Consequences of Exits from Political Unions on Leverage: The Case of Sudan Split

Mohamad Youness
The Bucharest University of Economic Studies, Bucharest, Romania

This paper examines the consequences of exits from political unions and the split of countries on capital structure decision especially the leverage, taking Sudan split (2011) as a practical case. Where the split between the two countries presents a challenge to companies in Sudan, especially they have not faced such a situation before in their businesses. This paper studies the impacts of the split on the capital structure during the period before and after the split, between 2008 and 2015, using a database of five different companies from different sectors, from Sudan. A regression model was adopted to study the impact of the split on the variables in order to analyze the variation in the ratios before and after the split. The results show that the political decisions such as split have a lot of consequences on the capital structure.

Keywords: capital structure, political exits, Sudan split, corporate financial policies

Introduction

Politics has a major impact on the economy and fiscal policy of any country. According to Osterloh (2010), a country’s political environment can affect its economic performance in several ways, taking into account the determinants of economic growth, such as the level of public spending and the structure of the economy, which becomes readily measurable, so that the effects of policy on growth rates in the econometric analyses are more clearly examined. Moreover, Gupta (2018) assures that economics and politics are co-determined, especially with regard to fiscal policy where politics has a strong influence on the economy and the fiscal policy of any country.

It must be noted that political unions are one of the most important pillars of countries. Dullien and Torreblanca (2012) focus on the most important roles the political union plays which are sustainability, that is, it was prepared in a way that does not lead to more economic and political crises in the future. Therefore, joining the union is considered immunity and stability for the associate countries, and some examples of unions such as the United Nations, the European Union, the African Union, the League of Arab States, and others.

In recent years, we have witnessed the split of many countries, such as the split of South Sudan from Sudan 2011, and Eritrea’s split from Ethiopia1993, and recently the UK’s intention to leave the European...
Union, which is known as the Brexit 2020. With respect to Acemoglu and Robinson (2012, p. 1), “States don’t fail overnight. The seeds of their destruction are sown deep within their political institutions”. Most of the countries that are separated or collapsing, who live in a state of war and violence, remain in their complete inability to take advantage of the huge potential of their society to grow, and they owe their citizens a lifetime of poverty.

As for Sudan, there were many reasons for split. Wilkinson (2011) mentioned that Sudan which is the third largest country in Africa, with a population of about 34 million people, was destroyed by the civil war even before it gained independence from Britain in 1956, so the referendum was a key component of the 2005 peace treaty that ended a bloody north-south civil war from 1983 to 2005, killing and displacing millions of Sudanese.

Moreover, Wilkinson (2011) added that the comprehensive peace agreement that started in 2005 until secession took place in 2011, and which many analysts regard as the expected end result of ending the conflict, has created the latest country in Africa, or he would have drowned the country in renewed conflict if Northern Arab Sudan refused to commit to the results. The referendum was held in South Sudan from January 9 to 15, 2011, between the Khartoum central government and the Sudan People’s Liberation Army, “SPLA”.

Wilkinson (2011, p. 3) said that “There are lessons historically out of Africa elsewhere. For example, when Eritrea become independent from Ethiopia, some of these issues could be learned from the Eritrea example I think”. This is an indication of the importance of benefiting from previous experiences in order to reach a sound agreement that guarantees the rights of both parties and regulates the relationship between them in the coming days.

However, there are a lot of impacts of Sudan split on corporate financial policies; with respect to Mukul (2013), the separation between the two countries may present a challenge to companies in Sudan, especially as they have not faced such a situation anywhere else in their businesses. Therefore, this separation has many ramifications for the company’s performance, regarding the corporate financial policies, especially for companies operating in the oil sector.

According to Almosharaf and Tian (2014), the Sudanese civil war has surely cast a shadow over the Sudanese economy over the years, which was a real challenge for the most companies. Back to the real reason behind all these wars and divisions, we will find that political instability was the direct cause of the economic decline that led to the current crisis in Sudan, which caused the creation of contradictions and randomness in economic and financial policies.

