

Intellectual Capital in Religious Organisations: Malaysian Zakat Institutions Perspective

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Abstract: The current study investigates the relationship between intellectual capital with zakat institutions' performance. Intellectual capital is a broad concept that recognizes knowledge, learning capabilities, innovativeness of the employees as well as skills of the organisation as the key ingredients in economic development, replacing tangible resources and financial capital. Intellectual capital consists of three main constructs namely human capital, relational capital and structural capital. In order to meet the objectives, survey questionnaires were distributed to employees of zakat institutions in Malaysia. The result of the study provides evidence that intellectual capital influences the performance of zakat institutions. Meanwhile, only two out of three intellectual capital constructs which are human capital and relational capital have significant positive relationships towards zakat institutions' performance. This reflects that experience, competencies and skills of human resources and knowledge embeds in the relationships with zakat recipients, zakat contributors and others such as government are considerably important in enhancing efficiency of the zakat institutions. On the other hand, the structural capital does not have any influence over zakat institutions' performance. The findings of this study offer guidelines to the managers of zakat institutions in decision making and formulating strategies relevant to the knowledge development of the organizations.

Key words: Intellectual capital • Human capital • Relational capital • Structural capital and Zakat Institutions

INTRODUCTION

The rise of a knowledge-based economy (k-economy) caused a complete transformation in the current business since knowledge-based resources had become very important in determining the wealth as well as the sustainability of the organisations. Presently, the k-economy can be considered a good package as it possesses huge opportunities, potentials and abilities in providing a good platform which can assist in enhancing international competitiveness and sustaining a rapid rate of economic growth. The growth of k-economy had increased the significance of intellectual capital [1]. Intellectual capital is a broad concept that recognised knowledge and learning capabilities [2], as well as skills in the organisation as the key ingredient in economic development, replacing physical and other resources [1].

In the current economic environment, intellectual capital is vital to the organisations' competitiveness regardless of profit or non-profit oriented. However, at the

time of this study limited studies have explored the relationship concerning intellectual capital and performance of religious institutions, for example zakat institutions and Baitulmal. At present, zakat institutions are known as non-profit organisations which have the responsibility to manage zakat fund in Muslim countries. Even though zakat institutions are non-profit oriented, but due to their role to promote socioeconomics of the community, intellectual capital remains crucial because knowledge and intangible values had become the main source of competitive advantages for both profit and non-profit organisations in the new economy. Disregarding intellectual capital growth may lead to problems such as workers incompetence, low quality of service, poor works systems and poor relationship with external parties. The existence of intellectual capital is crucial to zakat institutions as intellectual capital consists of intangible resources that contained knowledge that could be used by the institutions to accomplish its goals, increase efficiency and effectiveness of the organisations.

The objectives of this paper is to investigate the relationship of intellectual capital with zakat institutions' performance. As studies regarding intellectual capital in religious organisations especially zakat institutions are scarce, this study contributes to the existing literatures on intellectual capital and performance.

The paper is constructed as follows. The next section reviews the literature related to intellectual capital constructs, determinants of intellectual capital and resource-based theory. This is followed by a discussion on the research method which includes samples and respondents, questionnaires, responses rate, hypotheses development as well as multiple regression model employed. Section four would highlight the data analyses and findings. Finally, the discussions on conclusion, implications, limitations as well as directions for future research are presented in section five.

Literature Review

Definitions of Intellectual Capital: There are numerous definitions on intellectual capital offered by the previous researchers. According to Stahle and Hong [3], intellectual capital could be defined as the ability of an organisation to generate value, under conditions of constant change. Meanwhile, Brooking [4] stated that intellectual capital is the combination of intangible assets in the market, intellectual property, human-centred and infrastructure which enabled the company to function. Intellectual capital as referred to Shakina and Barajas [5] had the capacity to increase the effectiveness of other resources including tangible assets. Most definitions of intellectual capital compose of three interrelated constructs being the sum of human capital, customer or relational capital and structural capital [6][7].

