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RELATIONSHIP BETWEEN ORGANIZATIONAL FACTORS TOWARD PROJECT SUCCESS

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Abstract

This paper entails the examination of the direct empirical linkage between organizational factors namely top management support, client consultation, as well as client acceptance, and the achievement of project success. Four telecommunication companies operating in Yemen were studied and they are: Tele-Yemen, MTN Yemen, Y Telecom, and Yemen Mobile. A total of 250 employees were the study's participants. SEM tool and some statistical methods (i.e., the maximum

likelihood estimate and regression technique) were chosen to analyze the obtained data and test the hypothesis, in order that the variable's dimensionality could be understood. As found, organizational factors (top management support, client consultation, and client acceptance) are positively linked to the success of project. The theoretical and practical implications of this study's findings were highlighted as well.

Keywords: Top Management Support; Client Consultation; Client Acceptance and Project Success

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INTRODUCTION

Project management is an integral element for the prevention of project fiasco and for the maintenance of timeframes, costs and resources within the budget allocated. Each year organizations worldwide expend billions of dollars on projects [1-3]. For instance, a total of \$750 billion was spent on software projects worldwide in 2013, and of this amount, 40% (\$300 billion) was used by the projects in the United States, whereas 25% (\$200 billion) was used by the projects in Europe, while the projects in Asia consumed \$100 billion, and the remainder of the amount (\$150 billion) was consumed by the projects in other parts of the world [4]. Additionally, there was a minor increase in project success from 37% in 2010 to 39% in 2012 [1]. Further, Standish Group [1] reported that of the projects carried out, approximately 43% were faced with obstacles, while 18% met with failure. According to Thomas and Mullaly [5], organizations investing in project management need to be assured of a concrete return from their investment.

As proven by the literature, the domain of project management has considerably

been successful, and by way of projects and products delivered, this domain offers value to numerous organizations [1,5,6]. The recent years have witnessed the dramatic increase in the usage of project management particularly in terms of scope and frequency. Over the past two decades, there has been substantial increase in the interest towards project management [7,8]. As the utilization and application of project management increase, the call for effective project management and project performance also increases [9,10]. Therefore, by making assessment on the implementation of effective of organizational factors toward project success, this study will become a precious addition to the body of knowledge relevant to this subject.

Within any organization today, project management becomes its key feature. In fact, management is the organization's integral operation component which contributes to the attainment of the organizational goals. Meanwhile, empirical works demonstrating the linkage between crucial success factors (organizational factors) and their impact on project success are still insufficient [11,12].

Thus, the current study will evaluate the specified and empirical linkage between critical success factors (organizational factors) and project success with the hope of bridging the present gap as evidenced in the literature. Based on the overview of the study, four research objectives are formulated, and they are described as follows:

The objectives of this study are to investigate:

RO1. The relationship between client consultations and top management support.

RO2. The relationship between top management support and client acceptance.

RO3. The relationship between client consultations and client acceptance.

Based on the objectives, this study intends to test the hypothetical statements as shown below:

H1: There is a positive correlation between client consultations and top management

support.

H2: There is a positive correlation between top management support and client acceptance.

H3: There is a positive correlation between client consultations and client acceptance.

LITERATURE REVIEW

The ICT industry has been highly successful in the last 15 years and at the same time, the use of computers have greatly multiplied. Such phenomena have compelled many developing countries such as Yemen to employ these novel technologies as initiatives in automating and accelerating the processes of work in public sector, so that the citizens could enjoy better services. In Yemen, countless IT projects have been implemented in countless ministries by the government with the purpose of making available an environment conducive to investments. Among the initiatives is the Ministry of Social Affairs and Labour (MoSAL). This body monitors private sector companies' application of Yemeni labour law. Unfortunately, nearly all of these initiatives did not reach their aims and the anticipated outcomes. Somehow, the substandard success rates exhibited by ICT projects have actually been reported in both developed and developing nations. As reported by the Standish Group for instance, merely 34% of ICT projects were deemed successful. Further, the organization reported that more than half of the projects (51%) did not develop as dictated by the pre-implementation plan (but certain goals were reached), whereas 15% were deemed a complete failure [13].

