International Journal of Business Management, Entrepreneurship and Innovation, Volume 5, Issue 2, 2023, PP 157-167, ISSN 2707-8027

Effect of Credit Terms on Financial Inclusion among Self-help Group Financing in Informal Settlements in Kenya: A Case Study of Kibera Slum

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ABSTRACT

Financial inclusion is a vital element of growth in any economy. It has led to the economic growth of 15 OECD and 50 non-OECD countries. Despite its relevance, the optimal rates of financial inclusion in Kenya have not been achieved. The wide gap between financial inclusion among the lowest wealth quintile at 12.67% in comparison to the rates of financial inclusion of the highest wealth quintile at 76.4% in 2021 is a huge cause of concern. Lower rates of financial inclusion among the less privileged have translated to high poverty rates, lower living standards and hampered economic growth. The main objective of this study was to determine the effect of credit terms on financial inclusion among self-help group financing in informal settlements in Kenya, a case study of Kibera slum. The study was founded on the demand theory and the rational choice theory, to bring to light the relationship between credit terms and financial inclusion in informal settlements in Kenya. A descriptive research design was used and the 237 registered self-help groups in Kibera slum formed the population of the study and were studied in their entirety. The data was collected using a questionnaire and analysed using SPSS 25 then presented in form of tables and figures. Descriptive statistics was performed using frequencies, percentages, means and standard deviations. Inferential statistics was conducted using the regression model to test the hypotheses of the study. The study established that credit terms had a positive significant effect on financial inclusion among self-help group financing in informal settlements in Kenya. According to the leaders of the self-help groups, the more favourable the credit terms offered in self-help groups, the wider the adoption of financial services by the members of the self-help groups. This study therefore recommends that financial service providers should offer financial services with credit terms tailored to suit the needs of their target market to increase affordability of financial services, thereby increasing financial inclusion.

Key Words: *Credit terms, financial inclusion, informal settlements*

DOI 10.35942/jbmed.v5i2.331

Cite this Article:

Ochieng, S., Njagi, G., & Kiveu, M. (2023). Effect of Credit Terms on Financial Inclusion Among Self-help Group Financing in Informal Settlements in Kenya: A Case Study of Kibera Slum. *International Journal of Business Management, Entrepreneurship and Innovation*, 5(2), 157-167. https://doi.org/10.35942/jbmed.v5i2.331

1.0 Introduction

Financial inclusion is a vital element in the growth of any economy, the higher the rate of financial inclusion, the greater the opportunities people all over the world have, to improve their livelihood. A long-run positive association exists between financial inclusion and economic growth (Singh and Stakic, 2021). The vitality of financial inclusion in improving GDP and resulting in economic growth is hampered by the difficulty in accessing financial services, especially among the less privileged (Nsiah et.al, 2021). In 2021, only 3.6% of the population in the highest wealth quintile are not financially included, compared to 22.1% of the population of the lowest wealth quintile (FinAccess Survey, 2021). In South Asia, the achievement of optimal levels of financial inclusion is deterred by the low income of most of the residents who cannot afford the financial services offered by financial institutions (Gugerty, Biscaye & Leigh Anderson, 2019). According to Sarania & Maity (2014), in India, the increasing concern on the lower levels of financial inclusion led to the emergence of self-help group bank linkage programs that aim to provide more affordable, available, and flexible financial services in India.

Formal financial institutions in most developing countries serve only a maximum of 30% of the population (Sharma & Pandey, 2018). The increase in the number of commercial bank branches and agents as well as digital banking has had significant advantages for the wealthy but minimal effect on the poor majority who are still relatively unaware of the financial services available to them (Gugerty, Biscaye & Anderson, 2019). In Nigeria, the number of bank branches within 100 hectares, has positively impacted on financial inclusion within the region, but with the maximum advantage felt by the wealthy and minimal impact on the poor (Sulong & Bakar, 2018). According to Wokabi (2018), measures such as digital banking implemented in most African states, have significantly increased financial inclusion among the poor living in rural and urban informal settlements. Digital banking has however still been sub-optimal in increasing financial inclusion, since despite being available, the services are still unaffordable by the poor. Nsiah et al., (2021) demonstrated that about 70% of adults in Sub-Saharan Africa have no access to financial services, the majority being the poor living in rural regions and urban informal settlements. According to Simatele & Maciko (2022), only 14% of the 40% poorest have been able to access financial services in rural South Africa between 2020 and 2021.