Constructs of Intellectual Capital

Human Capital: Bontis [8] and Ahmadi *et al.* [9] defined human capital as the main constructs of intellectual capital. It could generally be referred to as the stock of competences, knowledge and personality attributes embodied in the human resources to produce economic value [10]. Human capital basically was the combination of education, experience and attitudes about life and business [11]. In addition, according to Bontis, Crossan and Hulland [12], human capital could also be represented by the individual knowledge of the employees in an organisation. Moreover, the level of employees' education and skills as well as the effectiveness of employees to improve the productivity of the firm also represented human capital [13]. Consequently,

organisations that continually made superior investments in human capital achieved higher firm performance [14] because human capital functions as key critical operative factors to support and drive value creation dynamics over the time [15]. Chiucchi [16] highlight that intellectual capital in the Italian language is usually associated with "human capital".

Relational Capital: In accordance to Rudez and Mihalic [17], relational capital is owned by every organisation. Relational capital is related to the knowledge in the relationships built with the external elements such as shareholders, customers, suppliers, government as well as the society [8][9][15][18]. It was because organisations were considered as systems that are dependent on their relations with their environment, not on their own [9]. On the other hand, relational capital could also be related to the knowledge embedded in the marketing channels and customer relationship that was developed by the organisation through the business activities [19].

Structural Capital: Structural capital is a form of non-human sources of knowledge [9][15] and had been defined as the knowledge owned by an organisation [20][21] and consisted of organisational routines, procedures, systems, cultures and databases [18][22][23]. Structural capital could be considered as the most important among the constructs of intellectual capital due to its significant impact on the organisation's performance as it possessed the capability to influence organisation's performance [24]. Besides, even though the human resources possessed a high level of intellect but intellectual capital would not reach its fullest potential if the organisation had poor systems and procedures to control their actions [20].

Studies on Intellectual Capital and Performance: There had been various research conducted on the relationship between intellectual capital and organisation performances such as in banking sector [25][26], pharmaceutical industry [27][28] and information technology industry [29]. This section discusses the perception of intellectual capital and its constructs in sectors such as non-profit organisation [30][31], public sector [2][32] and microfinance sector [33].

Kong [30] examined the intellectual capital in social enterprises. He defined social enterprises as a hybrid form of organisations that involved taking business-like, innovative approaches to deliver public services. The findings of this study summarised that intellectual capital

could be utilized as a competent strategic management framework in innovation processes in social enterprises. This was because, through the constructs of intellectual capital, social entrepreneurs were able to better conceptualize the strategic significance of their organisation's intellectual resources and knowledge management activities. Other than that, intellectual capital was found to give a broad perspective of both internal and external aspects of intellectual resources that were embedded in the personnel (human capital), organisational routines (structural capital) and network relationship (relational capital). Hence, the intellectual capital conceptual framework would provide social entrepreneurs with a better understanding of the internal and external issues in their organisations, which in the end would influence the performance of those organisations.

Cohen and Vlismas [2] analysed the relationship between intellectual capital and the performance of the local government in Greece. This study used ninety-two (92) local governments as a sample. The empirical findings revealed that there was a positive significant relationship between the constructs of intellectual capital and the organisational performance in Greece's local government. The constructs of intellectual capital helped to improve the performance that was measured by financial ratios. The study on the relationship between intellectual capital and organisation performance in term of service quality had also been tested on Malaysian local authorities by Kamaluddin *et al.* [32]. From the data that was collected with the aid of questionnaires, it was found that structural capital and relational capital had a positive significant relationship towards the service quality offered by local authorities in Malaysia.

A study on intellectual capital and financial performance in microfinance industries was conducted by Kamukama *et al.* [33] using sixty-five (65) microfinance organisations in Uganda as samples. As expected, the results indicated that the constructs of intellectual capital being human capital, relational capital and structural capital showed a positive and significant relationship towards financial performance in the microfinance industry in Uganda. Therefore, it was proven that intellectual capital was important in microfinance institutions as it could influence the performance of this institution.

The Resource-based Theory: The resource-based theory stressed on the usage of internal resources which are internally developed resources such as assets, skills,

abilities and knowledge within the firm and not those acquired externally. It was because the firms' resources which could be tangible or intangible were the forces for the competitiveness and effectiveness of an organisation [34]. Thus, the manipulation of human, physical and intangible resources would create value over time. However, according to Bounfour [35], the resource-based theory indicated that intangibles resources would influence the growth of competencies of the organisations in their long-term performance. Basically, intangibles resources were the resources that could not be easily purchased and required an extended learning process. Hence, these types of resources were likely to be unique to the organisations and thus, it would be more difficult to imitate by competitors [36]. Conner [37] stated that performance differentials between firms depended on the set of unique inputs and capabilities owned by the organisations.

