Research Article

The Effects of Structured Planning on Business Virtual Negotiations after the Pandemic

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Abstract:

Covid-19 coronavirus pandemic has brought with it the need for the reinvention of human beings in virtually every area of knowledge. New paradigms and challenges, such as social isolation and urban mobility restrictions, are being overcome with innovations arising from the need to overcome the economic adversity caused by the pandemic, bordering on collapse on a global scale. In this context, developing negotiation skills as a mechanism of social interaction has never been more necessary in the so-called Age of Innovation as a peaceful method of dispute settlement. In this article, we analyze the challenges of distance negotiation through a non-parametric analysis of N=733 Brazilian business negotiations, with a confidence interval of 99 percent. The results indicate statistical significance in the planning and effective structuring of the negotiation. The analysis of primary data and discussion complements the present work. Ultimately, we present best negotiation practices recommendations useful to negotiators, scholars, academics, decision-makers, and other interested parties.

Keywords: Business Administration; Virtual Negotiation; Non-parametric analysis

Introduction

On March 11, 2020, the World Health Organization (WHO) declared the outbreak of the Covid-19 coronavirus a pandemic with no cure at the time of writing. From then on, severe measures of restriction of urban mobility, lockdowns, social isolation, home office, and mass vaccination became part of our standard dictionary. As a consequence, in addition to the hundreds of thousands of lives lost, there has been a significant reduction in business activity, with shocks to both the supply and demand of products and services, forcing both consumers and companies and service providers to adapt to face the crisis on a global scale. Disturbances in economic activity affected production, interfering with the supply curve, while consumer reaction altered demand for goods and services.

Innovations have become the order of the day to provide solutions to avoid the collapse of the global economy. In this context, the negotiation process has undergone adaptations: from face-to-face, the negotiations became primarily remote, with their mishaps and challenges.

Before the pandemic, negotiations took place sequentially: negotiating indoors with family members, then negotiating in the office with their peers, then negotiating with clients at different times, hence sequentially. With the advent of the pandemic, negotiations became parallel and within a unique environment, that of the home office, that is, from inside the home, all at the same time. Concerns about image and background noise, internet signal quality, sound and lighting, and the lack of crucial nonverbal language cues began challenging negotiators. They demanded creative and adaptive solutions to the so-called new normal of negotiations in the Age of Innovation. Remote negotiation has gained a scale never before experienced. Innovations and improvement in the Art of Negotiation have become the cornerstone for the survival of the species threatened by the process of natural selection caused by the coronavirus within humanity.

Therefore, this article addressed the theme of negotiations in the era of Innovation, because of the gravity of the situation faced by the population of the planet due to the pandemic and the change in work, leisure, and consumption habits, in addition to the need for solutions that minimize the impact on Brazilian business activity, through effective negotiations, whether virtual or in-person. In this unprecedented study, N=733 Brazilian business negotiations were statistically analyzed in a situational and structured way (Dias, Lopes & Duzert, 2020), with a confidence interval of 99 percent, in order to answer the following research question: (i) is there relevance and statistical significance in the structured planning of a negotiation? Given the paradigm shifts mentioned in the previous paragraphs, the question is justified by the need to improve diplomatic negotiating skills. Therefore, the topic has attracted the attention of recent research on the negotiation process (Dias, 2021, 2021b, 2021c, 2021d; Dias, Lopes, 2021; Dias, Dias, Lopes & Duzert, 2021, 2020; Salacuse, 2006; Fisher, Ury & Patton, 1994; Ury, 2015; Duzert, 2007; Duzert; Lempereur &

Colson, 2009; Bazerman, 2004; Stone et al., 2012; Susskind, 2009).

Negotiation is defined as "a communication process by which two or more people seek to advance their interests through joint action." (Salacuse, 2006, p. 7) or "a process of communication back and forth to reach a joint decision." (Fisher, Ury & Patton, 1994, p. 21). Among the various ways of classifying negotiations, we follow two: (i) structured negotiations versus situational negotiations (Dias, 2020e) and (ii) negotiations regarding the number of negotiators and matters negotiated (Dias, 2020). Here, structured negotiation is carried out with prior, systematized, and technical planning. On the other hand, situational negotiation is carried out without adequate preparation; therefore, a reactive negotiation is based only on trial and error and past experiences (Dias, 2020e).

