



## Dynamics of Locus of Control, Financial Knowledge, Financial Behaviour and Financial Position: An Empirical Study

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### Abstract

Qatar has witnessed significant economic growth since 2008 with Gross Domestic Product (GDP) increasing by about 10 percent annually on an average, and it is consistently listed among the richest nations in the world since then. A study on the financial behaviour of the Qatari nationals would reveal their role in this achievement. This research tests the hypothesis that the locus of control, income, financial knowledge, financial behaviour and financial position of the citizens are causally related. The research methodology is typical to the empirical studies using Structural Equation Modelling (SEM). The evidence collected from randomly chosen 204 respondents supported five out of seven hypotheses which indicated that internal locus of control, financial knowledge, financial behaviour and financial position were causally related. For policy implementation, it is imperative that household of a country should be educated in terms of financial knowledge to control the financial behaviour which affects the financial position.

**Keywords:** Locus of Control, Income, Financial Knowledge, Financial Behaviour, Financial Position



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- H4: INC has a significant influence on FNK.  
 H5: FNK has a significant influence on FNB.  
 H6: FNB has a significant influence on FNP.  
 H7: FNK has a significant influence on FNP.

#### *Linkage between Financial Behaviour and Financial Position*

Financial behaviour could be studied both at micro and macro level. In this research the focus is at micro level i.e., at the household level as this study basically tests the behaviour of Qatari citizens in terms of their financial behaviour. So, in the context of household's financial behaviour refers to the response of the members of the house by virtue of which the household manages its financial resources through planning, budgeting and saving with a long-term financial plan (Hobman, 2010). Financial position refers to the ability of the members of the household to provide the needs of the household by meeting the financial obligations (Hobman, 2010). Researchers have focused their studies to test whether the responsible financial behaviour has contributed to a strong financial position (Lea et al., 1995; Joo and Grable, 2004; Dowling et al., 2009). Common finding is that these two research constructs are positively correlated, but causation is not proved through the empirical evidence (Parrotta, J.L. and Johnson, 1998 and Zakaria et al., 2012). But, there are studies which have found that responsible financial behaviour has resulted in lower financial difficulties (Lea et al., 1995; Joo and Grable, 2004) and higher financial satisfaction (Dowling et al., 2009). Thus, it is very evident that financial behaviour plays a crucial role in achieving a commendable financial position for a household. Having realized the importance of financial behaviour, a group of researchers have made attempts to find the determinants of this research construct. The fundamental question to be answered was, 'What explains the responsible financial behaviour and financial position?' Researchers have come with a series of variables which would explain the financial behaviour among which the first and the foremost is the sound financial knowledge (Hogarth, et al., 2002; Hilgert et al., 2004; Perry et al., 2005).

#### *Linkage between Financial Knowledge and Financial Position*

Having realized the importance of the construct financial knowledge, many researchers have found its attributes which includes a thorough knowledge about the interest rate, cost, prices, discount rate and the time horizons (Zakaria et al., 2012). Researchers have also found that in many cases the financial information is complex to the common household member and in many cases it is inaccessible. Many a times people fall a prey to the Dunning-Kruger effect (Zakaria et al., 2012) which means people who do not know the details admit their ignorance and fail to seek information. Lusardi (2008) considers financial literacy to be an important determinant of financial behaviour. Hayhoe et al., (2005) and Xiao et al., (2006) have found that having financial knowledge reduces the risk of financial mismanagement leading to credit card non-payment, check bouncing, bankruptcy etc. One aspect which plays a vital role in the way people behave is the 'self-belief' which has been

emphasized by many researchers, but unfortunately not many have investigated the importance of this construct in shaping the financial behaviour.

#### *Linkage between income and financial position*

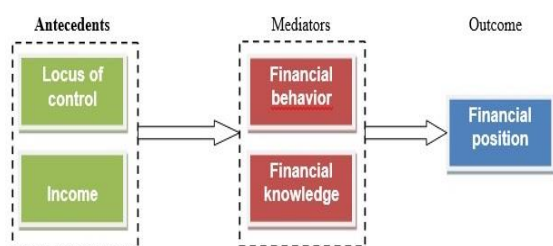
Going further deeper into the causation it can be said that financial behaviour and financial knowledge act as a mediator between the locus of control and financial position as well as income group and the financial position. In these relationships, it is important to understand the difference between the income and the financial position. While income refers to the income group of the household which have influence on the financial behaviour and financial knowledge, financial position refers to the outcome that could be achieved through the income available in the household. It is imperative that it is possible to have a high-income group family leading towards an inferior financial position and a low-income family with the right kind of investments and fund management leading towards a better financial position.