MATERIALS AND METHODS

Respondents and Questionnaires: Data was only collected from twelve (12) zakat institutions in Malaysia. Data was collected using questionnaires that had been distributed by hand and through postal to all levels of managers of zakat institutions.

The data on intellectual capital and performance of zakat institutions were captured using questionnaires. The questionnaires comprised three sections. The first part of the questionnaires consisted of forty (40) intellectual capital line-items on human capital, relational capital and structural capital. The second part of the questionnaires which consisted of ten (10) line-items measuring the zakat institutions' performance. The third part provided questions on respondent profile. The managers were required to indicate their level of agreement based on five Likert-scales with one (1) to represent strongly disagree and five (5) to represent strongly agree. The questionnaire in Appendix 1 was adopted from Kamaluddin *et al.* [32][38] who initially founded their work on those established by Roos *et al.* [39]; Edvinsson and Malone [40]; Youndt *et al.* [41]; Moon and Kym [42]. Before final distribution, the current instrument was reviewed by a Shariah advisor to Islamic Finance Institutions and academicians who specialised in the area of Islamic accounting and zakat institutions.

The performance of zakat institutions was proxied by the quality of zakat institutions' products and services as well as zakat collections and distributions [43,44].

Table 1: Reliability test of HC, RC, SC and zakat performance

Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Human Capital (HC)	.947	.948	20
Relational Capital (RC)	.890	.891	10
Structural Capital (SC)	.908	.910	10
Zakat Performance	.804	.821	10

Products and services were associated with the quality of services offered to customers that covered the efficiency and the length of time taken in providing the services. Meanwhile, the collection and distribution was related to the promotion conducted to attract zakat payers, the types of mechanisms offered to zakat payers as well as the status of zakat collection and distribution.

Response Rates: One hundred and nine (109) usable questionnaires were applicable for data analysis, giving a response rate of about 73 per cent (109/150). A reliability test using Cronbach's Alpha coefficient was conducted to check the internal consistency of the scales used in the survey instrument [45]. Table 1 summarised the results for reliability test. The reliability coefficients presented were above 0.7, indicating that the data used for this study met the level of reliability required for significant analysis. The overall Cronbach's Alpha coefficients of intellectual capital constructs (human capital, relational capital and structural capital) and zakat performance were between the ranges of 0.804 to 0.947 which indicated an excellent internal consistency reliable test for the scale. As the values of Cronbach's Alpha were high, no item was eliminated.

Hypotheses Development

Human Capital and Zakat Institutions' Performance: Bontis *et al.* [19] highlighted that human capital had a positive impact on non-service sector performance in Malaysia. Human capital also became the main element on the efficiency of banks in United Kingdom [46]. It was supported by Ahangar's [47] study which presented the positive significant relationship on human capital efficiency towards financial returns of companies in Iran. In addition, human capital efficiency was also important in enhancing the profitability and productivity of the pharmaceutical industry [27].

Maditinos *et al.* [48] proposed the same conclusion as human capital efficiency had significant positive relationship with financial performance of the firms. The positive results recorded by the above findings proved

that human capital contributed to the flow of knowledge and information in the organisation and would later provide the organisation with favourable results in terms of performance. In addition, human capital had currently become a basis of competitive advantage in the organisations. Abd. Wahab and Abdul Rahman [49] suggested that the management team of zakat institutions needed to consider the quality and qualification of their human resources before hiring them. This was because a good quality of human capital possessed the ability to enhance the organisations' performance by increasing the benefits of customers and decreasing the services costs as they would invent new process innovations that would eliminate the costly procedures[41]. Thus, the statement confirmed the importance of human capital in the process of creating good performance in zakat institutions.

Hence, based on the above discussion, the following hypothesis was formulated:

H1 (a): There is a positive significant relationship between human capital and zakat institutions' performance.

