee motivation and client satisfaction. Accordingly, findings [11] suggest that it is crucial for the organization to realize the value of talent retention to attain a stable financial position.

Consequently, this study will evaluate the impact of employee motivation on client satisfaction in Engineering Consultancy Firms (ECFs). The research findings of the study will assist in taking adequate steps for achieving desired levels of employee motivation and client satisfaction, and as a result, in improving the reputation of the organization in the business environment. Thus, the findings of this study can prove to be helpful for employers and top management. The findings of the study will also increase the knowledge base of the present literature and will help researchers to validate future results for the other organizations in the business environment. Because employee motivation and client satisfaction are important determinants of organizational success, this study will determine the objectives of increased productivity, employee motivation and client satisfaction.

B. Research Questions

Initially, this research aims to fill the research/knowledge gaps identified in the presented literature review. By conducting a study based on these gaps, ECFs will be able to understand the link and how it can benefit them. More precisely, this research will attempt to identify and test the key factors that lead to client satisfaction (CS) in the context of ECFs. The five human resource factors that will be investigated are: experience

and knowledge, motivation, proximity, professionalism, and care factor. In addition, this research will investigate the causal relationship between client satisfaction, client retention, and "word of mouth", as conventional relationship marketing consequences.

The objectives of this research are:

- To investigate the literature pertaining to the instigators of client satisfaction, especially human resource determinants.
- To investigate if client satisfaction increases the likelihood of client retention and improved organisational reputation through "word of mouth" for ECFs.
- To provide a set of recommendations for ECFs to improve their client satisfaction and retention.

Furthermore, to fulfil the aim of the study, the following research questions have been framed:

1. What theories can be applied to Small or Medium Engineering Consulting Firms in order to achieve better performance results?
2. What is the influence of the Human Resource Management on Client Satisfaction?
3. What are the relationships between Client Satisfaction, Client Retention, and "Word of Mouth" and reputation?
4. What benefits can Engineering Consulting Firms (ECFs) achieve from understanding the HR determinants of Client Satisfaction?

II. LITERATURE REVIEW

Employee motivation and client satisfaction are two vital concerns of any organization. Their contribution to the company's image is crucial in determining the views that clients keep in mind while thinking about the organization's behaviour and actions. Loyalty to the organisations' clients incurs capital investments which should include employees' motivation to achieve the company's non-monetary and economic objectives. Organizations are increasing their efforts to ensure that harmony exists between employee motivation and client's satisfaction to increase the chances of success.

Accordingly, client satisfaction is a significant indicator of client retention and also indicates their purchase intentions [12]. The level of client satisfaction provides the company with a real picture about the degree to which products and services are satisfactory to the end consumer. Likewise, client satisfaction has a strong link to organisational success. Consulting firms that can ensure a positive client experience can gain a strong competitive advantage over their rivals. For these reasons, client retention is crucial [13] for a company. Retaining a client is more important than acquiring a new one. Clients' satisfaction is thus considered as a basis for client retention as our goal is to meet their needs and requirements. When clients are happy, there are limited chances that such clients will shift to the rival for the same or similar products. Furthermore, organizations focus on client satisfaction strategies because without satisfied clients there is no business [14].

It should be noted that the impact of trust has been investigated [15] along with its implications on future relationships and choice of future purchase. High organisational

performance is then a prediction on managers' commitment to organisational goals, which, in turn, can be reflected in their attitudes and actions. The objectives of an organisation are influenced by the level of employee satisfaction, support, respect, and working conditions. It is to the benefit of an organisation to ensure the social and psychological well-being of their employees to ultimately ensure greater productivity.

In his famous Hierarchy of Needs, Abraham Maslow intensely talked about the second rung -the sense of belonging. This stresses that managers with a sense of belonging are more dedicated, engaged, and motivated when executing assigned tasks. They are known to have greater confidence, interest, enjoyment, and enthusiasm when engaged in organisational activities. Managers not only work harder to provide better services, but also step outside their comfort zone to deliver quality services that are in alignment with client needs. A study [16] demonstrated that employees with a sense of belonging exhibit greater dedication in delivering services with improved quality. The argument is grounded on the theory of equity in social justice, which preaches that transactions can potentially pave the way for high-quality relationships [17]. When managers are accorded social gifts that are beyond their expectations, they tend to develop a sense of belonging, responsibility and satisfaction, which, in turn, makes them more focused on addressing the needs and concerns of their clients.

