
**INTELLECTUAL CAPITAL AND GROWTH STRATEGIES: A Study of
Selected Quoted Service Companies in Nigeria**

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Abstract

The viewpoint that intellectual capital affects the growth strategies of companies is widely shared in developed countries; however, whether this is the case for Nigerian companies is an issue not deeply researched. Consequently, the effect of intellectual capitals on growth strategies of quoted service companies in Nigeria was examined. This paper employs the resource-based theory as its theoretical framework. The study was carried out by means of a sample of 297 employees of quoted service companies. Questionnaire was the major instrument of data collection and the Ordinary Least Square estimation technique was employed in the analysis of data. The results revealed that all the intellectual capital measures (social and structural) positively and significantly impact on growth strategies. In view of the findings, the study recommends the need for management of companies to improve both the structural and social capitals by way of committing more resources in this aspect. This study contributes to knowledge by reaffirming the viewpoints of prior studies on the nexus between intellectual capitals and growth strategies of companies as well as establishing that social and structural capital impacts positively and significantly on growth strategies.

Keywords: Intellectual capital; Structural capital; Social capital; Growth strategies; Nigeria

JEL Classification: E24; J24; M19

1. INTRODUCTION

The movement from an economy based on tangible assets to intangible assets, accelerated the interest in intellectual capital researches (Jardon & Martos, 2012; Sydlar, Haefliger & Prukša 2014; Nimtrakoon, 2015; Rezvan, Merhrdad & Mohammed 2016; Isabel & Bailoa, 2017; Maciková, Smorada, Dorčák, Beug, Markovic, 2018). To date, there has been renowned body of knowledge on intellectual capital and firm performance; seemingly, studies on intellectual capital and growth strategies of companies, particularly in Nigeria are lacking.

Predominantly, intellectual capital is the summative stocks of intellectual property rights, knowledge, experiences, learning competencies, customer relation, information, technologies that companies harness in order to improve their values. According to Isabel and Bailoa(2017) intellectual capital is a group of asset intangible in nature that generate value for companies and

seems to be the determining raw material in creation of sustained competitive advantages. Broadly speaking, intellectual capital encompassed human, social, structural and external capitals as opined by Kostopoulos, Papalexandris, Papachroni and Ioannou (2011).

In management literature, there are numerous forms of intellectual capitals, which conform to the viewpoints of Kostopoulos *et al* (2011) to include human, social, structural and external; however, this study focused on two (2) variants of intellectual capitals-social and structural capitals. Hamideza, Ruzita and Parastou (2015); and (Isabel & Bailoa, 2017) asserted that companies that use intellectual capital do so to augment growth strategies.

Growth strategy in the views of Shakina and Barajas (2013); and Khan and Terziovski (2014), is the outcome of decisions made to guide a company with regards to its structure, processes and environment. In the Nigeria, companies have experienced unmatched expansion in growth in physical asset as opposed to intellectual capital (social and structural). Remarkably, service companies fundamentally depend to a considerable extent on their intellectual capital in order to harness their growth strategies (Hoang, Bui & Nguyen, 2018; and Isabel & Bailoa, 2017).

The viewpoint above is widely shared among developed countries; however, whether this is the case for Nigerian companies is an issue not deeply researched. Consequently, this study was carried out with the view to investigate the effect of intellectual capital on growth strategies of service companies in Nigeria and to fill gap in management literature in this area. The remaining part of this paper is divided as follows: review of relate literature, research methods, results, conclusions and recommendations.

2. REVIEW OF RELATED LITERATURE

2.0 Intellectual Capital

The term ‘intellectual capital’ was first introduced by Kenneth Galbraith in 1969 and later popularised by Tom Stewart in 1991. Following the use by Galbraith and Stewart, numerous researchers (Edvinsson & Sullivan, 1996; Wang & Chang, 2005; Huang & Jim, 2010; and Ahmad & Mushraf 2011) have assessed the nexus between intellectual capital and companies’ performance in developed nations.

Intellectual capital is has been widely acknowledged not only as intangible assets, but also an ideological process that seeks to accumulate knowledge, capabilities, experiences, intellectual property, competencies aimed at enhancing growth strategies not of individuals alone but also of the business processes (see Edvinsson & Sullivan, 1996; Stewart, 1997; Bontis, Chua & Richardson, 2000; and Huang & Jim, 2010).