Relational Capital and Zakat Institutions' Performance: According to Khaliq *et al.* [50], the role of intellectual capital on the organisational performance of electrical and electronic SMEs in Pakistan showed that all constructs of intellectual capital namely, human capital, relational capital and structural capital had a positive relationship with organisational performance, with relational capital showing the strongest relationship. In addition, relational capital also showed a significant positive relationship with the performance of National Iranian South Oil Company [9]. This indicated that relational capital had a direct effect on the performance of an organisation because it helped in improving and enhancing the firms' profitability and organisational performance.

On the other hand, Bontis *et al.* [19] highlighted that relational capital had a positive effect on the service sector performance in Malaysia. It was supported by Kamaluddin and A. Rahman [38] who indicated that the

managers in Malaysia perceived that relational capital was the most important element in their organisation among the intellectual capital constructs. This was due to the nature of services in the service sector that had to deal with various types of customers. Thus, they required a high relational capital to secure the relationships that existed with the external parties. Moreover, the relationships with external parties resulted in useful information to the organisations in terms of present demand of customers. In addition, with a strong relational capital, it was easier for the organisations to acquire suppliers and investors.

Thus, based on the above arguments, the following hypotheses were formulated:

H1 (b): There is a positive significant relationship between relational capital and zakat institutions' performance.

Structural Capital and Zakat Institutions' Performance:

A study conducted in Malaysia showed that structural capital had a positive relationship on its impact towards business performance of service and non-service sector in Malaysia [19]. The finding reflected the importance of structural capital in influencing organisational performance. This was because, structural capital represented the knowledge embedded in the systems and structures practiced by an organisation and was considered as one of the drivers of organisations' performance. Meanwhile, structural capital also displayed a positive significant impact on the Iranian computer and electronic organisations' performance [51]. It was proven by the reaction of structural capital towards market leadership, future outlook and overall performance of Iranian computer and electronic organisations. In addition, structural capital was found to have a significant positive association with both external and internal competitive capabilities of the software organisations in West Africa [52]. The organisations' competitive capabilities reflected the good performance of the organisations. Apart from that, the study on the relationship between intellectual capital and organisational performance within the National Iranian South Oil Company also showed a positive significant relationship between structural capital with organisational performance. This demonstrated that high investment in structural capital led to organisation's efficiency and enhanced the organisation's profitability as well as performance.

Hence, the relevant hypothesis for this study was as follows:

H1 (c): There is positive significant relationship between structural capital and zakat institutions' performance.

Multiple Regression Model: Multiple regression models were employed to analyse the relationship of the intellectual capital and its constructs towards zakat institutions' performance. The regression models for this study are as follows:

Model 1: Human capital, relational capital and structural capital with zakat institutions' performance

$$\text{ZAKAT_P} = \beta_0 + \beta_1 \text{SIZE} + \beta_2 \text{HC} + \beta_3 \text{RC} + \beta_4 \text{SC} + \epsilon$$

where,

SIZE	= Size of zakat institution
ZAKAT_P	= Zakat Performance
HC	= Human Capital
RC	= Relational Capital
SC	= Structural Capital
ϵ	= Error Term

RESULTS AND DISCUSSION

As summarised in Table 2; the mean for constructs for intellectual capital (human capital, relational capital and structural capital) was above 4.0. Therefore, all constructs of intellectual capital were perceived as important to the performance of zakat institutions. Among all the constructs of intellectual capital, structural capital was the most important element to zakat institutions performance as it showed the highest mean of 4.2037, followed by human capital with a mean of 4.0950. Meanwhile, relational capital had the lowest mean of 4.0385. This showed that among the intellectual capital constructs, zakat institutions noticed that structural capital was the most important element in the institutions, followed by human capital and relational capital. This is acceptable because strong structural capital is required by human capital and relational capital to accelerate transactions and flow of knowledge and information in the institutions. This is in line with the study done by Kamaluddin *et al.* [53] on other type of organizations.