In addition, the inability to cultivate relationships with clients often accompanies the failure to understand different personalities and communication styles, but this is a problem that can be addressed through effective training. Training and development provide a framework of understanding clients, which then makes it easier for members of an organisation to understand the needs and the problems of clients. Thereafter, the appropriate strategies can be developed to resolve these problems whilst minimising stress [18].

Above all, Abraham Zaleznik wrote the first landmark scholarly article that encapsulated the distinction between leadership and management. In this regard, [19] asserted that whilst both managers and leaders are needed in an organisation, they each make different contributions. For instance, with respect to goal setting, leaders articulate a vision and create the future; on the other hand, managers execute the plan and improve the present. Managers are branded with the tendency to exercise authority, promote stability, and focus on getting things done. In contrast, leaders pay close attention to the adoption of changes, new approaches of boosting productivity; they focus on the beliefs of people with in order to boost their commitment [19], [20]. Certain scholars [21] contend that the two are diametrically opposite as they speculate that a good manager cannot be a good leader and vice versa.

Subsequently, when the members of an organization are motivated to encourage open communication and engage in healthy relationships with one another, this definitely will have a positive effect on client satisfaction and loyalty [22]. A commitment in relationship management [23] can be created through interactions, reciprocity and trust. By investing the time and effort into affective commitment, it "creates psychological bonds that encourage clients to stay in that relationship and sets

an expectation of reciprocation" [23]. Apart from this, [24] found three elements that constitute the quality of employee relationships-conflict handling, commitment, and trust. Reference [25] also considers commitment and trust as the elements of relationship quality. Within the context of the consumer market, the involvement or interaction of clients does not differentiate among the person offering the service and the company itself.

Last, but not the least, the focus is on employee care factor. Highly engaged employees that care about their work and their clients are a key link to client satisfaction, performance outcomes and loyalty. When employees know that they are cared for, they become more engaged, dedicated, committed, and take more initiative in their work [26]. Furthermore, employees with the highest levels of commitment usually show higher performance by about 20% [27]. In particular, some organisations define employee engagement as "going above and beyond" what is expected of them in their work roles [26]. Briefly, employee engagement is often defined as an "emotional and intellectual commitment" to the organisation [26]. It is a state where employees can value, enjoy and believe in what they are working for. Employees that are not engaged will often waste their time and effort on tasks that do not matter and are often dissatisfied and do not complete tasks with full commitment. So, when employees feel more engaged in their work, they are more likely to offer better quality service, thus improving client satisfaction and promoting client loyalty [27].

III. HYPOTHESES

This study used a mixed methods research to analyse the causality and correlation between clients' gratitude and managers' motivation. Triangulation, both quantitative and qualitative investigation was utilized. Qualitative analysis was used to explore the market and justify the set of hypotheses that were devised. Qualitative research methods often use small sample sizes and involve techniques such as in-depth interviews, open-ended surveys, focus groups, and uninterrupted observations [28]. On the other hand, quantitative analysis is described as "*being scientific in nature*" due to its more rigorous approach in its use of "*scientific methods for data collection and analysis*" [29]. In turn, quantitative methods are used to verify data and models, and due to their large sample sizes and ease of replicability, the results can be confidently extrapolated to the general population [29]. Since the theme of this research is the determinants of client satisfaction, we chose not only quantitative but also qualitative methodology to analyse and verify the effects.

An employee is able to build a relationship of trust and loyalty with clients when they are satisfied with their jobs and feel they are well aligned with the mission and goals of the organization. As such, for organizations to ensure the highest success rate, it is essential for them to develop positive work environments. Research [30] recommended that if a company wants its employees to be fully dedicated, they should provide them with learning and growth opportunities. In addition, it found that providing effective learning or growth opportunities and benefits to employees can significantly increase employee

dedication. In turn, the dedicated employees will strive to help the organization to meet its strategic objectives. Moreover, this research proved that employee pro-social behaviour and dedication are positively related to the improvement in the perceived transformational leadership execution. For these reasons, when employees feel that managers are implementing a high-level transformational leadership approach, they display dedication and pro-social behaviour [24]. Fig. 1 shows the final conceptual model.

IV. METHODOLOGY

This section will highlight the methods, processes and activities that were performed in this research. Background knowledge for the analysis will also be provided to explain what software contributed to the data analysis and as a result, answered the questions presented in part one and justified the hypotheses presented in part three.