Kenya’s formal financial inclusion as measured by the access dimension expanded from 82.9% in 2019 to 83.7% in 2021 (FinAccess Survey, 2021). Despite Kenya having a relatively higher rate of financial inclusion in comparison to most African nations, optimality has not yet been achieved with a big gap evident between the rates of financial inclusion in the highest wealth quintile at 76.4% and the lowest wealth quintile at 12.67%. According to Mbuuri (2020), the less privileged in Kenya have moved towards a higher preference for informal financial services such as self-help group financing that suit their needs. The lowest wealth quintile recorded the highest use of formal non-prudential-financial services like Fuliza and informal financial services such as chamas at 64.8% compared to the highest wealth quintile percentage use of formal non-prudential and informal financial services at 22.7% (FinAccess Survey Report, 2021). Informal financial services offer more affordable financial services with less stringent collection policies and flexible terms and conditions more suited to the needs of the less privileged in the society (Ndichu, 2021). Nishimwe (2019) noted that Kibera slum, being the largest slum in Eastern and Central Africa is not left behind in this initiative, with a majority of Kibera residents surviving on less than US $ 1.90 a day with minimal access to financial services, thereby preferring the more affordable informal financing options.

1.1 Statement of the Problem

Informal settlements are an integral part of any developing economy as they attempt to bridge the gap between rural settlements and urban settlements (Turok, 2015). This attempt to aid immigrants from rural to urban regions improve their livelihoods has however been significantly unsuccessful. Breunig & Majeed (2020) noted that residents of informal settlements are plagued by difficult living conditions, limited access to basic services and high rates of unemployment, making informal settlements fail in its role as a bridge to financial freedom among the poor. According to Simiyu, Cairncross & Swilling (2019), various measures such as government aid have attempted to improve the livelihoods of those in informal settlements, but this has not translated to improved living standards among the poor. Provision of hand-outs to the poor, has not translated to improved living standards as they still survive on less than US $1.90 a day. Nsiah et al. (2021) considered financial inclusion as a potential alleviator of the status of the poor in Sub-Saharan Africa. This has however still proved challenging because in Kenya, financial inclusion among the poor has been difficult to achieve. Muindi & Mutwiri (2021) affirm that most financial institutions have many requirements to access financial services ranging from high cost of credit, need for collateral and need to reduce risk of default. Financial institutions therefore create more opportunities for the rich leaving the less privileged in peril as they are less likely to access these credit opportunities (Nan & Markus, 2019). According to the 2021 survey on Financial Inclusion, the lowest wealth quintile had the lowest access to formal financial services at 12.7%, compared to the highest wealth quintile's access to formal financial services at 76.4%. (KNBS, 2021). Self-help groups have minimal collateral requirements, lower interest rates, better credit terms and customer centricity, resulting in relatively affordable financing to the poor. Various scholars such as Chipunza & Fanta (2021) have researched on what affects financial inclusion, providing different qualities of financial services such as affordability of the service, ease of access and flexibility resulting in increased financial inclusion. Further, Mule, Wafula & Agusioma (2021) researched on how financial technology loans affect financial inclusion. They concluded that financial technology has made financial services easily accessible to individuals irrespective of their geographical location. While these studies have cited evidence on the most suitable measures to increase financial inclusion by making the financial services more available, achieving optimal financial inclusion among the residents of informal settlements remains a challenge. The biggest concern of the poor relates to whether they can afford the financial service and not whether the financial service is available (Simiyu, Cairncross & Swilling, 2019). Measures to ensure provision of financial services that are affordable enough for the poor to access, remain unsolved.

1.2 Research Hypothesis

$H_0 1$: There is no statistically significant effect of credit terms on financial inclusion among self-help group financing in informal settlements in Kenya.