The results, statistical analysis, and discussion are presented in the following work, as well as the interpretation in the light of the negotiation process, supported by the Dramaturgical theory of Goffman (1975). Trades are classified in several ways. This work was followed by the Matrix of the Four Types of Negotiation, according to Dias (2020), which in turn classified a negotiation into four categories or types I, II, II, and IV, according to the number of parties and matters negotiated, namely: (i) negotiation Type I, two parties, one matter negotiated; (ii) Type II negotiation; two parts; multiple matters negotiated; (iii) Type III negotiation, multiple parties, one negotiated subject, and (iv) Type IV negotiation multiple parties, multiple negotiated matters, as illustrated in **Figure 1:**

Figure 1 The Four-Type Negotiation Matrix. Source: Dias, 2020. Reprinted under permission

In this article, only Type I management negotiations were investigated, that is, two parties with a subject at the negotiating table, namely: (i) value of the agreement (dependent variable: DEAL). The results were obtained after the application of 733 Type I negotiation cases, as described in the following section. The research questions are discussed in the conclusion section of this research. In this study, the Shapiro-Wilk Test for normality was applied to the analyzed negotiations. Figure 2 demonstrates the equations of the Shapiro-Wilk Normality test:

$$W = \frac{\left\{ \sum_{i-1}^{n} a_i \left(x_{(n-i+1):n} - x_{i:n} \right) \right\}^2}{\sum_{i=1}^{n} (x_i - \bar{x})_2},$$

Fig.2: - Shapiro-Wilk Normality Test Equations

The present work presents the methodological procedures, hypothesis, results, analysis, and discussion below. In the next section, the research design is discussed, as well as the other research procedures and limitations.

Methods and Materials

The current research approach observed positivist and deductive logic. A series of statistical tests were applied to the data set analyzed, totaling N=733 Brazilian negotiations. The confidence interval adopted for the present study is 99 percent ($p < .010$); that is, the chance of occurrence of the phenomenon on screen at random is less than 1 percent. The same case of Type I business negotiations (Dias, 2020) was applied to 1,066 participants distributed among the five Brazilian regions between January 2019 and August 2021, resulting in a primary data set of 733 agreements. Data were analyzed using the statistical software IBM SPSS version 26, in Portuguese, do Brasil. The ethnographic data of the participants are presented below: s 64 percent were male, 33 percent female, 69 percent the medium to high-level management positions, and 25 percent held low-level management positions.

In this sample, 85 percent are employed, of which 60 percent are Caucasian, 35 percent married, 50 percent single, divorced, or 15 percent others; 60 percent are between 25 and 35 years old, 25 percent over 34 years old, with a time of experience business negotiations of five years on average. The negotiations took place in quiet locations with no significant background noises. There was no participation of third parties or any facilitators in the process. Participants were given confidential instructions from each side. After reading and preparing 30 minutes, the negotiation and presentation of the results followed, totaling 12 minutes on average of negotiations, carried out both in day and night sessions, that is, inside and outside business hours. The whole exercise lasted 1 hour on average. In all, 1,066 MBA and LLM students in various courses participated in the experiment. Of the total negotiations, $n1 = 361$ were carried out without prior preparation, and $n2 = 372$ were added 30 min prior to the negotiation, using specific material provided by the researcher.

Before the pandemic, negotiations took place in person. However, during the period of social isolation brought on by the COVID-19 pandemic, negotiations took place remotely through (i) phone calls, (ii) instant messaging (I.M.), or (iii) voice over I.P. (VoIP) services, such as WhatsApp®, or Telegram®, for example. At the end of the negotiation, the parties presented the financial result of the agreement, plus the conditions. Here, we statistically analyze only the agreement (independent variable) results. Then, the primary data were imputed in the statistical analysis software and subsequently analyzed. First, we performed the normality test for samples above 100 sample items (N>100). Next, tests of independent non-parametric samples were performed (to be discussed in the section on analysis of the results). Since the research does not involve ethical or sensitive issues, submitting the present research to appreciate the Research Ethics Committee was not considered necessary. The research is limited to Brazilian negotiations. Other countries, territories, or cultures are not part of the scope of this investigation, as well as the analysis of the results: they are limited to the data set analyzed in the present work. Next, the research hypothesis is presented and discussed.