For one thing, the introductory questionnaire included items pertaining to the general background of the firms. The various other questionnaires were each specific to the variables that formulated both the questions and hypotheses. For instance, the variables covered client satisfaction, needs, preference; employee experience, knowledge, motivation, professionalism; and the overall care factor, retention and word-of-mouth. Ultimately, the process of preparing, codification, distribution, collection, and analysis of data was initiated. The results were used to establish the proposed model and were tested using statistical software such as, the Statistic Package for Social Science Statistics 24: IBM-SPSS Statistics 24 and IBM-SPSS-AMOS 26. The primary use of SPSS is for data and variable organisation and management and it provides a valuable tool to manage the data that was imported into SPSS from a Microsoft Excel file after the results were extracted from the survey package Jot-form.

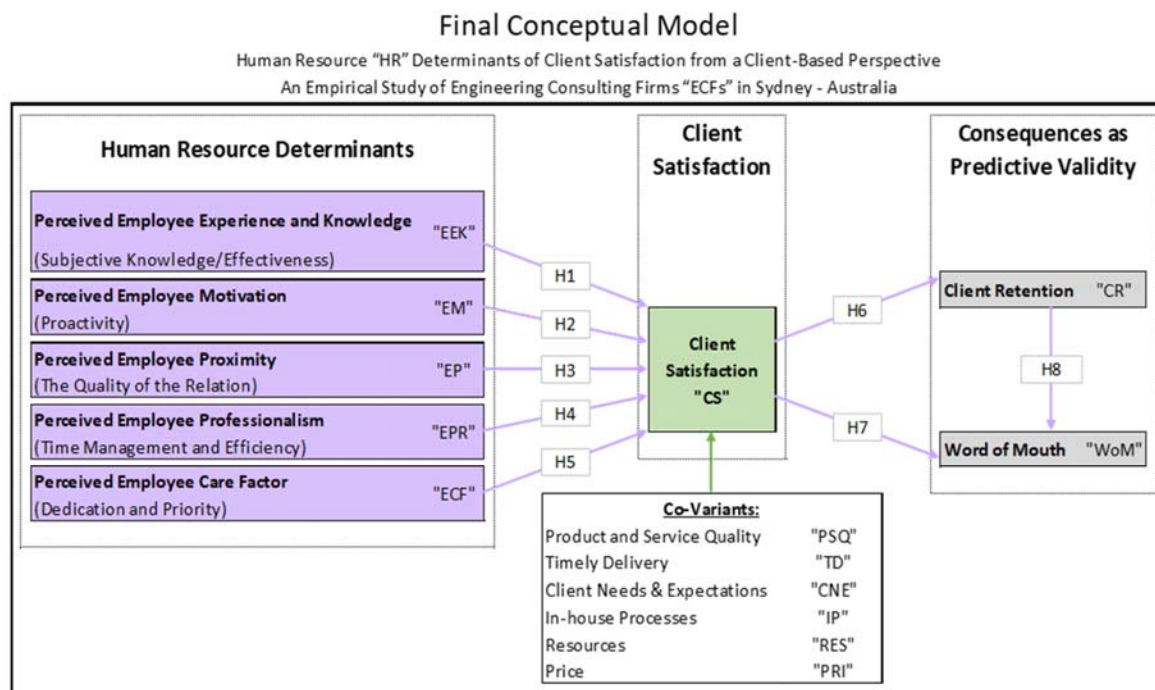


Fig. 1 Final Conceptual Model

For clarification, the introductory questions requested information from the clients to validate the respondent ensuring that they belong to the target audience. This information was also used to group each respondent by certain demographics and controls, such as age, position, experience with engineering consultants, value of project, and type of engineering consultant used. Definitely, anonymity of the respondents was assured and so questions were designed carefully so as not to identify participants; the engineering firms that were part of the sample are prominent and successful members of Australia's elite. To elaborate, the seven-point Likert scale was employed so that the survey was able to meet the requirements of validity and reliability that were measured by Cronbach's Alpha.

At this time, there was much debate as to how large the

sample should be and in accordance to the context of the study, numerous sample sizes were considered. A consensus among researchers is that a sample size of approximately two hundred is usually suitable [31], [32]. There is also evidence that a meaningful analysis can be conducted with at least one hundred samples [33]. Nonetheless, ACE decided to opt a random selection of one thousand that had been their clients for the last three years. The online survey on jot-forms was distributed via email to the above-mentioned clients. Of the one thousand emails, 273 bounced back, indicating that it was the wrong email or that the person no longer worked at this firm or address. Along with this, of the remaining 727 emails that were delivered, only 256 clients responded indicating a response rate of approximately 35%.