In this context, many researchers made a lot of studies about the capital structure and its determinants. According to Martins, Costa Pinho, and Carmo Azevedo (2019, p. 88), “there are several theories about the capital structure, namely Trade-off and Pecking order which identify the determinants of the capital structure and analyze the application of those theories for the companies”. Moreover, Charalambakis and Psychoyios (2012) study the effect of size, tangibility, profitability, and growth on debt ratios using a large sample of US and UK firms by applying advanced estimation methods that are perfectly aligned with the panel data in order to analyze the capital structure components.

Furthermore, Moldovan, Vtuva, Albu, and Stanciu (2016) try to empirical evidence about the impact of financial crisis on companies’ financing preference and economic performance. The data collected for 79 different-sized companies, listed on the Bucharest Stock Exchange over the period 2003-2014. Both panels were divided before and after 2007, when the crisis was triggered in Romania. The financial crisis affected the
corporate performance and companies had to change their financing activity to minimize financial risks. Also, Sudiyatno, Nugroho, Susilawati, and Nurhayati (2019) analyse the capital structure of manufacturing companies listed on the Indonesia Stock Exchange, where the study shed light on the importance of the capital structure and its relation to the composition of the company’s debt.

Therefore, all these articles are a clear and frank assertion about the impact of politics on the economy and financial policy, and this is the case of Sudan split, where this secession presented a major challenge to corporate financing policy, in terms of capital structure and its determinants since it was the first time that these companies faced such a situation.

In this paper, the author addresses the impact of political exits and split on the corporate financial policies especially the capital structure taking the Sudan split as a practical case, while other articles just mention the impact of politics on the economy and financial policies in general. Where there are few studies about the topic, the issue was not discussed in detail. Therefore, this paper shows how the Sudan split affects the corporate financial policy, through studying the determinants of capital structure before and after the split and noticing the changes that resulted from the split.

According to the nature of the topic and the data mentioned in this study, this paper is useful for academics specializing in financial and economic studies, as this study shows the impact of politics on corporate financial policy, especially the capital structure, and the results of this study can be adopted in subsequent studies for those interested in this field. In addition, this study can assist financial and economic analysts by adopting the results of this study in analyzing similar cases later. It is also beneficial to the government of Sudan and South Sudan for knowing that taking any political decision in the future may have repercussions on the economic and the financial policy therein, which will be reflected on the companies operating in these two countries.

The rest of the paper is structured as follows. Section 2 expressed theoretical background and presenting the tested hypothesis. Then, Section 3 described the data and methodology, which include the regression model. Section 4 showed the results and discussion of the study. Section 5 included conclusions and limitations of the study.

Theoretical Background & Tested Hypothesis

Politics, and in particular political exits, often has a lot of implications on economic and fiscal policy. However, the question remains: Does political exits affect the corporate finance policy, and to what extent this may affect the performance of companies?

There are many studies that have covered the determinants of the capital structure. For example, Myers (2001) explains the mix of securities and financing sources used by corporations to finance real investment. Most of the research on capital structure has focused on the proportions of debt vs. equity observed on the right-hand sides of corporations’ balance sheets. In addition, Welch (2004) mentions that the equity returns can explain about 40 percent of debt ratio dynamics, although net corporate issuance activity is active, and although it can explain 60 percent of debt ratio dynamics. Moreover, Baker and Wurgler (2002) document that the resulting effects on capital structure are very persistent. As a consequence, current capital structure is strongly related to historical market values. The results suggest the theory that capital structure is the cumulative outcome of past attempts to time the equity market.

Furthermore, Harris and Raviv (1991) discuss about capital structure theories based on agency costs, asymmetric information, product/input market interactions, and corporate control considerations. Moreover,
Faulkender and Petersen (2005) mention that prior work on leverage implicitly assumes capital availability depends solely on firm characteristics. However, market frictions that make capital structure relevant may also be associated with a firm’s source of capital. Also, Rauh and Sufi (2010) use a novel dataset that records individual debt issues on the balance sheets of public firms; they show that traditional capital structure studies that ignore debt heterogeneity miss substantial capital structure variation.