Failure statistics in many segments of industry have been issued by the Yemeni government [14]. As exhibited by the statistics, the failure rate for services sector was 92%, whereas that of real-estate sector was 89%. Meanwhile, construction companies had a failure rate of 73%, corporate companies had a failure rate of 67%, and limited liability companies had a failure rate of 60%. The statistics also show

public shareholding companies with the lowest project failure rate (11%).

Focusing on ICT projects in Yemen, failure could be minimized by implementing the 10 Pinto and Selvin critical factors. Esmat, Ahmad and Zakaria [15] found that having a project's goals and objectives clearly defined would help in the success of ICT projects in Yemen. Meanwhile, Al-Mamary, et al. [16] found that having the organization's top management provide support for a project (through prompt funding, provision of project resources, and commitment to project goals and objectives) is indispensable to successful management of projects among ICT and the Yemeni telecommunication industries. Similarly, Esmat, et al. [15] stated that ICT projects in Yemen without top management commitment may lack resources, while the project team may lose motivation, and the project may fail as a result. Teamwork skills also play an important role in delivering a success project as mentioned by a few researchers. Al-Mamary, et al. [16] asserted that employees among the Yemeni telecommunication industries should have the skills and abilities to accomplish a specific task successfully.

The Yemeni Telecommunication Industries

Yemen's telecommunications sector is among the key sectors contributing to the GDP of the country. According to the Yemeni Minister of Communications, the total revenue for year 2013 from the telecommunications sector in Yemen amounted to almost 400 million dollars, while the Yemen's 2013 budget amounted to nearly 12.9 billion dollars [16].

In general, Yemen's telecommunications sector has shown improvement especially for fixed line subscriptions and internet usage. Yet, it has low penetration rates of less than 3% when compared with other Arab countries. Given that 65% of the Yemeni population lives in rural areas, the allocated budget for the telecommunication sector is equivalent to nearly 2.8% of the overall budget of Yemen [16]. This budget is among the lowest allocations provided by the Yemeni

government in Middle East countries. The three well-known mobile companies in Yemen are HiTS-UNITEL (Y), Spacotel Yemen (MTN), and Yemen Mobile. Additionally, there is a single provider of international telecommunications for Yemen-fixed-line, telex, and an internet service called Tele-Yemen. Tele-Yemen is a private company jointly owned by the British Company Cable and Wireless PLC and the Public Telecommunications Corporation with the responsibility for operating and developing international telecommunication services, mobile telephony services using TACS, and internet and email services. The services provided by the telecommunication can be classified into information, communication, transaction, and entertainment [16].

Organizational Factors

Organization factors are classified into top management support, client consultation, and client acceptance. Classification has been conducted based on different studies [17]. In general, top management governs the access of a project manager to resources, and these resources are usually under the supervision of functional managers. As for functional managers, they offer support that is generally dictated by the support level provided by top management. Further, projects that belong to the functional department will usually not have difficulty in obtaining resources owing to the fact that the functional manager will also take the position of project manager. On the other hand, projects with matrix organizational forms, or projects with pure project forms may have difficulties in obtaining sufficient resources. For this type of project, negotiating skills and positional power within the organization are required. Clearly, full support from the organization for the project helps to facilitate and implement the strategies for the successful completion of projects. Nonetheless, for functional projects, it is common that the clients are part of the organization; for instance, the clients may belong to top management. In such cases, factors related to the client can be grouped under the organizational factors [17].

Top Management Support

The CSF top management support is defined by Pinto and Slevin [18] as having sustained support, commitment and buy-in from an organization's senior management for projects, and project activities [19]. There seems to be an overwhelming agreement in much of the CSF literature [20-22], that top management support is a key facilitator of successful project management. Top management generally plays an important role in defining the scope of a project and selection of project team as well [23]. Al-Mamary, et al. [16] found that having an organization's top management provide support for a project (through prompt funding, provision of project resources, and commitment to project goals and objectives) is indispensable to the successful management of projects among the Yemeni telecommunication industries. Similarly, Clark opined that top management commitment delivers an "unspoken message" that a given project is relevant to the organization, thus providing the needed comfort for the project team to meet the project goals.