Once the data had been screened, the dataset was ready for the exploration of the quality of the measurement scales using an Exploratory Factor Analysis (EFA). EFA is used for the exploration of the underlying structure among initial variables (or items) included in the analysis. It helps determine if these initial variables are factorizable, and if the computed factors are interpretable. The EFA is a statistical approach that groups variables with strong correlations together to give a factor structure [34]. An important aspect of the EFA is that the analysis is not dependant on these constructs [34]. Rather, the EFA will identify the number of latent factors and the variables that strongly group with each latent factor based on the correlations of the observed variables.

Moreover, Structural Equation Modelling (SEM) is a technique used primarily in social and behavioural sciences and can be described as “a combination of factor analysis and regression or path analysis” [35]. A major advantage of SEM is its ability to measure theoretical constructs through the use of *latent variables*. Latent variables are factors that cannot be directly observed themselves but can be inferred mathematically from the use of a number (usually 3-6) of observed variables [36]. In contrast, as the name suggests, an *observed variable* is a factor that can be directly measured itself. In the case of this research, the latent variables will represent the HR determinants while the observed variables will be the survey question responses which can be directly measured and it allows researchers to assess their theories using a testable model [37].

On the whole, there are two types of variables: latent variables (unobserved variables) and measured variables (observed variables). In social science research, many variables cannot be directly measured such as the behavioural dimensions and so are placed as latent variables in the model. The reason why the behavioural dimensions are latent variables instead of measured variables is that these concepts are complex and multifaceted- a single measure will not adequately cover the whole dimension. For example, there are many variables that will be needed to cover the entirety of employee professionalism such as their appearance, manners and ethics. Measured variables, on the other hand, are variables where there is a measurement for that dataset. For instance, in the Client Retention questionnaire, one statement was: “In the future, I will use the ACE consultant for most of my engineering consultancy needs” and participants gave a score between one and seven giving an exact measurement for their retention level.

Likewise, the reliability of the measurement scales will be tested using Cronbach’s alpha which is widely used to measure reliability in social sciences [38]. Cronbach’s alpha measures the connection and consistency for a set of variables that are placed together as a factor. As a rule, the Cronbach’s alpha value for each factor should be above 0.7 [38]. Furthermore, there are two types of validity to account for- Convergent Validity and Discriminant Validity. The aim of convergent validity is to verify that the variables in each dimension are correlated with each other or share a high proportion of variance. For convergent validity, there are three values that need to be checked which are the standardised factor estimates,

the average variance extracted and composite reliability. Discriminate validity aims to verify whether there is a distinct difference between latent constructs. To measure discriminant validity, the square root of the average variance extracted is compared to the estimated correlations between the constructs.

Briefly, correlation coefficients measure the amount of shared variance that occur between two variables. The value of this coefficient determines the relationship between the relative movement of the two variables. Clearly, correlation coefficients range in value between -1.0 and 1.0 – whereby a positive value means that the two variables move in the same direction and a negative value means that they move in opposite directions. Altogether, this research will use the criteria defined by the Multivariate Data Analysis [39] for establishing reliability and validity of the factors.

V. RESULTS

First and foremost, the results related to the descriptive statistics revealed that the majority of the respondents are in total agreement with the item of Customer Satisfaction. Therefore, it is concluded that customers are satisfied with the service provided by the ACE consultant. In addition, their experiences with the ACE consultant are excellent and they are highly pleased with overall performance.

To clarify, let’s explore the results of each of the variables that are the focus of this study. In terms of customer needs and expectations, the results confirm that mainstream participants revealed their total agreement. Hence, it is concluded that ACE consultants always offered as much information as needed. Moreover, employees spent an adequate amount of time sharing their needs with the ACE clients during the project. It is also found that ACE consultants surpassed the level of expectations and never disappointed their clients. The above is also related to timely delivery and entails that a large proportion of respondents agree that ACE consultants met deadlines and are highly punctual. In other words, ACE consultants made excellent choices and implemented time management. In short, ACE consultants are extremely dependable.

As for the quality of products and services, the data revealed that adequate agreement levels were observed. It is thus concluded that services provided by the ACE consultant are reliable and demonstrated overall quality. Additionally, the analysis of outcomes stressed that due to adequate training and development, ACE consultants are always expected to perform satisfactorily. This is due to the fact that all in-house processes are instigated professionally so as to achieve successful project completions that meet client requirements.