#### *Linkage between Locus of Control and Financial Position*

The term which encompasses the self-belief and moves beyond it to the determination of the outcome of their own action well in advance is 'locus of control' (Zakaria et al., 2012). Locus of control reflects upon the ability of the individual to be positive about the achievement of the intended outcome which is the financial position. So, it can be conceptualized that locus of control and income could be the exogenous variables which have influence on the financial behaviour and financial knowledge which in turn have influence on financial position which are all the endogenous variables. Grable et al. (2009) have studied the two extremes of locus of control i.e., internal locus of control and external locus of control. The people with internal locus of control believe that it is their own financial behaviour that decides their financial position, while those with external locus of control attribute their financial position not purely to their financial behaviour but to chance, luck, fate, and all possible external factors. According to Grable et al., (2009) it is the people with internal locus of control who demonstrate more responsible financial behaviour. In other words, people with external locus of control may not demonstrate responsible financial behaviour through proper planning, budgeting and financial planning. Even though locus of control is an important determinant of financial behaviour, the research on locus of control is limited and even those studies which are available are mainly conducted in the context of west.

Further, the study results are mixed and while one group has found that those with external locus of control are more likely to have higher debt (Lunt and Livingstone, 1991 and Cosma et al., 2010), another group of researchers (Nyhus et al., 2001 and Wang, 2011) have found that those with internal locus of control have more debt and it is justified that as they are more confident of managing their debts, they can incur more debt. It is interesting to note that a group of researchers have even proved that external locus of control is negatively related to both financial behaviour and

financial position (Perry et al., 2005). Thus, it is evident that the research on the influence of locus of control on the financial behaviour and financial position needs further investigation to arrive at a meaningful conclusion (Figure 2).



**Figure 2. The Conceptual Model**

**Source:** Authors’ own compilation

### III. Research Methodology

#### Research Design

The concept of meta-analysis was used to screen the dimensions of the study. The approach of this study was mainly quantitative and to some extent qualitative in nature and it was exploratory and ‘ex post facto’ kind of research (Creswell, 2008), the concepts and models evolved as the research made progress both in terms of literature review and field work with the households in Qatar. The secondary sources such as journals and conference proceedings were used to collect the qualitative data and questionnaire with 5-point Likert scale was used for collecting the quantitative data. Score of 5 indicated strong agreement and 1 indicated strong disagreement with the intermediate scores varying evenly in between these two extremes. Structural Equation Modelling (SEM) was used for confirmatory factor analysis, regression and hypothesis testing using path modelling approach. The quantitative analysis involved mainly statistical analysis, which had the distinct components of descriptive statistics and inferential statistics. Descriptive statistics provided the general idea about the sample demographics, sample normality study using Skewness and Kurtosis measures and the overall perceptions. The inferential statistics was used for drawing the inferences of the study mainly with reference to hypothesis testing.

#### Questionnaire Development

The development of the metric in the form of a questionnaire entailed a four-stage approach including meta-analysis of literature, informal interviews with households in Qatar, questionnaire development and pilot testing of the questionnaire. The households chosen were spread across Qatar. The reason for this selection was to study the influences of external factors across the cross section of the society. Data collection was through electronic means as well as personal distribution of the questionnaire. Table 1 summarizes the research constructs, authors, description and sample items.