2.0 Literature review

2.1 Theoretical Foundation

2.1.1 Demand Theory

The demand theory was proposed by Alfred Marshall in 1890. It outlines that the higher the price of a product is, all else equal, the less of it will be demanded. Buechner (2018) supported this theory and stated that demand refers to the willingness and ability of an individual to buy a product. The higher the price, the fewer the number of people who will be willing and able to purchase the product. The demand theory was further affirmed by Baddeley (2018) who reiterated that as the price of a good or service goes up, its demand becomes lower and, a decrease in prices increases demand ceteris paribus. The theory further purported the existence of other factors that affect the demand for a good or service. An increase in the level of income, increase in price of substitutes and decrease in price of complementary goods positively affects demand (Ozili, 2020). Since substitutes are products used in place of the product; an increase in price leads to consumers' shift to the cheaper product while complementary goods are used together hence increase in prices reduces the demand of the product. Another factor deemed to affect the demand of a good or service is the consumer's tastes and preferences. Products made to suit the consumers' needs, tastes and preferences result in increased demand in comparison to products not tailored towards consumer needs, tastes and preferences (Baddeley, 2018).

Informal financial institutions are more flexible in their financing options thereby as stated by Marshall in the demand theory, goods and services that are more customized to the consumers' tastes increase demand (Baddeley, 2018). The demand for informal financial services were therefore inductively higher as the services are tailored to the consumer who will be more willing and able to access these financial services due to their customer centricity. According to Ozili (2020), the theory of demand doesn't hold true for all types of goods and services. Buechner (2018) criticized the theory of demand by stating that there are some goods such as laxities which do not follow the pattern of the theory of demand. However, as noted by Baddeley (2018), normal goods and services are items used by individuals on a day-to-day basis neither as a laxity nor as an inferior good. Chowdhury, Yeasmin & Ahmed (2018) note that financial services among the poor are neither a laxity nor an inferior good or service, financial services are scarce and not readily available commodities among the poor, therefore satisfying the definition of a normal good and service hence obeying the law of demand.

2.1.2 Rational choice theory

The theory of rationality was first proposed in 1791 by Adam Smith. It states that people calculate the costs and benefits of choices in making decisions. Mishan & Quah (2020) supported the rational choice theory by stating that individuals rely on rational thought when making decisions and conduct a cost versus benefit analysis to determine the best decision in each situation. Krstić (2020) noted that an individual would analyse the cost associated with a decision, compare it to the benefits associated with the decision to arrive at the most optimal solution. According to Ozili (2020), costs refer to the demerits of a decision both from a financial and non-financial perspective while benefits relate to the financial and non-financial advantages of making the decision. For a certain decision to be made, the benefits associated with the decision must outweigh the costs incurred in making the decision. Smith stated that to maximize utility from the decision made, an individual will use all available resources to ensure optimum benefit from the decision made (Baddeley, 2018).

In relation to the area of study, the residents of informal settlements view all the benefits of self-help group financing compare it to the costs associated with the decision to determine the appropriateness of the decision. Mbuuri (2020) noted that self-help group financing offers financial services at relatively affordable rates, is customized to suit the consumer, and requires no collateral. The disadvantage of self-help group financing is however the lack of formalization in the process (Oware, 2020). Kariuki & Muturi (2018) observed that the residents of informal settlements have a higher preference for cheaper and easily accessible financial services therefore, despite the lack of formalization associated with self-help group financing, self-help group financing still seems a better alternative. Embracing of self-help group financing enables the residents of informal settlements to access financial services that would otherwise be impossible to access under formal financial institutions (Sarania & Maity, 2014).

2.2 Empirical Review

Chipunza & Fanta (2021) conducted research on what determines quality financial inclusion in South Africa. The FinScope 2015 survey data was used to develop an index using polychoric principal component analysis. A heteroscedasticity scatter diagram was used to assess what determines financial inclusion. Income, location, gender, and financial literacy were determined as some of the factors that determine financial inclusion. They proposed tailoring of financial products based on the socio-demographic groups as a measure to increase financial inclusion. This study created value for this study by considering important dimensions that could impact on financial inclusion such as provision of diverse, affordable, appropriate, and flexible financial services, as an effective measure to increase financial inclusion. This study however was centred in South Africa and may not be effectively applicable in Kenya due to the unique demographic characteristics of the two countries.