There are widely held views that intellectual capital takes the forms of human, structural, social, and external (Kostopoulos *et al*, 2011; Hamideza, *et al*, 2015; and Isabel & Bailoa, 2017). Prior studies (Gilbert, Von & Broome, 2017; Cao & Wang, 2015; and Hsu, Chang, Huan & Chiang, 2011) have shown that both structural and social capitals are the most dominant intellectual capitals affecting companies’ strategies. This study focussed on two (2) forms of intellectual capitals namely structural and social capitals.

2.1 Social Capital

Social capital (SOCL) surfaced in management literature due to flow of goods and services in business chain. In the views of Kaya, Sahin and Gurson (2010), SOCL is the value of relation with institutions and people who are probable to be customers and suppliers and expressing the loyalty of people mentioned to the companies. Nahapiet and Ghosal (1998) see SOCL as the knowledge and experiences entrenched within interactions among people and relationship networks.

SOCL refers to the sum of actual and latent resources deep-rooted within, available via, and derived from relationship networks possessed by a social unit within the organisation (Leana & Pil, 2006). According to Schiuma and Lerro (2008), SOCL is an asset that plays a vital role in value creation and investment in social relations with expected returns. Prior studies have shown that companies SOCL improves the quality of strategy they employ as well as the intensity of information exchange among members of the organization (Hsu, *et al*, 2011; and Gilbert, *et al*, 2017).

2.2 Structural Capital

Structural capital (STRCL) refers to the underpinning regulating, authorizing and supporting intellectual capital. According to Altinok (2005), STRCL is the knowledge that does not go home and stay at the organization. Hence, STRCL is the method and policy a company may employ in order to grow is business processes and chains; such methods include information technologies-databases to records and numerous documentations, from management thinking to organizational culture, from financial affairs to patents (Maciková, *et al*, 2018; Gilbert, *et al*, 2017; and Isabel & Bailoa, 2017).

STRCL is less tangible and more specialized than other forms of intellectual capitals. In other words, STRCL is the knowledge embedded in a company's processes, practices and routines (Jansen, Tempelaar, Van-den Bosch & Volberda, 2009). STRCL uses non-human depots of knowledge and experiences and is effectiveness in building organizational processes, information systems, and culture (Jardon & Martos, 2012).

Extant literature have revealed that companies STRCL enhances the quality of strategy they employ as well as the depth of knowledge and experience exchanges among members of the organization (Hsu, *et al*, 2011; and Gilbert, *et al*, 2017). In view of this, the study was carried out with the view to assessing whether both social and structural capitals drive companies growth strategies in Nigeria.

2.3 Theoretical Framework

This paper is anchored on the Resource Based Theory (RBT), which was advocated by Wernerfelt in 1984 as a tool for evaluating the strategic resources available to a company. The underlying philosophy of RBT is that development of intellectual capital is a crucial means of realizing strategic growth of the company. Supporting this view, Cao and Wang (2015) stressed that a company's intellectual capital is valuable when it is able to augment strategies aimed at improving its efficiency and effectiveness.

The RBT elucidates that in order to realize sustainable growth, it is vital for companies to focus on both its tangible and intangible assets. Impliedly, the strategic resource of a company is capable of generating effective growth strategies and competitive advantage. The link of RBT to the study is that intellectual capital fits the description of strategic assets since it is valuable, poorly imitable, rare, and lacking tactically alike substitute.

From the viewpoint of RBT, predicting intellectual capital and growth strategies relationship is within the feasible parameters. Specifically, this study proposes that intellectual capital (social and structural) may affect growth strategies of companies in the service sector. Hence, strategic intangible resources such as intellectual capital resulting from the skills, knowledge, processes, information systems and customer relationships are very fundamental in the service sector.

2.4 Prior Studies

This section of the paper provides a review of some prior studies within and outside Nigeria. Hoang, Bui and Nguyen (2018) examined the effect of human, social and organizational capitals on information communication technology (ICT) of Vietnam companies via confirmatory factors. The results indicated that intellectual capital have direct effects on the performance of companies.

In Korea, Xu and Wang(2018) assessed the place of intellectual capital in promoting financial performance and sustainable growth of manufacturing firms using multiple regression tool. Findings indicated that intellectual capital has a positive impact on companies' performance in Korea. More so, the study established that relational capital is the most influencing intellectual capital factor.