Similarly, the data and results related to employee experience and knowledge confirmed that all respondents revealed the higher scale agreement with the statement that products and services that ACE consultants presented demonstrated the expected quality for money. In addition, ACE consultants are well informed and knowledgeable affirming that they are proficient, competent and experts in their fields and execute their jobs both effectively and efficiently.

In particular, the findings regarding employee motivation confirm that overall greater motivational levels are found to be

prevalent. The strong agreement level confirms that ACE consultants verified strong commitment and loyalty towards their jobs and fulfil their goals in the best possible fashion. Unquestionably, ACE consultants are found to be highly motivated.

Correspondingly, the survey findings regarding employee professionalism that was highlighted previously attested that strong agreement is evident for the demonstration of respect by ACE consultants. These consultants readily presume responsibility for decisions, choices and errors. The results also confirmed that ACE consultants' clothing, grooming, and hygiene consistently portrayed a professional appearance. As such, the ACE consultant is considered to be highly straightforward, sincere, truthful, and sincere, but the results did not reflect that professionalism influenced Customer Satisfaction.

The outcomes regarding the Employee Proximity confirms that higher agreement scale affirms that ACE Consultant connected to life and experiences and takes an account of other perspectives. The ACE Consultant knows how to construct a close relationship during a project. The results also confirm those ACE consultants are aware about the effective treatment of client.

Furthermore, the outcomes of the employee care factor especially confirmed that ACE consultants displayed extra effort to meet their clients' needs. For instance, they were always ready to comply by working late, extra hours or on weekends; they were always accessible. Obviously, this ascertains that ACE consultants were well equipped to provide a suitable resolution to any problem encountered during the project.

Finally, the data regarding customer retention and word-of-mouth revealed that clients are loyal to the consultants of ACE. In the forthcoming future, clients are more prone to utilize the ACE consultant for any engineering deliberation. Besides, the majority of respondents confirm that ACE is the firm of choice when it comes to engineering consultancy services. Likewise, the results regarding word-of-mouth validates that respondents are more inclined to maintain a positive attitude where ACE consultants are involved. In sum, the majority of respondents are in harmony and are adamant and keen to recommend the services of ACE consultants to others.

Accordingly, the eight hypotheses stated above are justified and fully supported except for the effect of Professionalism and Proximity on Customer Satisfaction.

Clients that have strong relationships with consultants are assured that they will continue to meet their expectations due to precedence. Switching to a new consultant means confronting uncertainty in the quality of the project. This explains why clients are more likely to do business with people they have a good relationship with. As such, employee relationship quality is an essential element in ensuring the repeat purchase decision by clients as compared to the price competition or contractual agreement. Thus, Employee Proximity is good, and the employee is aligned with the Client then this should lead them directly to repurchase decisions.

We therefore suggest a direct and positive influence of

perceived employee proximity on client retention, and this Hypothesis was tested and successful.

VI. DISCUSSION

At this point, we would like to emphasize that this study was conducted for the requirements of a Doctorate in Business Administration dissertation. This chapter has aimed to present as fully and as concisely as possible the findings of the data analysis that contributed to the overall justification of context. It is worthy to note that all documentation-text clarifications, full interview transcripts, letters sent to participants to ensure ethical behaviour, descriptive analysis of data, quantitative and qualitative analysis in the form of matrixes, tables, graphs etc.- is available in the original dissertation.

This research conducted a SEM analysis on the influence of human resource determinants of engineering consultants on client satisfaction. In the initial proposed conceptual model, there were determinants such as experience and knowledge, motivation, proximity, professionalism, and the care factor. Namely, the results showed that experience and knowledge, motivation, and Care led to a positive effect on client satisfaction, which in turn directly influenced client retention and word of mouth. More precisely, the results from the analysis revealed that employee professionalism had a negative effect on Customer Satisfaction which is a strange effect which needs to be explored further and that Employees Proximity had no effect on Customer Satisfaction but Rather on Customer retention. It was further demonstrated and supported that client satisfaction leads to a higher likelihood of client retention and positive word of mouth.

Based on these basic findings, ECFs can now understand that a consultant's experience and knowledge are crucial behavioural dimensions. If ECFs are aiming to retain their clients and create a positive word of mouth, they must initially ensure client satisfaction and guarantee that their employees offer effective and efficient outcomes. Specifically, Perceived Employee Experience and Knowledge followed by Perceived Employee Motivation and then followed by Perceived Employee Care factor show a standardised Direct Effect of 0.47, 0.335, and 0.202 respectively. Moreover, the data analysis proved that the effect of Client Satisfaction on Client Retention was very high and positive with a standardised Direct Effect of 0.45. Following that, the effect of Client Satisfaction on Word of Mouth was also high with a standardised Direct Effect of 0.559. Furthermore, the effect of Client retention on Word of Mouth was also positive but with a smaller standardised Direct Effect of 0.433. All the above-mentioned hypotheses were supported with significant p-values.