The literature (e.g., Loo, 2002, 2003) has found that many project management failures were attributable to lack of top management support. Loo (2002) posited that all successfully managed projects had one feature in common: a project management champion from the organization's top management, who had the authority to provide resources, motivation, and funding to the project. Aqeel and Salam asserted that top management support plays an important role as a critical success factor in the telecommunication industry. Other studies have also found that most project failures were the result of lack of commitment from the organization's senior management. As top management commitment is an indispensable factor for successful project management, it is important for a performing organization to appoint someone from the organization's top management (project sponsor, PMI, 2008) to provide necessary organizational support for successful project management. Other studies that have listed top management support as a critical

success factor include Belassi and Tukel [17], Bond [24], Cooke-Davies, Fortune and White, Kuen et al., Culler, Yong and Mustaffa.

Client Consultation

Client consultation, according to Slevin and Pinto [25], entails early and sustained engagement with the client to ensure continued client support, and commitment to project objectives [19]. It involves active listening to the client and seeking client's input at every major decision point during project implementation. Telecommunication projects in Yemen do not achieve the required results because they have been ignoring the client's involvement for unknown reasons. It should be noted that projects with poor involvement of user will demonstrate poor performance, while involvement of user tops the list of factors that contribute to the success of project [15]. Many studies have listed this factor as an important contributor to project success, opining that client's interest in the project must be secured at the start of the project and sustained throughout its lifecycle [17,21,24-27]. Evidence abounds in the literature that without proper engagement with the client, the project may lack buy-in from relevant organizational actors, leading to conflict and possible project failure. Pinto and Slevin [19] posited that unless client consultation happens early in the project lifecycle, subsequent client acceptance of project results may be difficult.

Client Acceptance

Slevin and Pinto's client acceptance CSF which is also referred as planned project review and acceptance, involves activities such as joint determination of project success criteria and post-project review, among others, that are required to make the project's final product acceptable to clients. Pinto and Slevin [19] posited that this CSF is most important at both the project planning stage (where the project team determines the client's specific needs, obtains the client's concurrence on budget,

schedule, etc.) and at the termination stage, where the project team needs to perform a verification of client acceptance of the project [19,28]. Baker, Murphy and Fisher opined that without a jointly determined performance evaluation system between project parties, the contractor and client may have conflicting measures of project success which breeds conflict and may lead to eventual project failure. Client acceptance as an important factor to project success has been mentioned in several studies such as Alan [26], Amponsah and Darmoe [21], as well as Nasir and Sahibuddin [27]. Finally, Saadé, Dong and Wan [29] found that client acceptance is an important factor for project success among ICT projects.

RESEARCH METHODOLOGY

The quantitative method has been chosen in this study and survey has been the instrument selected for gathering the data pertaining to organizational factors that impact the success of projects carried out in the telecommunication industry in Yemen. This study has opted for the survey method because aside from being fast, cost-effective, efficient, and easily administrable to a large sample, this method could also deal with the participant's thoughts, feelings, as well as opinions on certain attitudes and beliefs. Further, a precise means of information assessment about the sample is also offered by the survey method. Thus, researcher could make deduction about the findings' generalization based on the population's sample. In this study, a total of 580 Yemeni telecommunications industry employees were invited to be participants. Data on the manner in which factors impact project success were obtained. However, only 250 questionnaires were found useful (43.10% response rate) for analysis which was performed using structural equation modeling (SEM).

Sampling Method

Due to richness and accuracy of data when obtained from respondents of diverse

stratums, this study has opted for the method of stratified sampling. Hair et al. [30] and Sekaran [31] mentioned the practicality of this sampling method when the aim of the research is to attain differentiated information from numerous stratums.

Following the stratification of the population is the drawing of some respondents' percentage from every stratum. Here, the technique of probability sampling was used where a fairly significant amount of units from a population was chosen, whereby the determination of inclusion possibility for each population member is possible. In quantitative researches, probability sampling is performed primarily to achieve a degree of representativeness that a sample truthfully epitomizes the whole population.

Sample Size

Any statistical analysis is impacted by sample size, and statistical analysis that is more sophisticated will call for larger sample size [32]. Since SEM has been chosen in this study, the sample size will follow the requirements posited by SEM. Based on Sekaran [31], this study will require a sample size of 232. However, this study has decided to obtain 250 samples so that the outcomes obtained will have higher accuracy.