**Table 1: Research Construct, Author, Meaning and the Sample Item in Questionnaire**

Research construct	Author	Meaning	Sample item
Locus of control	Gohari et al., (2014), Cobb-Clark, (2015)	It reflects upon the ability of the individual to be positive about the achievement of the intended outcome which is the financial position.	When I make financial plans, I am sure I will make them work.
Income	Joo et al., (2004), Perry et al. (2005), Zakaria (2012).	The position of the household in terms of earning potential in the society.	My income per month is above 20,000-30,000 QAR
Financial knowledge	Avard et al., (2005), Robb, and Woodyard (2011), Agarwalla et al., (2012),	It is the ability to understand how money works, how to manage it to earn or make it, how to invest it and how t donates it to help others. It also refers to the knowledge about the interest rate, cost, prices, discount rate, and the time horizons	I do not believe in holding 3 to 4 credit cards which my financial position does not support.
Financial behaviour	Joo et al., (2004), Hobman et al., (2010), Zakaria (2012),	It is the behaviour which prompts an individual to take a stand regarding the investment or spending of money.	I have plans to set money for retirement.

Financial position	Parrotta et al., (1998), Hilgert et al., (2003), Dowling et al., (2009).	The state of finance in the household to meet the day-to-day requirements and be comfortable for handling financial demands.	I had no financial troubles because I had enough money.
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**Source:** Authors' own compilation

#### Sample Design

This research has been carried out based on simple random sampling which is a probability-based sampling as the total number of households in Qatar was a finite sample. Sampling unit was an individual in the household the sampling frame being the households in Qatar. Stratification was not necessary as there was no need for inter-strata comparison in this research. The standard formula for sample size calculation has been adopted which yielded a sample size of 187 and to have a cross section of the sample and meet the minimum requirement of Structural Equation Modelling (SEM) a sample size of 204 has been adopted in this research. Adequate care has been taken to ensure that the sample is free from bias and distributed uniformly across the cross section of the society.

## IV. Results and Discussion

#### Demographics

Demographic distribution gives the general idea about the respondents who have participated in this research. This becomes important as an idea about the participants gives the strength to the inferences which are drawn through the data. It can be observed that majority of the respondents are males in this research (70.1%) and in the age group of 25-35 years (36.3%) followed by the age group of 35-45 years (30.9%) (Table 2). It can be observed that majority of the respondents were bachelor's degree holders (47.1%) followed by certificate holders (20.6%). It can be observed that the majority respondents' income per month come under the range of 30,000-40,000 QAR (41.21%), followed by 20,000-30,000 QAR (25.5%). Majority of the respondents are having five to ten years (46.1%) experience in financial management followed by more than 10 years (32.4%). So by and large, it is evident that the respondents are very well versed with the financial management of the household and have the required experience in the organization to express their views on the topic of interest.

**Table 2: Demographic Distribution of the Respondents (N = 204)**

Attributes	Frequency	Percentage
<i>Gender</i>		
Male	143	70.1
Female	61	29.9
<i>Age</i>		
Less than 25 years	26	12.7
25 – 35 years	74	36.3
35 – 45 years	63	30.9
45 – 55 years	26	12.7
55 years and above	15	7.4
<i>Educational qualification</i>		
Certificate	42	20.6
Diploma	32	15.7
Bachelors	96	47.1
Masters	16	7.8
Others	18	8.8
<i>Income per month (QAR)</i>		
Less than 10,000	16	7.8
10,000 to 20,000	18	8.8
20,000 to 30,000	52	25.5
30,000 to 40,000	84	41.2
40,000 and above	34	16.7
<i>Experience in finance management</i>		
Less than two years	12	5.9
2 – 5 years	32	15.7
5 – 10 years	94	46.1
More than 10 years	66	32.4

**Source:** Authors' own compilation

#### Normality of Data

Normality assumption was not violated with an acceptable range of Skewness and Kurtosis statistics (threshold values -1.00 to +1 and -3 to +3 respectively) (Table 3). Therefore, the data could be subjected to further level of statistical analysis. The negative Skewness shows that the response is towards the higher side of agreement in the Likert scale (Mean = 3.0).