Table 2: Mean of HC, RC and SC

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
Human Capital	109	2.05	5.00	4.0950	.49544
Relational Capital	109	2.60	5.00	4.0385	.49214
Structural Capital	109	2.50	5.00	4.2037	.50934
Total	109	7.15	15.00	12.3372	1.49692

Table 3: Correlation results of variables

Human Capital	Relational Capital	Structural Capital	ZakatPerformance
Relational Capital	.706**		
Structural Capital	.686**	.781**	
Zakat Performance	.573**	.643**	.609**

Note: **significant at 0.05 level; and*significant at 0.10 level

Table 4: Regression result

Variables	Coefficient	t-statistics	P-value
Intercept		5.178	.000
Total Employees	.095	1.323	.189
Human Capital	.189	5.178	.079*
Relational Capital	.363	2.922	.004**
Structural Capital	.192	1.585	.116
R ²	46.6%		
Adj. R ²	44.6%		
F-statistics (P-value)	22.75 (0.000)***		
df	(4,108)		

Note: ***Significant at 0.01 level; **Significant at 0.05 level; and *Significant at 0.10 level

Based on Table 3, the results showed a high and positive significant correlations for all constructs of intellectual capital at 5% (p-value = 0.05) of significant level of 2-tailed test Pearson correlation. The results showed that there was a significant positive correlation between relational capital and human capital at coefficient of 0.706. Therefore, any increment in relational capital would increase human capital of zakat institutions. On the other hand, structural capital also showed a positive significant correlation with human capital as well as with relational capital at 5% (p-value = 0.05) significant level with coefficients of 0.686 and 0.781 respectively. The results also reported that there was a positive significant correlation between zakat performance with all constructs of intellectual capital (human capital, relational capital and structural capital) with results of coefficients 0.573, 0.643 and 0.609 respectively. Thus, this indicated that the zakat performance was positively associated with the condition of human capital, relational capital and structural capital. In other words, if the performance of human capital, relational capital and structural capital in zakat institutions were good, thus it would reflect better performance.

Overall results as presented in Table 3 shows that the correlations between variables were low and not highly correlated to each other, meaning that there were no cases of multicollinearity problems. Thus, none of the variables were rejected from this study.

Table 4 showed that the overall explanatory factors of zakat institutions performance were statistically significant at 1% significant level with adjusted R-squared of 44.6% (F-value = 22.75; p-value = 0.000). Hence, with this condition, it revealed that the independent and control variable explains 44.6% of the variance in zakat institutions' performance. The regression result of zakat institutions performance with each dimension of intellectual capital and control variable showed that there was a positive significant relationship between human capital and zakat institutions' performance at 10% significant level (t-statistics = 5.178; p-value = 0.079). The positive relationship signified that in zakat institutions, human capital may record better performance as compared to other constructs.

Hypothesis H1a of the current study stated that there is a positive significant relationship between human capital and performance of zakat institutions. Hence, this statistical finding supported hypothesis H1a. This finding concurred with Alipour's [15] study where human capital had a significant positive relationship with firms' profitability. This result was also consistent with Maditinos *et al.* [48] who suggested human capital had a significant positive relationship with return on equity (ROE); a proxy of firms' performance. However, this result seemed to contradict Kamaluddin and Abdul Rahman's [38] results as they statistically found that human capital was not significant towards firms' effectiveness.

In order to improve the efficiency of human capital, a zakat marketing workshop was held to enhance the marketing skills and techniques of employees [48]. In addition, MAIPk Intellectual Forum was also conducted once every two (2) months to develop and sharpen the employees' skills of to analyse, argue and explain the issues related to zakat. Therefore, this had resulted in exposures and improved public speaking techniques and provided training to employees. As reported by Wadah MAIPk 2011, twenty-six (26) courses were conducted to

enhance the skills and knowledge of human resources in that institution. This situation proved that zakat institutions were aware about the importance of human capital in influencing their performance. Thus, all of the activities were conducted as investments to improve the efficiency of human capital, which would enhance their future performance.

Besides, the relationship between relational capital and zakat institutions performance also showed a positive significant result at 5% significant level (t-statistics = 2.922; p-value = 0.004). The positive result was indicated by the positive sign of the coefficient value of 0.363, which reflected that excellent relational capital would influence the performance of zakat institutions. Therefore, the positive relationship proved that the more relational capital developed by zakat institutions, a better performance would be recorded.

Moreover, the coefficient value of relational capital was the highest compared to other variables indicating that this variable made the strongest unique contribution to explain zakat institutions' performance, as the variance explained by all other variables in the current study was controlled. Hence, this indicated that zakat institutions felt that continuous effort in developing interaction skills with zakat recipients, zakat contributors and related organisation as well as the government would enhance the performance of the institutions. For example, a customer services workshop on the applications of psychology was conducted to improve the relationship between zakat institutions and stakeholders [54].