Sarania & Maity (2021) researched on the relationship between self-help groups and financial inclusion in Baksa District, India. The target population were the members of the SHGs. 30 SHGs obtained using multistage purposive random sampling were studied. Financial inclusion index was used as a measure of financial inclusion. Chi square test was used to test the significance of the relationship between membership in SHG and degree of financial inclusion. They concluded that being an SHG member led to an increase in access to financial services. There exists a geographical and methodological gap whereby the study was conducted in India and the study used members of the SHGs as the respondents while this research was conducted in Kenya and focused on the leaders of the SHG as the respondents.

Cherono (2019) conducted a study on modelling the socioeconomic and demographic determinants of financial inclusion among rural women in Kenya. A multiple regression logistics model was employed using financial inclusion insights from 2017 survey. Economic status and informal society membership were discovered to be some of the determinants of financial inclusion among rural women. Individuals living below the poverty threshold of US $1in a day were less likely to be included compared to individuals living above the poverty line. Rural women who were members of informal groups such as merry-go-round, chamas and Village Savings and Loan Associations were more likely to be financially included in comparison to non-members of informal groups. The study's focus was however mainly on the rural regions with no inference on the informal settlements which has dissimilar characteristics in terms of income generation potential and challenges faced by the residents.

Chowdhury, Yeasmin & Ahmed (2018) conducted a study on how women entrepreneurs in Bangladesh perceive access to bank credit. The study sought to discover the challenges that the women entrepreneurs face in their attempt to access credit. Primary data was used in the study obtained from a sample survey. Exploratory Factor Analysis was used to bring to life the fact that the reluctance of women entrepreneurs to take loans from banks was due to the many problems faced in the endeavour. The main challenges faced by these women include the requirement of collateral as well as the terms and conditions of the bank loan. The study recommended that financial institutions should tailor their financial services to the potential customers' needs to make these services more accessible and affordable to these women thereby increasing financial inclusion. This study was conducted in relation to financial services obtained from formal financial institutions, creating an opportunity for review of perceptions on financial services from informal financial institutions such as self-help groups.

Muindi & Mutwiri (2021) conducted research to determine whether the requirement for collateral affected the portfolio quality among microfinance institutions in Kenya. Their study was based on agency and modern portfolio theory. 13 microfinance banks in Kenya formed the population for the study. A survey research design was implemented over a five-year period for all the microfinance banks selected. The regression model was used, aided by Statistical Package for Social Sciences for analysis. At a 5% significance level, it was established that collateral requirements were inversely proportional to the quality of the portfolio. The higher the need for collateral, the lower the quality of the portfolio, as most customers are attracted to financial services that require no collateral, as this is what is affordable especially to the less privileged. This study however only centred on financial services within microfinance institutions, creating room for exploration into financial services offered by other financial institutions.

Ndichu (2021) conducted a research on how credit management practices affect performance of loans in self-help groups. He investigated the effect that credit terms, client appraisal, credit collection policies and credit risk control had on performance of loans of Catholic self-help groups. 120 self-help groups were studied through issuing semi-structured questionnaires to their accountants. Descriptive and inferential statistics were applied in the study. The terms of credit and credit collection policy had a positive and significant effect on performance of loans of self-help groups. The study recommended that self-help groups should set-up credit terms like increased credit period, lower interest rates and fees and a more convenient repayment schedule. This would in turn result in increased loan performance and attractiveness of the loans to potential customers giving them a competitive edge. The study considered the effect credit practices has on loan performance among self-help groups, but did not factor in the effect the credit management practices had on increasing accessibility to the financial services. This created room for a study on how the credit management practices in self-help groups translate not only to increased loan performance but also to enabling increased access to financial services.

Mwangi (2021) conducted a study on the effect credit management had on the quality of assets in microfinance institutions in Nairobi metropolitan. The study intended to determine how credit policy, credit standards, credit terms and credit collection techniques affect quality of assets in these institutions. A descriptive design was used with primary and secondary data sources utilized for the study. Questionnaires were shared to the executives in the 74 microfinance institutions in Nairobi metropolitan and STATA software was used for analysis. Credit collection techniques had a positive and significant effect on asset quality. The utilisation of better credit collection techniques led to improved asset quality with more customers being enticed to seek financial services from these institutions. The study's focus on improved quality of assets in microfinance institutions created room for further research into how credit terms affect other financial service providers such as self-help groups. Despite both being financial service providers the target market for microfinance institutions defers from the target market of the self-help groups which is the lowest income earners, resulting in a research gap that was therefore explored in this study.