RESULTS

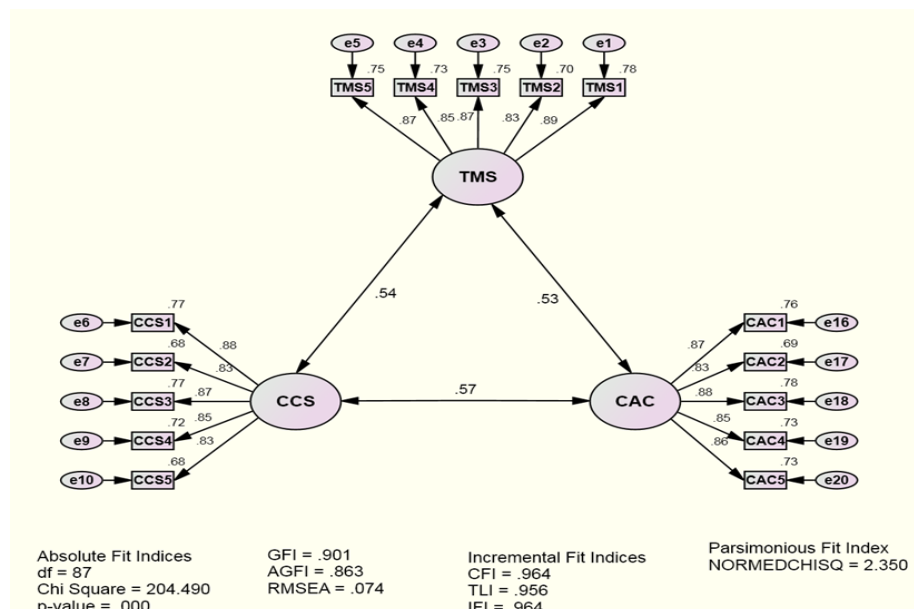
The analysis employed the data obtained from 250 respondents. Here, the majority of respondents (78.40%) were males while the remainder (21.60%) was females. Nearly half of the respondents (46.8%) were aged 35 and less, while 7.6% were more than 45 years old. Moreover, more than half of the respondents (62.0%) were married whereas 38.0% were single. Further, 28.8% were from IT while 21.2% were from Engineering. The majority of respondents or 40% were Master holders, 34.40% were Bachelor Degree, 11.20% were Doctorate holders, 10.0% were Diploma

holders, 2.40% were High School holders, and 2.0 percent had Professional Certificate. Nearly half of the respondents (48.8%) were employed in their organization for less than 5 years, whereas 35.60% were employed in their organization for between 5 to 10 years. Twenty seven respondents (10.8%) were holding their present position for more than 10 years whereas the rest had held their present position for longer than 16 years. Finally, 28.40% of respondents were holding the middle management position while 20.8% were holding the position of top management. Meanwhile, only 18.0% were senior managers, and the remainder was holding the Supervisory and Subordinate position.

CFA Model Organizational Factors (ORF)

This model contains 15 items and these items measure 3 first-order constructs which are: Top Management Support (TMS), Client Consultation (CCS) and Client Acceptance (CAC). The initial Organizational Factors CFA model containing the 15 items is as in Figure 1.

Figure 1: CFA Model for organisational factors with 15 Items.



GOF

As demonstrated by the outcomes of GOF of the CFA for organizational factors with 15 items, the model is an appropriate fit to the data. Further, the chi-square demonstrates significance at the 0.000 level. However, the absolute fit index of minimum discrepancy chi-square can be ignored if the sample size obtained for the study is greater than 200 [32,33]. The chi-square was 204.490, $df=87$, $p=.000$. The GFI was 0.901, exceeding the cut-off point of 0.9 as recommended by Hoyle [34].

After the adjustment for the degrees of freedom relative to the number of variables, the adjusted GFI (AGFI) was 0.863. This obtained value was above the cut-off point of 0.80 as recommended by Chau and Hu [35]. It indicated that the model predicts 86% of the variances and covariance in the survey data. The CFI, TLI, and IFI were 0.964, 0.956 and 0.964 respectively. All of these values were above the cut-off value of 0.9 which indicated the model had good fit of data [36,37]. Also, the root mean square error of approximation (RMSEA) was at 0.074, and this value is less the threshold of 0.1 as recommended by Schumacker and Lomax [38]. Additionally, the relative NORMEDCHISQ (χ^2/df) was 2.350 which was less than 5, showing the good fit of the model [36]. The outcomes demonstrate the sufficient fit of the overall CFA model with the data and therefore, adjustments were not necessitated.