In Malaysi, Halid, Choo and Salleh (2018) investigated the nexus between intellectual capital and sustainable advantage of companies using regression tool. Findings showed a significant nexus between intellectual capital and sustainable advantage of Malaysian companies.

In Pakistan, Wafa and Javaria (2018) evaluated the impact of intellectual capital on financial performance and financial efficiency of manufacturing companies using panel regression tool. The study found that there exists a significant relationship between the various components of intellectual capital (human capital, structural capital and social) and financial performance (return on asset) of Pakistani companies.

In Indonesia, Hariyati and Dyani (2018) studied intellectual capital, differentiated strategy and business performance of small and medium scale enterprises(SMSE) via descriptive statistical tool. The study indicated that intellectual capital contributes significantly to business performance and differentiated strategy.

In Nigeria, Isabel and Bailoa (2017) assessed the effect of intellectual capital on the strategic resource of companies using descriptive statistical tool. The study established that intellectual capital variants (such as structural, human, social and relational capitals) significantly and positively affect strategic resource of companies.

In Iran, Rezvan, Merhrdad and Mohammed (2016) investigated the link between intellectual capital and companies' performance via Pulic's model. The regression results support the hypothesis that intellectual capital is positively related to firm performance (Tobin's Q).

In Australia, Khan and Terziovski (2014) appraised the link between intellectual capitals and SMEs performance and the mediating effect of organizational innovation using regression analysis. Findings showed that human, structural, and relational capital had a positive and significant effect on SMEs performance when mediated by organizational innovation.

In Turkey, Adnan, Ozlem and Mutlu (2014) studied the links between intellectual capitals, organizational strategy, innovation and companies' performance using Pearson correlation analysis. The study found that intellectual capital, organizational strategy and innovation contribute significantly to companies' performance.

Ekwe (2013) used value added intellectual coefficient to assess whether there is a positive and significant link between intellectual capital indicators (human, structural and capital employed efficiency) and revenue growth of deposit money banks using multiple regression. The result suggests a positive and significant nexus between intellectual capital components and growth in revenue of deposit money banks in Nigeria.

In Taiwan, Chang and Hsieh (2011) examined the dynamics of intellectual capital within the dynamic random access memory companies in Taiwan. The study variables are human and structural capital efficiency and regression model was employed in the analysis of data. The results showed that firms place relatively diverse weights on the development of intellectual capital components across life cycle stages and such investments have diverse consequences in terms of financial performance.

In Jordan, Sharabati, Jawad and Bontis (2010) studied the relation between intellectual capital and firm performance in Jordan. Primary data and descriptive analysis were employed and results suggest that measuring intellectual capital is the primary focus of senior executives and it thus improve firm performance in Jordan

Using regression statistical analysis, Wang and Chang (2005) studied the nexus between intellectual capital and business performance in China and found evidence that intellectual capital significantly affect business performance, with an exception to human capital element of intellectual capital.

Furthermore, human capital insignificantly affects performance via the other three elements: innovation, process and customer capitals. Moreso, there exists a cause-effect link among four elements of intellectual capitals (human, innovation, process and customer capitals. In view of the review of literature, the conceptual model of the study is given as:

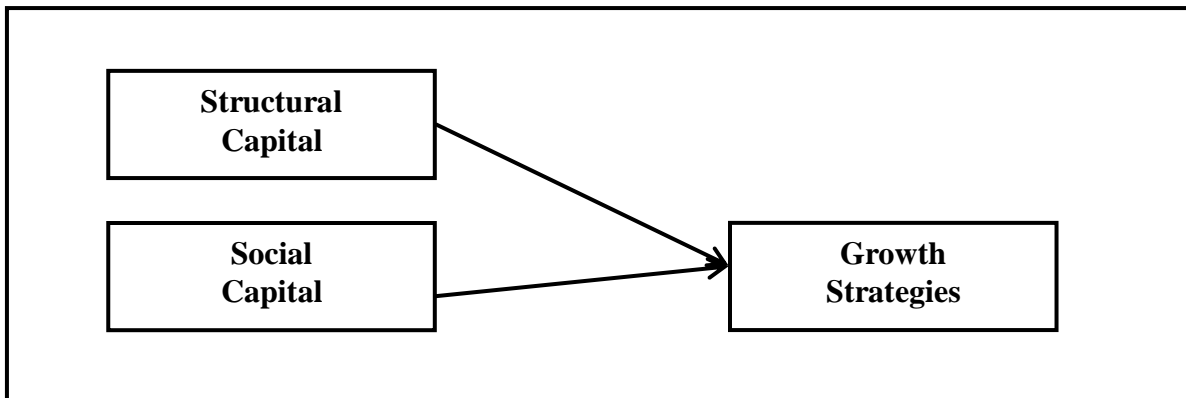


Fig. 1: Conceptual Model of Study

3. RESEARCH METHODS

This paper adopts the descriptive survey design and the study population comprised of all quoted service companies on the Nigerian Stock Exchange (NSE). As at 31st December, 2020, there are about twenty-five (25) service companies. The study adopts the simple random sampling technique by selecting ten (10) service companies.

Data required for the study were obtained via primary source. The data was obtained via the administration of questionnaire to three hundred employees of the selected service companies, out of which two hundred and ninety-seven (297) was fully completed and retrieved. The questionnaire was designed on a 5-point Likert scale of strongly agree, agree, undecided, disagree and strongly disagree. The questionnaire was administered to all participants via self-administered. The instrument is advantageous as it enabled the researcher to efficiently collect data from a large population within a short period of time and also guaranteed participants' anonymity.

The Cronbach Alpha reliability coefficient technique was used in establishing the reliability of the research instrument. However, fifty (50) respondents who are not part of the study group were administered the questionnaire and the data obtained were analyzed via Cronbach Alpha technique. The research instrument yielded Cronbach Alpha of 0.89, hence, the research instrument is considered suitable for the study, since the Cronbach Alpha coefficients exceed 0.5 as suggested by Cronbach (Creswell, 2003).

In this study, intellectual capital variant comprised of social and structural capitals. This study adopts the models of Kostopoulos, *et al* (2011); the model of study is given as follows:

$$GRST_t = \beta_0 + \beta_1 x_t + \mu_t \quad eq. 1$$

Equation 1 shows the implicit form of the regression model of intellectual capitals and growth strategies. Thus, equation 1 can be rewritten as follows:

$$GRST = F (STRCL) \quad eq. 2$$

$$GRST = F (SOCL) \quad eq. 3$$

Equations 2-3 are expressed in their implicit forms; however, equations 4-5 take the explicit form in equations 2-3 as follows:

$$GRST_{it} = \beta_0 + \beta_1 STRCL_{it} + \mu_t \quad eq. 4$$

$$GRST_{it} = \beta_0 + \beta_1 SOCL_{it} + \mu_t \quad eq. 5$$

Where: GRST = Growth Strategies; SOCL = Social Capital; STRCL = Structural Capital. The dependent variable is growth strategy while social and structural capitals are the independent variables.

The regression tool was employed the analysis of data and done in phases: descriptive (mean, standard deviation, minimum and maximum value, Pearson correlation coefficient, variance inflator factor and normality test) and inferential (simple regression) statistical tools. The analysis was carried out by means of STATA 13.0 version.