3.0 Methodology

A descriptive research design was adopted in the study. It involved a description of the specific character traits of the variables under study. The target population was the registered self-help groups in Kibera Slum between the year 2015 – 2021. According to the Ministry of East African Community, Labor and Social Protection (2021), there were 237 registered self-help groups in Kibera Slum by the year 2021. The respondents were the leaders of the self-help groups, due to their extensive knowledge on the operational framework of the self-help group. The researcher used a census technique therefore studying all the 237 registered self-help groups in Kibera slum. Data was collected using questionnaires issued by two research assistants, analyzed using Statistical Package for Social Sciences (SPSSv25), and presented in form of tables, graphs and figures. To test the validity and reliability of the questionnaire, a pilot study was conducted in Mathare Slum which was assumed in the study, to have similar characteristics as Kibera Slum.

The study used the following regression model:

Financial Inclusion = f(Credit terms), $FI = \beta_0 + \beta_1 \chi_1 + \varepsilon$

Where; FI represents financial inclusion, β_0= Constant, β_1 = Coefficient of determination

$X_{1=}$ Credit terms, $\varepsilon =$ Error term

4.0 Research Results

4.1 Descriptive Statistics

The leaders of the self-help groups were requested to respond to various statements on credit terms and financial inclusion, to determine the extent to which credit terms affected financial inclusion. Means and standard deviations were used to describe the data obtained from the questionnaires. According to Kothari (2019), descriptive statistics including mean, mode and standard deviation are appropriate for analyzing Likert scale data.

The responses were based on the Likert scale with 5 points whereby 1 represented no extent, 2 represented to a little extent, 3 represented a moderate extent, 4 represented a great extent and 5 represented a very great extent. The mean and standard deviation of the responses of the leaders of the self-help groups to the effect of credit terms on financial inclusion are as presented in Table 1.

Table 1: Credit Terms on Financial Inclusion

Attribute	Mean	Std. Deviation
The self-help group has less stringent credit terms than other financial institutions	4.62	.356
The less stringent credit terms of self-help group financing has enhanced financial inclusion in the informal settlements in Kenya	4.50	.491
I consider lack of the need for a collateral a great boost to accessing self-help group financial services	4.48	.501
The few legal requirements in self-help group financing has increased my ability to access and use financial services	4.35	.409
The self-help groups' failure to probe on my credit history has increased my access and usage of their financial services	3.80	.529
The ability to obtain financial services sought within a short period of time without unnecessary delays has increased my access of financial services	4.46	.499

Source: Research data (2023)

Table 1 indicated that the leaders of the self-help groups agreed that the self-help group has less stringent credit terms than other financial institutions to a very great extent accounted for by a mean of 4.62. They agreed that the less stringent credit terms of self-help group financing had enhanced financial inclusion in the informal settlements in Kenya to a very great extent with a mean of 4.50. The lack of the need for a collateral was considered a great boost to accessing self-help group financial services to a great extent at a mean of 4.48. The respondents stated that the ability to obtain financial services sought within a short period of time without unnecessary details had increased their access of financial services to a great extent (4.46). The respondents believed that the few legal requirements in self-help group financing had increased their ability to access and use financial services to a great extent (4.35) and the respondents agreed that self-help groups failure to probe on their credit history had increased their access and usage of their financial services to a great extent (3.80).

These results were consistent with Chowdhury, Yeasmin & Ahmed (2018) who discovered that the entrepreneurs' access to credit was challenged mainly by the requirement for collateral and the terms and conditions of the financial services. They recommended tailoring of financial services to the customers' needs to increase affordability of the financial services. Ndichu

(2021) also discovered that the credit and collection policy had a positive significant effect on financial services, further supporting the findings of the study. The theory of demand by Alfred Marshall in 1890 also states that the customization of goods or services to suit the customers' tastes, needs and preferences increases demand for the item, further affirming that financial services centred towards more favourable credit terms increase financial inclusion among the less privileged.