Table 1 can be referred to view the indices of goodness-of-fit of the CFA model of organisational factors with 15 items.

Table 1: GOF Indices of CFA model for organizational factors.

Fit index	Modified Model	Recommended values	Source
Df	87		
Chi-Square (χ^2)	204.490		

p-value	0.000	>0.05	
NORMEDCHISQ (χ^2/df)	2.350	≤ 5.00	Bagozzi and Yi [36]
GFI	0.901	≥ 0.90	Hoyle [34]
AGFI	0.863	≥ 0.80	Chau and Hu [35]
CFI	0.964	≥ 0.90	Bagozzi and Yi [36]
TLI	0.956	≥ 0.90	Hair et al. [30]
IFI	0.964	≥ 0.90	Hair et al. [30]
RMSEA	0.074	≤ 0.10	Schumacker and Lomax [38]

Reliability and Convergent Validity

Once the unidimensionality of the constructs was achieved, each of the constructs was assessed for their reliability and validity. Assessment of reliability was performed using Cronbach's alpha, construct reliability (CR) and average variance extracted (AVE). As for validity, the construct included the convergent and discriminant validity. Table 2 exhibits the Cronbach's alpha and convergent validity's outcomes for the model of CFA of organizational factors with 15 items.

Table 2: Cronbach's alpha and Convergent Validity Results for Organisational Factor.

Construct	Item	Factor Loading	Average Variance Extracted (AVE) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach's alpha
Top Management Support (TMS)	TMS1	0.885	0.741	0.935	0.935
	TMS2	0.834			
	TMS3	0.867			
	TMS4	0.852			
	TMS5	0.865			

Client Consultation (CCS)	CCS1	0.878	0.725	0.930	0.929
	CCS2	0.826			
	CCS3	0.875			
	CCS4	0.851			
	CCS5	0.827			
Client Acceptance (CAC)	CAC1	0.872	0.737	0.933	0.933
	CAC2	0.828			
	CAC3	0.881			
	CAC4	0.853			
	CAC5	0.857			
^a AVE=(summation of the square of the factor loadings)/{(summation of the square of the factor loadings)+(summation of the error variances)}. ^b Composite reliability=(square of the summation of the factor loadings)/{(square of the summation of the factor loadings)+(square of the summation of the error variances)}.					

Table 2 demonstrates that each indicator has high factor loadings which range from 0.826 to 0.885. This means that these indicators were preserving the factors. The table also demonstrates the AVE values reflecting the total variance amount in the indicators accounted for by the latent construct. The value obtained in this study was 0.741, 0.725 and 0.737 for Top Management Support (TMS), Client Consultation (CCS) and Client Acceptance (CAC) respectively. These values were all greater than the cut-off value of 0.5 as Nunnally and Bernstein had proposed.

The values of composite reliability denote the degree to which the construct indicators point to the latent constructs. The value of composite reliability obtained in this study was 0.935, 0.930 and 0.933 for Top Management Support (TMS), Client Consultation (CCS), and Client Acceptance (CAC) respectively. These values were all greater than the value of 0.6 that Bagozzi and Yi [36] had proposed in their study.

The value of Cronbach's alpha denotes the degree to which a measure is free from error. The value of Cronbach's alpha obtained in this study was 0.935, 0.929 and 0.933 for Top Management Support (TMS), Client Consultation (CCS) and Client Acceptance (CAC) respectively. These values were all greater than the cut-off value

of 0.7 as Nunnally and Bernstein had suggested in their work. Hence, for all constructs, the Cronbach's alpha value attained in this study is deemed to be adequately error-free.

Discriminant Validity

Examination was performed on the discriminant validity to ascertain how a construct is distinct from others. In the case of discriminant validity, the correlations between factors in the measurement model do not exceed 0.85 as recommended by Kline (2005). As explained by Fornell and Larcker, validity examination was performed in line with the comparison correlations between constructs and the AVE square root for a construct. The discriminant validity of the CFA model for organizational factor can be referred in Table 3.