**Table 3: Skewness and Kurtosis**

	N	Mean		Std. Deviation		Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
VAR1	204	2.9118	.124847	-.076	.170	-1.016	.339		
VAR2	204	2.9461	.130631	-.087	.170	-1.161	.339		
VAR3	204	3.0735	.119322	-.145	.170	-.835	.339		
VAR4	204	2.9363	.123211	-.054	.170	-1.071	.339		
VAR5	204	2.8676	.128926	-.054	.170	-1.139	.339		
VAR6	204	2.9216	.124122	-.072	.170	-1.071	.339		
VAR7	204	2.9668	.122713	-.065	.170	-1.105	.339		
VAR8	204	2.7206	.121378	-.351	.170	-.831	.339		
VAR9	204	3.0392	.123311	-.141	.170	-.929	.339		
VAR10	204	3.0794	.125307	-.154	.170	-1.215	.339		
VAR11	204	3.0833	.125471	-.088	.170	-1.168	.339		
VAR12	204	2.8039	.118313	-.062	.170	-1.112	.339		
VAR13	204	3.0343	.118438	-.013	.170	-1.045	.339		
VAR14	204	2.9706	.111820	-.144	.170	-.807	.339		
VAR15	204	3.0686	.110315	-.248	.170	-.799	.339		
VAR16	204	3.0588	.105815	-.093	.170	-.809	.339		
VAR17	204	2.9902	.119324	-.019	.170	-1.031	.339		
VAR18	204	2.9902	.107818	-.020	.170	-.907	.339		
VAR19	204	3.0190	.96725	-.290	.170	-.440	.339		
VAR20	204	3.0049	.114254	-.090	.170	-1.221	.339		
VAR21	204	3.2598	.96037	-.370	.170	-.795	.339		
VAR22	204	3.0243	.110279	-.040	.170	-1.134	.339		
VAR23	204	3.1520	.103221	-.255	.170	-.644	.339		
VAR24	204	2.9755	.111169	-.065	.170	-1.018	.339		
VAR25	204	3.1078	.100154	-.040	.170	-1.092	.339		
Average	204	3.0000	1.1537	0.0185	0.1703	-0.9906	0.3389		

Source: SPSS Software Output

*Measurement Model*

A pilot study was undertaken to validate and test the reliability of the questionnaire with a sample size of 35. The questionnaire with a total 25 indicators of the latent variables was reduced to a total of 15 items through factor analysis, which were subsequently used for collecting data through a total sample size of 204. To verify the reliability of the latent variables in the model, internal consistency reliability measure, item reliability measure, and composite reliability measures were calculated. Table 4 shows the Cronbach’s alpha coefficient and the composite reliability result for the model. The alpha coefficient has the acceptable value ranging from (0.7 to 0.9), indicating a moderately high level of internal consistency. The result of item reliability (IR) measured as standardized confirmatory factor loading (FL) ranged from 0.8 to 0.9 (Table 5). The composite reliability is in the range of 0.7 to 0.9 indicating moderate to high reliability score. The convergent validity assessment based on factor loading and composite reliability indicate moderate to high acceptable range of factor loading for all items and good composite reliabilities in general. To test for discriminant validity, the square root of average variance extracted (AVE) for each construct was compared with the correlation between the construct and the other constructs (Table 6) and was found to be higher, and hence, the

discriminant validity is proved. The data could be subjected to the further analysis as very high measures were indicated in all the methods of reliability and validity.

**Table 4: The Reliability Measures**

	AVE	Composite Reliability	R Square	Cronbach’s Alpha	Communality	Redundancy
FNB	0.5239	0.8188	0.727	0.7238	0.5239	0.3657
FNK	0.745	0.9359	0.701	0.9142	0.745	0.3964
FNP	0.6482	0.9019	0.214	0.8656	0.6482	-0.165
INC	0.6971	0.9188	0	0.8858	0.6971	0
LOC	0.7808	0.9467	0	0.9291	0.7808	0

Source: SPSS Software Output

**Table 5: Factor Loadings (after reduction)**

	FNB	FNK	FNP	INC	LOC
FNB1	0.9076	0	0	0	0
FNB2	0.9019	0	0	0	0
FNB3	0.9079	0	0	0	0
FNK2	0	0.8861	0	0	0
FNK3	0	0.8777	0	0	0
FNK4	0	0.8768	0	0	0
FNP1	0	0	0.8518	0	0
FNP2	0	0	0.8213	0	0
FNP3	0	0	0.7818	0	0
INC1	0	0	0	0.9986	0
INC2	0	0	0	0.9047	0
INC4	0	0	0	0.922	0
LOC4	0	0	0	0	0.9152
LOC1	0	0	0	0	0.9132
LOC2	0	0	0	0	0.908