Hypothesis

H_0: there is no significant correlation between structured or situational negotiations. The value of the deal is not affected by the value of the scope in the structured or situational negotiations of the dataset. In short, the deal's value is not affected by negotiation planning. Thus, $H_0 = \mu$NOT STRUCTURED$=\mu$STRUCTURED, or $H_0 = \mu$NOT STRUCTURED $- \mu$STRUCTURED$= 0$, where: μNOT STRUCTURED is the average value of the situational agreement, and μSTRUCTURED is the average percentage value of the structured agreement.

H_a: The value of the negotiation deal is affected by whether or not the negotiation process is structured. In short, a planned negotiation presents statistically significant results to a situational or unstructured negotiation.

IV. Results and Analysis

Figure 3 illustrates the results of the Shapiro-Wilk normality test, selected because of the number of samples investigated (N>100):
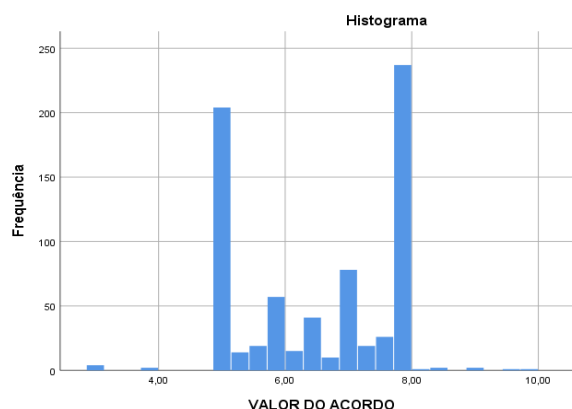
Testes de Normalidade

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Estatística	gl	Sig.	Estatística	gl	Sig.
VALOR DO ACORDO	,187	733	,000	,855	733	,000

a. Correlação de Significância de Lilliefors

Fig. 3: - Normality Tests. Source: SPSS 26

Figure 3 shows that p < .000, resulting in a non-parametric distribution, as corroborated in the histogram presented in Figure 4:

Fig. 4: - Histogram. Source: SPSS 26

Figure 5 shows the result of the non-parametric hypothesis test of independent samples, chosen because no negotiation had any link or dependency relationship with another negotiation, are independent events, and therefore require the use of tests for independent and non-parametric samples because the Shapiro-Wilk test has resulted in p < .000 (see Figure 3).

Resumo de Teste de Hipótese

	Hipótese nula	Teste	Sig.	Decisão
1	A distribuição de VALOR DO ACORDO é igual nas categorias de TIPO.	Amostras Independentes de Teste U de Mann-Whitney	,000	Rejeitar a hipótese nula.

São exibidas significâncias assintóticas. O nível de significância é ,010.

Fig. 5: - Summary of the Hypothesis Test. Source: SPSS 26

Figure 5 shows that H0 is rejected for the analyzed dataset. Hence, a structured negotiation strategy has statistically reliable and relevant results for a negotiation, to the detriment of the situational negotiation strategy. The conclusion is that to innovate in negotiation, it is necessary to prepare correctly, in a systematic and structured way, before negotiating.

Figure 6 shows the results of the non-parametric analysis of the primary data through the most appropriate test for this analysis, Whitney's U-Mann test, suitable for N> 100 samples of non-parametric data. Note that the null hypothesis (H_0) is rejected (p < .010), so the structured negotiation strategy has statistical significance in the Wilcoxon rating test (Z= 181237.500, p < .010).