Table 3: Discriminant validity of CFA Model for Organisational Factor.

	TMS	CCS	CAC
Top Management Support (TMS)	0.861		
Client Consultation (CCS)	0.538	0.852	
Client Acceptance (CAC)	0.53	0.572	0.858
Note: Diagonals denotes the square root of the AVE whereas the			

The inter-correlations that were present between the three sub-constructs in organizational factors were within the range between 0.530 and 0.572. This range was less than the threshold value of 0.85. Moreover, Table 3 demonstrates that the correlations were below the AVE square root by the indicators. Such condition, according to Kline [39], shows sound discriminant validity between the factors.

The CFA model was examined in terms of data's goodness of fit, convergent validity and discriminant validity. Based on the examination, the measurement scale for the evaluation of the constructs alongside their respective items in organizational factors appeared to be reliable and valid (Table 4).

Table 4: Summary of results of hypothesized effects of the variables.

Hypothesis	P-value	Hypothesis Result
Client consultations has a positive relationship with top management support	0	H1) Supported
Top management support has a positive relationship with client acceptance	0.019	H2) Supported
Client consultations has a positive relationship with client acceptance	0.012	H3) Supported
*p<0.05, **p< 0.01, ***p< 0.001		

DISCUSSION

The model evidently demonstrates the statistical significance of client consultations (CCS), and top management support (TMS) as well as client acceptance (CAC). This is evidenced by their p-values being lower than the standard significance level of 0.05 (Table 4). Therefore, the hypotheses: H1, H2, and H3 were supported. Moreover, the result of that hypothesis indicated that top management support, client consultation, and client acceptance play an important function to deliver a successful project. There is consistency between the outcomes of this research and those of past researches (e.g., Amponsah and Darmoe [21]; Bond [24]). Top management support, client consultation and client acceptance have been frequently reported to be significantly linked with one another so that the projects' rate of success can be increased. Top management generally plays an important role in defining the scope of a project and the selection of project team as well [23]. It was also found that the communication between top management and clients must exist in order to produce an excellent project. These results further suggested that clients' involvement and top management support are a driving force for the project success. In summary, the results of these hypotheses are in agreement with the prior research indicating that

top management support, client consultation and client acceptance play an important function in determining and shaping the project's success.

CONCLUSION

The study outcomes generally demonstrate a strong support for the linkage between organizational factors and project success. The project's success was impacted the most by top management support. In this context, top management strongly supported the usage as well as application of the Project Implementation Profile (PIP). RIP allows effective and practical evaluation of projects. It also guides improvements should the assessment finds weak areas on the projects.

The study outcomes demonstrate the need for organizations to have the awareness of and be in alignment with the suitable vital success factors as these factors highly contribute to the improvement of project success. The body of knowledge will be expanded by this study, particularly in the domain of the linkage between the critical success factors particularly the organizational factors and project success. The study also provides more in-depth understanding on the topics of project management and project success. This study provides valuable insights on how project managers and organizations can take proactive steps to improve the project's success rates. Also, the outcomes of this study expand the body of knowledge with respect to the availability of instruments and concepts for educating the present and future project managers on the methods deemed effective in improving their perception prospect or project success opportunities.

The information as well as insights on organizational factors alongside their positive impact presented by this study can be of assistance in attaining successful project. Top management can especially benefit from this study because they (top management) are the ones who make available the resources necessitated. Top management is also the one with the authority in assigning project leaders to deliver

a successful project. Further, this impact can be increased by involving clients' consultation, meaning that, when there is a consultation with customer, the efficiency of project success can be increased, and this will eventually increase customer satisfaction.

RECOMMENDATIONS FOR FURTHER RESEARCH

The relationship between top management support, client's consultation and client's acceptance was scrutinized in this study, and the outcomes obtained lead to the call for further scrutiny on the relationship between top management support, client's consultation, client's acceptance, culture and team work, and project success, but using sample of larger size. Moreover, considering that this work was carried out employing project managers in just Yemen, this study could be replicated employing project managers from other countries as well. This will enrich the body of knowledge much more by ascertaining if variations based on countries, ethnicities, or cultures of the project managers.

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