4. RESULTS

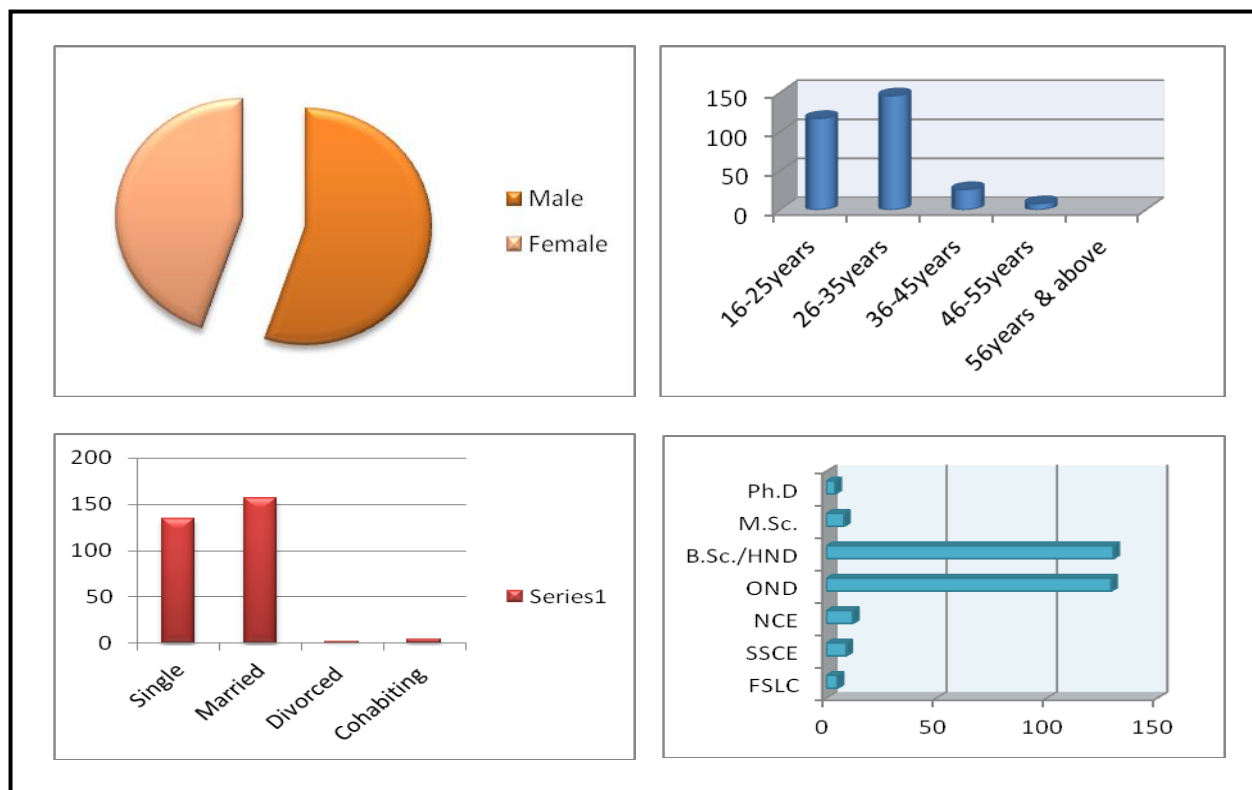


Fig. 1: Bio-data of the Respondents

The bio-data of the respondents of showed that 164 of the respondents are male while 133 are female. The marital status shows that 134, 157 and 22 are single, married and divorced respectively while 2 and 4 are either divorced or cohabiting respectively. The result indicates that 117 and 146 of the respondents are between ages 16-25 years and 26-35 years respectively, 26 and 8 are between ages 36-45 years and 46 years-55 years and above while none of the respondents were above 56 years of age.

Furthermore, the educational qualification reveals that majority of the respondents 130 and 129 had educational qualifications ranging from OND and first degrees (B.Sc./HND); an indication of the level of awareness and the knowledge-ability of respondents to provide answers to the questionnaire items.

Table 1: Descriptive Results of Structural Capital and Growth Strategies

S/N	Questionnaire Items	Mean Value	Standard Deviation
1	Q1	3.077	1.505
2	Q2	3.012	1.494
3	Q3	2.927	1.443
4	Q4	3.227	1.459
5	Q5	2.907	1.364

Source: Researcher's Compilation via Field Work, 2021

Table 1 shows the descriptive results for structural capital and growth strategies of quoted service companies in Nigeria. The result indicates that all items (1-5) scored above 2.50 mean cut-off mark; this implies that the respondents perceive and agree to the fact that the items of questionnaire are good measures for assessing structural capital and growth strategies. More so, standard deviation values are not too dispersed from each other; a clear indication that the perception of respondents on structural capital and growth strategies are not too dispersed from each other.

Table 2: Descriptive Results of Social Capital and Growth Strategies

S/N	Questionnaire Items	Mean	Standard Deviation
1	Q1	3.202	1.567
2	Q2	3.135	1.555
3	Q3	3.047	1.502
4	Q4	3.359	1.519
5	Q5	3.117	1.512

Source: Researcher's Compilation via Field Work, 2021

Table 2 shows the descriptive nature of social capital and growth strategies of quoted service companies in Nigeria. The result indicates that all items (1-5) scored above 2.50 mean cut-off mark; this implies that the respondents perceive and agree to the fact that the items of questionnaire are good indicators for assessing social capital and growth strategies. In addition, the standard deviation values are not too dispersed from each other; impliedly, the perception of respondents' social capital and growth strategies are not too dispersed from each other.