Source: SPSS Software Output

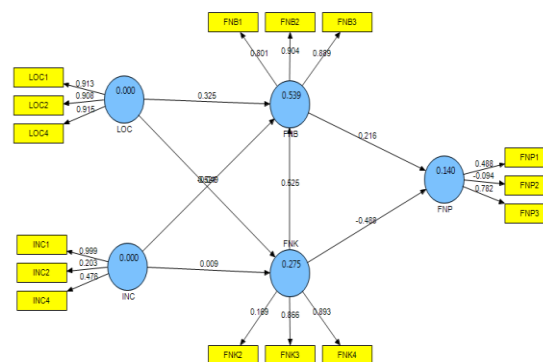
**Table 6: The Correlation Matrix**

	FNB	FNK	FNP	INC	LOC
FNB	<b>0.7238</b>	0	0	0	0
FNK	0.6846	<b>0.8631</b>	0	0	0
FNP	0.1182	0.3402	<b>0.8051</b>	0	0
INC	0.1798	0.2047	0.1931	<b>0.8349</b>	0
LOC	0.5811	0.5242	0.0388	0.3751	<b>0.8836</b>

Source: SPSS Software Output

*Structural Model*

The hypothesized model was designed to test seven hypotheses built based on the research literature to study the dynamics of LOC, INC, FNB, FNK and FNP. The model with path coefficients and the explanatory power (R<sup>2</sup>) for each dependent construct is displayed in figure 3. While path coefficients show the strength of relationship between the two latent variables, the t-values (Figure 4 and Table 7) are indicative of the significance of relationships which enable hypotheses testing. The R<sup>2</sup> values range from 0.1 to 0.5 (cut-off 0.1) which indicates moderate explanatory power of the model, in other words, the exogenous variables influence up to 50% on the endogenous variables of the study. The path coefficients are up to a value of 0.5 for the variables associated through hypotheses testing and indicate a moderate influence of exogenous variables on the endogenous variables.



**Figure 3. Path Coefficients and Factor Loading**

Source: Authors' own compilation

**Table 7: The t-values of the Hypothetical Model**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)	Hypothesis
FNB -> FNP	0.2159	0.2101	0.1326	0.1326	1.6281	Supported
FNK -> FNB	0.5246	0.5056	0.1793	0.1793	2.9248	Supported
FNK -> FNP	-0.488	-0.4677	0.142	0.142	3.436	Supported
INC -> FNB	-0.0494	-0.0427	0.0855	0.0855	0.5772	Unsupported
INC -> FNK	0.0094	-0.0929	0.1927	0.1927	0.049	Unsupported
LOC -> FNB	0.3247	0.2938	0.21	0.21	1.6461	Supported
LOC -> FNK	0.5206	0.565	0.1332	0.1332	3.909	Supported

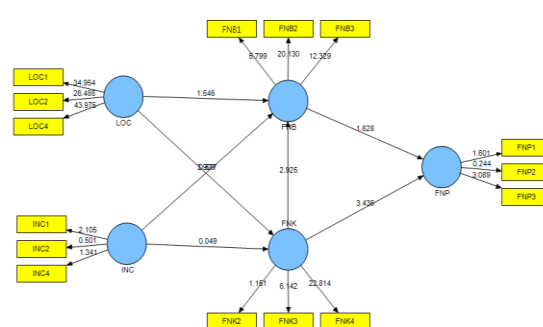
Source: SPSS Software Output

Following hypotheses stand supported:

- H1: LOC has a significant influence on FNB.
- H2: LOC has a significant influence on FNK.
- H5: FNK has a significant influence on FNB.
- H6: FNB has a significant influence on FNP.
- H7: FNK has a significant influence on FNP.

Following hypotheses are not supported:

- H3: INC has a significant influence on FNB.
- H4: INC has a significant influence on FNK.



**Figure 4. t-values of the Hypothetical Model**

Source: Authors' own compilation

**V. Findings and Discussion**

The financial behaviour of citizens of Qatar justifies the position of the country among the richest economies of the world. Following discussion emerging through the findings of the study provides adequate evidence to this point.