4.2 Inferential Statistics

The study used a univariate regression model based on the null hypothesis:

$H_0$1: There is no statistically significant relationship between credit terms and financial inclusion among self-help group financing in informal settlements in Kenya.

Karl Pearson's correlation coefficient was used to determine the strength and direction of the relationship between credit terms and financial inclusion. The results are as presented in Table 2.

Table 2: Model Summary of Credit Terms and Financial Inclusion

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661[a]	.437	.434	.372

Predictors: (Constant), Credit Terms
Dependent Variable: Financial Inclusion
Source: Research data (2023)

The results as presented in Table 2 indicated that the R squared value was 0.437 depicting that 43.7% of the financial inclusion in informal settlements is accounted for by the credit terms of self-help group financing. The coefficient of determination (R) was 0.661, indicating a strong positive relationship exists between credit terms and financial inclusion among self-help group financing in informal settlements in Kenya.

The Analysis of Variance (ANOVA) was used to determine if the model for the regression was linear and therefore, a good fit for the data. The ANOVA was done to determine the existence of a significant mean difference between credit terms and financial inclusion. The findings are as presented in Table 3.

Table 3: ANOVA for Credit Terms and Financial Inclusion

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.671	1	21.671	156.832	.000[b]
	Residual	27.912	202	.138		
	Total	49.583	203			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Credit Terms

Source: Research data (2023)

As shown in table 3, the F calculated (156.832) is more than the F-critical (3.03), and the p-value (0.000) is less than the significance level (0.05). The linear regression model was therefore affirmed to be a good fit for the data and was suitable for use in predicting the effect the credit terms has on financial inclusion among self-help group financing in informal settlements in Kenya.

The regression model was used for predictive analysis.

The study used the linear regression model: Y = α + β1X1

Where: Y represents financial inclusion and X1 represents cost of finance.

The results are as presented in Table 4.

Table 4: Coefficients for Credit Terms and Financial Inclusion

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.395	.243		5.747	.000
	Credit Terms	.660	.053	.661	12.523	.000

a. Dependent Variable: Financial Inclusion
Source: Researcher (2022)

Table 4 indicates a coefficient of 0.660 and a constant of 1.395. The regression model derived is as follows; $\mathbf{Y = 1.395 + 0.660\ X_1}$ Where: Y represents financial inclusion X_1 represents credit terms. As shown in table 4; when the credit terms among self-help group financing is held at a constant, financial inclusion in informal settlements in Kenya will have a 1.395 index. The association between the credit terms and financial inclusion among self-help group financing in informal settlements in Kenya has an unstandardized beta coefficient (B) of 0.660. Increasing one unit of credit terms among self-help group financing will result in a 0.660 increase in financial inclusion in informal settlements in Kenya. The P-value (0.000) was less than the significance level of 0.05, implying the relationship is significant. The t calculated (12.523) was more than the t-critical value (0.526). The study therefore rejects the null hypothesis that there is no statistically significant effect of credit terms on financial inclusion among self-help group financing in informal settlements in Kenya, and consequently accepts the alternate hypothesis.

5.0 Conclusions and Recommendations

5.1 Conclusions

Based on the study findings, the study concludes that a positive significant relationship exists between credit terms and financial inclusion among self-help group financing in informal settlements in Kenya. The study established that self-help groups have less stringent credit terms that are more affordable for the residents of informal settlements. In this regard, with the lack of the need for a collateral, fewer legal requirements, and self-help groups' failure to probe on the members' credit history, the members of the self-help groups can easily access financial services.

5.2 Recommendations

The study recommends that the self-help groups should strive to ensure the credit terms offered for financial services suit the needs of the residents of informal settlements. The more favourable the credit terms the higher the increase in access to financial services thereby increasing financial inclusion. Financial service providers should offer financial services tailored to the needs of its target customers. In offering services to the less privileged, financial institutions should avail more affordable financial services with less stringent credit terms. This translates to increased usage of financial services by the poor who are the majority, thus further increasing financial inclusion, and increasing the profit margins of the financial service providers as well. The study recommends that the government should invest in self-help group financing, as it is a useful financial services avenue for the residents of informal settlements. The government should consider providing a financial incentive to self-help groups to provide an increased asset base to the self-help groups, thereby enabling them to have more financial services to offer to its members.

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