Amostras Independentes de Resumo de Teste U de Mann-Whitney

N total	733
U de Mann-Whitney	111859,500
Wilcoxon W	181237,500
Estatística do teste	111859,500
Erro padrão	2789,492
Estatística de Teste Padronizado	16,029
Sinal assintótico (teste de dois lados)	,000

Fig. 6: - U-Mann Whitney test. Fonte: SPSS 26

Last but not least comes the comparative analysis of averages since the reader must wonder how significant the result of those who prepare for a negotiation (structured strategy) is compared to those who face a negotiation without any preparation. The answer is illustrated in Figure 7:

Relatório

VALOR DO ACORDO

TIPO	Média	N	Erro Desvio
NÃO ESTRUTURADO	5,8047	361	1,04582
ESTRUTURADO	7,3327	372	1,02248
Total	6,5802	733	1,28536

Fig. 7: - Comparative report of averages. Source: SPSS 26

Note that the difference between the means of the structured and unstructured or situational groups is 26.4 percent; that is, those who planned their negotiations in a structured and systematic way had a result in this analysis of 26.4 percent better than those who negotiated without any preparation. The implications for the research are discussed in the following section.

V. Implications

The study was conducted to investigate how important it is to adopt effective strategies for the negotiation process in the Age of Innovation. We demonstrated that effective negotiation planning has significant statistical relevance since the null hypothesis was categorically rejected. We also saw in the previous section that negotiators who planned their negotiations in a systematic and structured way had a result 26.4 percent higher financial than those who negotiated without any preparation for the negotiation process.

There are implications for different fields of research such as (i) Negotiation during the COVID pandemic (Dias, M (2021; 2021b;

Dias, M., Lopes, R., 2020, 2020d; Dias, M., Lopes, R., Teles, A., 2020); (ii) day and night negotiations (Dias, 2020e); (iii) negotiations on Intangible Assets Negotiation (Dias, M., 2020d); (iv) Structured versus Situational Business Negotiation (Dias, M., 2020c); (v) Business Asynchronous Negotiations (Dias, M., 2020b, 2021c); (vi) negotiation planning (Dias, M.; 2021); (vii) negotiation scenarios (Dias, M., 2021d, Dias, M., 2022); (viii) business negotiation & stereotypes (Dias, M., Lopes, R., 2020b); (ix) contract negotiations (Dias, M. et al., 2020); (x) trust in negotiations (Dias, M., Lopes, R., 2021), for instance.

VI. Managerial Recommendations

Moreover, what would be the best practices for preparing for a negotiation? Here we list five best practices in negotiations:

1. Recognition of scenarios: according to Dias (2021), it is first necessary to recognize the Type of negotiation to choose the most appropriate strategy better (See Figure 1). For each of the four types of negotiation, there is a defined and secure standard approach to be analyzed in detail by the negotiator between Types I, II, III, and IV of negotiations.

2. Avoid the most common mistakes in negotiation: according to Dias (2021 b), seven myths involve the negotiation process, and that should be avoided;

3. Structured planning of negotiations: according to Dias (2021c), the structured planning of negotiation involves the knowledge of the main fundamentals of the negotiation, such as interests, alternatives, options, ZOPA, or Zone of Possible Agreement, among others. To do so, it is necessary to learn the fundamentals and use the Negotiation Map (Dias, 2021c) to plan the negotiations in a structured and precise way.

4. Recognize how the negotiation process works: according to Dias (2020b), the negotiation process involves five steps, namely: (i) preparation; (ii) value creation; (iii) distribution of value; (iv) monitoring and adjustments and (v) finalization. In each of the steps, there are elements for better performance in the negotiation process.

5. Know the techniques and tactics most familiar to the negotiation process: Dias (2020b) listed 25 and 25 most common tactics used, mode of application, and their countermeasures, for application in a defensive character.

VII. Conclusion

We conclude by answering the research question formulated in the introductory chapter of the present work: (i) is there relevance and statistical significance in the structured planning of a negotiation? The answer is yes. The null hypothesis (H 0) was rejected (see Figure 5), and the alternative hypothesis (Ha) was accepted, which means affirming, with 99 percent certainty for the analyzed data, that the value of the negotiated agreement is affected by the structuring or not of the negotiation process. In short, a planned negotiation presents statistically significant results concerning a situational or unstructured negotiation.

VIII. Future Research

We encourage researchers to look at other types of negotiations, such as negotiations Types II, II and IV, including governmental and business negotiations in different countries, for instance. Other industries and business scenarios are indicated for future research as well.

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