What is more, the findings conclude that client satisfaction, client retention, and word of mouth are all strongly related to each other in the engineering consulting industry. That is, satisfied clients are more likely to continue to employ the services of an engineering consultant and recommend them to others, while the opposite is also true. This finding confirms the importance of client satisfaction for ECFs as it is directly related to the ability to better retain clients and enhance the firm's overall reputation in the industry.

Moreover, it can be concluded that through the alternative model, the Engineering Consultants Proximity has a positive and significant impact on Client Retention. The Proximity dimension asked the clients about the consultant's connection to the client's life and experience, if the consultant was able to consider the perspective of the client, if the consultant was able to take into consideration the input from the client, and if the consultant knows how to treat the client.

In fact, 34.6% of the clients in the survey totally agree that ACE consultants connected to the life experience of the clients. Similarly, 44.7% of the clients totally agree that ACE consultants were able to incorporate the needs of the clients while 46.2% totally agree that ACE consultants are able to establish rapport with the clients. Overall, 55.8% of the clients were in total agreement that that ACE consultants understand and know how to treat clients. Equally important is that over 50% of the clients totally agreed that ACE consultants consistently showed respect for others, readily assumed responsibility for performance. In short, consultants are always well groomed and display professionalism at all levels.

Furthermore, evidence revealed 45.2% of the clients in the survey totally agree that ACE consultant always took initiative and went out of their way to meet their needs. In doing so, clearly 51.9% of the clients agree that ACE consultants provided satisfactory resolutions to any problems encountered throughout the job. In general, over 50% of the clients also agree that ACE consultants have very good client relationship management and regard them highly in the industry. This is not surprising knowing that ACE just celebrated 25 years of service to the Construction industry and the majority were repeat clients and over 45% have been dealing with ACE for more than ten years.

In summary, it is notable that the significant implications and outcomes of this research include the experience and knowledge that ACE consultants have to offer. In addition, the level of motivation and care that ACE consultants display have been translated into the required client satisfaction. Accordingly, it is clear that almost 60% of the clients that were surveyed totally agree that they are likely to say positive things about ACE consultants, are likely to recommend the services of ACE consultants, and are likely to suggest ACE consultants if they are asked to recommend an engineering consultant.

Limitations and Future Research

Initially, the original scope of the study aimed to compare results based on different demographics such as gender, age, project type and size, engineering discipline, and prior experience with engineering consultants. However, an accurate analysis [32] should consist of a minimum of one hundred samples per group but unfortunately, this was not possible. The study showed 88.1% of the respondents were males, 70.4% of the responses were from the structural discipline, and 74% of the responses were based on residential projects. Surely, the results from this study should be carefully applied universally. Thus, it is unknown if the data would differ for female clients, other disciplines, and different project categories. Moreover, when identifying the determinants of client satisfaction, this

study focuses only on the human resource determinants of the consultant whereas client satisfaction has been found to also include non-behavioural determinants, such as time, cost, and quality.

Overall, the scope of this research focused on the context of ECFs in Sydney, Australia. Indeed, client satisfaction is a broad concept and can be extended to various frameworks. However, to keep the scope of this study applicable and relevant to engineering firms in Australia as a whole, then a study should certainly focus on the industry of engineering consultancy in Australia. Nevertheless, caution must be taken when extending the findings of such a study to other fields or regions as it is possible that the results may vary depending on cultural differences and industry norms.

Hence, further research that can be conducted to heighten the findings for future implementation may include the following themes, to list a few:

1. A focus on employee professionalism and its underlying phenomena with a specific research on its mediating and moderating effects.
2. The inclusion of non-behavioural controls such as price, time, and quality in the model.
3. Comparing results from different demographic groups, such as gender, age, project type, project size, engineering discipline, and prior experience with engineering consultants. As [32] recommends, a minimum of one hundred samples per demographic group would require a larger sample size of approximately one thousand.
4. Expanding the scope of the study-to-study client satisfaction in a variety of different contexts such as industry and region. In addition, further research may possibly attempt to perform this study for a universal context.