Table 3: Regression Results of Structural Capital and Growth Strategies

Number of Obs.=	297	F (1, 298)	=	84.88	
R-Squared	= 0.9811	Prob. > F	=	0.000	
Adj. R-Squared =	0.8921	Root MSE	=	16.32	
<i>GRST</i>	<i>Coef.</i>	<i>Std. Error</i>	<i>T</i>	<i>P>/t/</i>	<i>[95% Conf. Interval</i>
<i>STRCL</i>	0.3484	12.494	34.65	0.000	-5.2994 5.7867
<i>_cons</i>	0.3131	9.393	10.06	0.000	-26.621 28.382

Source: Researcher's Compilation via Field Work, 2021

Presented in Table 3 is the regression result of structural capital and growth strategies of quoted service companies in Nigeria. The R² adjusted is 0.8921, showing that the independent variable explained about 89.2% of the systematic variation in the dependent variable; hence, the model provides a good fit to the data.

Furthermore, the study found that structural capital positively affects growth strategies as shown in the f-ratio (84.88 Prob. 0.000) and t-value (34.65; Prob. 0.000). This finding corroborates in part with the results of prior studies done by Isabel and Bailoa (2017); and Khan and Terziovski (2014) that structural capital positively and significantly affects growth strategies of companies.

Table 4: Regression Results of Social Capital and Growth Strategies

Number of Obs.=	297	F (1, 298)	=	64.19	
R-Squared	= 0.8702	Prob. > F	=	0.000	
Adj. R-Squared =	0.8419	Root MSE	=	9.73	
<i>GRST</i>	<i>Coef.</i>	<i>Std. Error</i>	<i>T</i>	<i>P>/t/</i>	<i>[95% Conf. Interval</i>
<i>SOCL</i>	0.3393	6.322	22.48	0.000	-0.5507 6.01411
<i>_cons</i>	0.2183	3.494	6.393	0.000	-27.667 29.4974

Source: Researcher's Compilation via Field Work, 2021

Presented in Table 4 is the regression result of social capital and growth strategies of quoted service companies in Nigeria. The R² adjusted is 0.8419, showing that the independent variable explained about 84.2% of the systematic variation in the dependent variable; hence, the model provides a good fit to the data.

Furthermore, the study found that social capital positively affects growth strategies as indicated in the f-ratio (64.19 Prob. 0.000) and t-value (22.48; Prob. 0.000). This finding corroborates in part with the results of prior studies conducted by Hoang, *et al* (2018); and Wafa and Javaria (2018) that social capital positively and significantly affects growth strategies of companies.

Table 5: Diagnostic Test

Variable	VIF	1/VIF
strcul	1.17	0.8561
Socl	1.11	0.9020
Mean VIF	1.14	

Source: Researcher's Compilation via Field Work, 2021

Table 5 captures the Variance Inflation Factor (VIF). The mean VIF for independent variables did not beat the standardized VIF benchmark ($1.14 < 10.00$), suggesting the non-existence of multi-collinearity among pairs of independent variables of the study.

5. CONCLUSIONS AND RECOMMENDATIONS

This study assessed the effect of intellectual capital on growth strategies of quoted service companies in Nigeria. In this study, two (2) intellectual capital dimensions were employed - social and structural capitals. Data were obtained from questionnaire administered to the employees of ten (10) selected service companies. Data obtained in the field survey were analysed by means of Ordinary Least Square estimation technique.

The study found that all intellectual capital dimensions (social and structural) significantly and positively affect growth strategies of service companies in Nigeria. The conclusion is that intellectual capital affects growth strategies significantly and positively. In view of the findings, the study recommends the need for management of companies to improve both the structural and social capitals by way of committing more resources in this aspect.

This study has imperative implications for management and investors as it provides valuable information about the diverse dimensions (social and structural) that influence growth strategies. This study contributes to knowledge by reaffirming the viewpoints of prior studies on the nexus between intellectual capitals and growth strategies of companies as well as establishing that social and structural capital impacts positively and significantly on growth strategies.

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