1. First, the demographics of the sample chosen indicates that majority of the respondents are above the income level of 30,000-40,000 QAR per month which is indicative that the household in Qatar enjoys the luxury of being among the richer class.
2. Hypothesis testing has revealed that the locus of control has a significant influence on the financial knowledge of the respondents. Earlier studies have proved that people with external locus of control believe in chance, luck, and similar factors for financial success, but those with internal locus of control believe in their own decisions to be contributing to the financial success (e.g., Zakaria et al., 2012) and financial knowledge is quintessential for making sound financial decisions. Thus, the respondents have an internal locus of control which facilitates them in gaining the financial knowledge.

3. The research has provided evidence that locus of control also influences the financial behaviour of the people significantly. Again, the earlier research has proved that individuals with internal locus of control believe that it is their own financial practices which lead to the financial position, and hence they exhibit more responsible financial behaviour (Perry et al., 2005; Grable et al., 2009). It must be noted that this finding of this research is in direct contrast to the finding which indicates that higher locus of control i.e., internal locus of control has higher debt due to a negative financial behaviour (Lunt and Livingstone, 1991 and Cosma & Pattarin, 2010).

4. It has been found that financial knowledge has a significant influence on financial behaviour. Several researchers have emphasized the importance of financial knowledge in shaping the financial behaviour (Hogarth, et al., 2002; Hilgert et al., 2004; Perry et al., 2005). Thus, the research finding is consistent with the earlier studies and it also indicates that the financial behaviour of citizens of Qatar is governed by the financial knowledge they acquire through various means. To that extent the government has been successful in educating the citizens of the country.

5. It has been revealed in this study that financial knowledge has a significant influence on the financial position of the household. This finding is consistent with the earlier research (e.g., Hogarth, et al., 2002; Hilgert et al., 2003 and Grable et al., 2009). The finding indicates that if the society has an exposure to the financial knowledge it would plan accordingly and lead to better financial position.

6. The study has revealed that financial behaviour has a significant influence on financial position. Earlier studies have proved that those who adhere to responsible financial behaviour report lower financial difficulties (Lea et al., 1995; Joo et al., 2004 and Dowling et al., 2009) and higher financial satisfaction (Parrotta et al., 1998 and Joo et al., 2004). Thus, it is evident that the Qatari citizens have a positive financial behaviour which leads to their financial position.

7. Finally, it was interesting to note that the income of the household had neither any significant influence on the financial knowledge or financial behaviour. This is a clear indication that the citizens of Qatar have a clear idea about the financial behaviour and financial knowledge which is independent of their economic background. Whether the citizen belongs to an affluent class or not the financial knowledge and the financial behaviour gets formed through observation and the practical situations. There is no rule that those with high income group should exhibit a positive financial behaviour leading to a financial position and vice versa. This is quite positive about a community and probably the main reason why the country is one of the richest counties in the world since the past several years.

## VI. Conclusion and Recommendations

This research has investigated the mediating effect of financial knowledge and financial behaviour of the citizens of Qatar between the locus of control and

financial position and the income group and financial position. The results of hypotheses testing have revealed that income group had absolutely no role to play in the financial knowledge or financial behaviour of the households. But at the same time the financial knowledge and financial behaviour has very successfully mediated between the locus of control and the financial position. Thus it can be concluded that the citizens of Qatar have a sound financial knowledge, irrespective of the income group, through which they influence the financial behaviour to lead towards a better financial position.

While this research has supported many of the earlier studies, it has also contradicted some of the studies as listed in the discussions. Qatar is basically a progressive country in terms of the economy and consistently listed among the richest in the world and the leading economy and this research has proved that the citizens of the country have played a major role in achieving this status through their financial knowledge irrespective of the income group to which they belong to.

This research is the outcome of systematic implementation of the research methodology as governed by the principles of structural equation modelling. The major limitation of the study is that it is mainly dependent in the quantitative analysis. The study would have been more meaningful if coupled with interviews with some of the most successful households. Sample size of the study is also another limitation. However, through the fundamental principles of SEM the results can be generalized to a great extent as the sample size meets the requirement of SEM and it has been spread across the cross section of the country. This study can be treated as the benchmark for the developing economies as it provides meaningful insights on how the citizens of a leading economy respond to the financial position.

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