VII. CONCLUSION

To summarize, this research achieved an analysis on 221 samples in order to investigate two outcomes:

1. To identify, measure, and compare the impact that the Human Resource determinants of an engineering consultant have on client satisfaction.
2. To measure the impact that client satisfaction has on client retention and word of mouth reputation of ECFs.

For interpretation, the literature review identified essential HR determinants of engineering consultants to be knowledge and experience, motivation, professionalism, and care factor. Following this, a set of hypotheses were formulated to highlight that these factors had a positive and direct effect on client satisfaction. A questionnaire was designed and distributed to various clients of an ECF in Sydney, Australia; the response rate was 35% with a sample size of 256 and 221 valid responses were collected. Namely, it was discovered that due to high squared multiple correlations of the endogenous variables, there was enough statistical power to support the significance found for each HR determinant's impact on client satisfaction.

Thereafter, an extensive EFA of the data found that the questionnaire items loaded as expected to the original HR determinants. After a review of the questionnaire items and the

data results, a Confirmatory Factor Analysis (CFA) and a Path Analysis were performed on the model that exhibited sufficient-to-good reliability, validity, model fit, and squared multiple correlation. These findings correspond with [6] who stressed the importance of the “unwritten expectations” that clients desire but do not clearly state.

In conclusion, ECFs that are able to guarantee client satisfaction are more likely to retain those clients as well as receive recommendations that helps them gain new clients. Specifically, it should be comprehended that experienced, knowledgeable and motivated employees will always have the greatest and desired impact on client satisfaction. Without a doubt, these firms should not only be aware of but also acknowledge that when their employees are satisfied, this will translate into satisfied clients and ensure satisfactory end products.