Apart from that, zakat institutions also provided a customer service counter to ensure information regarding zakat were clearly conveyed to the society [54][55][56]. In addition, zakat institutions personally observed the conditions of Asnaf in order to strengthen the relationship between them [56]. As a conclusion, this statistical result supported hypothesis H1b. This result was consistent with Ahmadi *et al.* [9] and Kamukama *et al.* [33] as they confirmed that relational capital had a significant positive relationship towards organisational performance.

The regression results of the relationship between structural capital and zakat institutions' performance indicated that there was a positive relationship between structural capital and zakat institutions' performance. The positive relationship showed that zakat institutions' performance would improve if the structural capital in zakat institutions is high. However, the result showed that there was no significant relationship between structural capital and zakat institutions' performance (t-statistics =

1.585; p-value = 0.116). Thus, structural capital would not influence the performance of zakat institutions. Therefore, the hypothesis of 'there is positive significant relationship between structural capital and zakat institutions performance' was not supported. The result however was a contradiction to Kamaluddin and Abdul Rahman's [38] study that suggested a significant positive association between structural capital and organisation effectiveness. Meanwhile, Bontis *et al.* [19] and Kamukama *et al.* [33] also revealed that structural capital had a significant positive relationship towards business performance. Therefore, zakat institutions need to improve the innovation on their databases such as profiling of Asnaf, measurement on Asnaf performance and their well-being development after receiving zakat fund.

Finally, zakat institutions' performance also illustrated a positive relationship with the total employees reflected by a positive coefficient value of 0.095. Therefore, if the number of employees in zakat institutions increased, the performance of zakat institutions would show also increase. However, the relationship between total employees and zakat institutions' performance displayed a non-significant relationship (t-statistics = 1.323; p-value = 0.189). Thus, this result showed that total employees did not influence the performance of zakat institutions. In this study, total employees were used as the proxy for zakat institutions' size. Thus, the result indicated that the size of zakat institutions did not influence the performance. This shows that the effectiveness of an organisation was not influenced by the number of employees compared to growth in technologies.

CONCLUSION

The current study aimed to investigate the relationship between intellectual capital and its constructs of human capital, relational capital and structural capital towards the performance of zakat institutions in Malaysia. Human capital, relational capital and structural capital became the independent variables, while zakat institutions' performance was the dependent variable. This study used number of employees as control variable with the assumption that there were some other additional factors that could influence zakat institutions' performance in Malaysia.

It was discovered that human capital and zakat institutions' performance showed a significant positive relationship. This indicated that, the better the knowledge, experiences and skills of human resources recorded in

zakat institutions, the better the performance that would be generated by zakat institutions. This was due to the characteristics of human capital which could be a source of innovation and strategic renewal, which would reflect the sheer intelligence of the institutions. Moreover, the investments in human capital such as training would produce proficient employees which in return would assist in reaching the goal of zakat institutions; to record a better performance. This study also found that there was a significant positive relationship between relational capital and zakat institutions' performance. This result showed that knowledge in the relationship with the stakeholders consisting of zakat recipients, zakat contributors, the government and related organisations were the important determinant to the performance of zakat institutions. Moreover, the performance of zakat institutions was also determined by the satisfaction of clients' needs and expectation. Overall, the performance of zakat institutions was strongly influenced by the knowledge in the networking with people inside and outside the institutions. Thus, the improvement of knowledge in the relationship with zakat recipients, zakat contributors and others such as government would boost the performance of zakat institutions. Structural capital was found to be a positive predictor for zakat institutions' performance. This signified that high investment on the knowledge in the organisational routines, procedures, systems cultures and databases would result in high performance. Unfortunately, this result showed an insignificant relationship. Thus, structural capital did not have a significant influence on the performance of zakat institutions. This is due to the reason that structural capital indirectly influenced the performance of zakat institutions.

The limitation of the study is that the current study did not take into account the financial information to measure the performance of zakat institutions due to the result of using questionnaires as the method to collect data. Hence, it is suggested that any future research should consider the financial information as one of the measurements of zakat institutions' performance.

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