REFERENCES

- [1] Akroush M.N. & Abu E. (2012). An empirical investigation of the mediating role of relationship marketing skills on the relationship between Clients satisfaction and Clients loyalty. Vol. 7, Issue. 1, pp. 1-30.
- [2] Lam S.Y., Shankar V., Erramilli M.K. & Murthy B. (2004). Clients value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. Vol. 32, Issue. 3, pp. 293-311.
- [3] Rashvund, P. & Majid, M. Z. A. (2014). Critical Criteria on Client and Clients Satisfaction for the Issue of Performance Measurement. *Journal of Management in Engineering*, 30(1), 10–18.
- [4] Stefan M.C. & Dogaru M. (2012), Organizarea activității antrenarea angajaților, coordonarea și controlul activităților, Dezvoltări social-economice Vol. 2, pp.65.
- [5] Androniceanu A. (2011). Motivation of the Human Resources for a Sustainable Organizational Development. Ed.1.
- [6] Chelliah, J. & Davis, D. (2011). What Clients Really Want from Management Consultants: Evidence from Australia. *Journal of International Management Studies*, 6(1), 22–30.
- [7] O'Donnell, J. (2017). The benefits of building long-term business relationships. *Frazer John Recruitment*. Retrieved from: <https://frazerjohn.com/insights/the-benefits-of-building-long-term-business-relationships/>
- [8] Haverila, Matti & Bateman, Earl & Naumann, Earl. (2011). The drivers of Clients satisfaction in strategic consulting engagements. *Management Decision*, 49(8), 1354–1370.
- [9] Tang, S. L., Lu, M., & Chan, Y. L. (2003). Achieving Client Satisfaction for Engineering Consulting Firms. *Journal of Management in Engineering*, 19(4), 166–172.
- [10] Ganesh, A. (2016). Understanding the Relationship between Employee Motivation and Clients Retention. *Vilakshan: The XIMB Journal of Management*, 13(1).
- [11] Martinaityte, I., Sacramento, C., & Aryee, S. (2019). Delighting the Clients: Creativity-oriented high-performance work systems, frontline employee creative performance, and Clients satisfaction. *Journal of Management*, 45(2), 728-751.
- [12] Hill, N., & Brierley, J. (2017). *How to measure Clients satisfaction*. London: Routledge.
- [13] Ennew, C. T., Binks, M. R., & Chiplin, B. (2015). Clients satisfaction and Clients retention: An examination of small businesses and their banks in the UK. In *Proceedings of the 1994 Academy of Marketing Science (AMS) Annual Conference* (pp. 188-192). Springer, Cham.
- [14] Mohsan, F., Nawaz, M. M., Khan, M. S. Shukat, Z., & Aslam, N. (2011). Impact of Clients satisfaction on Clients loyalty and intentions to switch: Evidence from banking sector of Pakistan. *International Journal of Business and Social Science*, 2(16), 263-270.
- [15] Doney, P and Cannon, J (1997). An Examination of the Nature of Trust in Buyer-Seller Relationships. *Journal of Marketing*, Vol. 61 (April 1997), 35-51.
- [16] Yoon, M. H. & Suh, J. (2003). Organizational Citizenship Behaviours and Service Quality as External Effectiveness of Contact Employees. *Journal of Business Research*, vol. 56, no. 8, pp. 597-611.
- [17] Organ, D. W. (1977). A Reappraisal and Reinterpretation of the Satisfaction-Causes-Performance Hypothesis. *Academy of Management Review*, vol. 2, no. 1, pp. 46-53.
- [18] Mouawad, M. & Kleiner, B. H. (1996). New Developments in Clients Service Training. *Managing Service Quality: An International Journal*, vol. 6, no. 2, pp. 49-56.
- [19] Zaleznik, A. (1977). Managers and Leaders: Are They Different? *Harvard Business Review*, vol. 55, no. 3, pp. 67-78.
- [20] Hasham, E.S., (2012). *Organizational Behaviour: Arab World Edition*. U.K.: Pearson: Prentice-Hall.
- [21] Yukl, G. (1989). Managerial Leadership: A Review of Theory and Research. *Journal of Management*, vol. 15, no. 2, pp. 251-89.
- [22] Johnson, M., & Gustafsson, A. (2005). The effects of Clients satisfaction, relationship commitment dimensions, triggers on Clients retention. (study on telecommunications services). *Journal of Marketing*, 69(4), 210–218. Doi:10.1509/jmkg.2005.69.4.210.
- [23] De Wulf, K., Odekerken-Schroder, G., & Lacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of Marketing*, 65(4), 33–50.
- [24] Bratton, J., & Gold, J. (2017). *Human resource management: theory and practice*. Palgrave.
- [25] Gazzoli, G., Hancer, M., & Park, Y. (2010). “The role and effect of job satisfaction and empowerment on Clients’ perception of service quality: a study in the restaurant industry. *research of hospitality and tourism research*, 34 (1), 56-77.
- [26] Sundaray, B. (2011). Employee Engagement: A Driver of Organizational Effectiveness, *European Journal of Business and Management*, 3(8), 53-59.
- [27] Swarnalatha, C., & Prasanna, T. (2013). Leveraging Employee Engagement for Competitive Advantage: Strategic Role of HR. *Review of HRM*, 2, 139–148.
- [28] Hammarberg, K., Kirkman, M., & de Lacey, S. (2016). Qualitative research methods: When to use them and how to judge them. *Human Reproduction*, 31(3), 498–501.
- [29] Daniel, E. (2016). The Usefulness of Qualitative and Quantitative Approaches and Methods in Researching Problem-Solving Ability in Science Education Curriculum. *Journal of Education and Practice*, 7(15), 91–100.
- [30] Hanaysha, J. (2016). Examining the effects of employee empowerment, teamwork, and employee training on organizational commitment. *Procedia-Social and Behavioral Sciences*, 229 (2), 298-306.
- [31] Hoogland, J. J. & Boomsma, A. (1998). Robustness Studies in Covariance Structure Modeling: An Overview and a Meta-Analysis, *Sociological Methods & Research*, 26(3), 329–367.
- [32] Kline, R. B. (2005). *Methodology in the Social Sciences. Principles and Practice of Structural Equation Modeling (2nd ed.)*. New York, NY, US: Guilford Press.
- [33] Tabachnick, B. G. & Fidell, L. S. (2001). *Using Multivariate Statistics (4th ed.)*. Boston, MA, US: Allyn and Bacon.
- [34] Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications (1st ed.)*. Washington, DC: American Psychological Association.
- [35] Hox, J. J. (1999). An Introduction to Structural Equation Modeling. *Family Science Review*, 11, 354–373.
- [36] Sauro, J. (2016, November 22). The Difference Between Observed and Latent Variables. (Blog Post), Retrieved from <https://measuringu.com/latent-variables/>.
- [37] Violato, C. & Hecker, G. (2007) How to Use Structural Equation Modeling in Medical Education Research: A Brief Guide, *Teaching and Learning in Medicine*, 19:4, 362-371, doi: 10.1080/10401330701542685
- [38] Bonett, D., & Wright, T. (2015). Cronbach’s alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, 67(3), 3–15. <https://doi.org/10.1002/job.1960>.
- [39] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E., & Tatham, R. L. (2014). *Multivariate Data Analysis (7th ed.)*: Prentice-Hall, Inc. Upper Saddle River, NJ, USA.