Another study is where Booth, Aivazian, Demirguc-Kunt, and Maksimovic Booth (2002) use a new dataset to assess whether capital structure theory is portable across countries with different institutional structures, where they analyze capital structure choices of many firms in 10 developing countries, and provide evidence that these decisions are affected by the same variables as in developed countries. Finally, Ramjee and Gwatidzo (2012) use a dynamic model to investigate capital structure determinants for 178 firms listed on the Johannesburg Stock Exchange for the period 1998-2008. The sample of firms is also used to examine the cost and speed of adjustment towards a target debt ratio. The results show that the South African companies are adjusting relatively quickly towards the targeted leverage level. Also, the results indicate that the capital structure decisions of listed companies in South Africa follow both the pecking order and trade-off theories of capital structure.

Several studies used leverage as independent variable to study the determinants of the capital structure. For example, Cevheroglu-Acar (2018) addressed a case in Turkey about the determinants of the capital structure, where the author identifies the firm-specific determinants of the capital structure of non-financial firms in Turkey to test whether the determinants offered by financial theory are able to provide convincing explanations for non-financial firms in Turkey where the results show that capital structure decisions of non-financial firms are mostly consistent with the hypothesis of pecking order theory rather than trade-off theory. Moreover, Šarlija and Harc (2012) addressed a study about the impact of liquidity on the capital structure, a case study about Croatian firms, where they found that there are statistically significant correlations between liquidity ratios and leverage ratios. Also, there are statistically significant correlations between leverage ratios and the structure of current assets. The relationship between liquidity ratios and the short-term leverage is stronger than between liquidity ratios and the long-term leverage.

**Tested Hypothesis**

There are some authors and analysts who believe that politics or political decisions have a weak impact on corporate financial policy, especially with regard to the capital structure and dividend policy, as they rely in their theory on the principle that these issues are internal issues decided by the Board of Directors for every company, as it is not possible to determine whether there is a direct impact of politics on the corporate financial policy or not. Where they believe that politics charts the general framework of economic and financial policy, it does not interfere in the corporate financial policies.

According to Feltri, McLean, Rolnik, Schechter, and Zingales (2017), they stated that, until the past two and a half decades, finance researchers did not pay much attention to political economy until the impact of politics on the economy began to emerge. At that time, analysts did not study the impact of politics on the economy, and on the performance of companies and the policy followed, thinking that there was no close relationship between them. In addition, some studies such as Wiwattanakantang and Bunkanwanicha (2008) suggested there is a negative or no relation between them. Moreover, Faccio (2006) mentioned that the impact of political ties mostly depends on the level of the institutional and economic development of the country,
where the impact varies from one country to another which means that in some cases there will be no impact on a corporate financial policy.

H0: The Sudan split has no impact on the corporate financial policies.

On the other hand, there are many experts and analysts who believe that politics has a direct impact on economic and financial policies, where the political decisions and regulations have a lot of impacts on the corporate financial policies, especially when discussing about the determinants of capital structure.

According to Julio and Yook (2012), they assure that a lot of research and debate on the relationship between politics and economic outcomes has a long history. It is often assumed that politics often stands behind the decisions that cannot be predicted and that would create companies with a state of uncertainty and instability, especially when talking about incentives and uncertainties associated with possible changes in government regulations that have implications on the behaviour of all companies. There is correlation and linkage between government decisions and economic and financial policy in the long term. Moreover, Fisman (2001) said that political ties are beneficial to companies for preferential access to debt. He argues that government-linked companies easily get the lowest cost of a bank loan. In addition, Frederikslust, Ang, and Sudarsanam (2008) mention that the perceived “excess of the 1980’s” produced a major regulation of US financial markets that affects the control market, credit markets, and the market structure. These changes have highlighted the importance of the political environment and its impact on financial and governance policies and created a new interest known as “politics of finance”.

H1: The Sudan split has a direct impact on the corporate financial policies.

**Data and Methodology**

The study depends on financial indicators and variable collected from five known companies at Sudan from different sectors between the period 2008-2015, before and after the Sudan split, where a regression analysis was adopted to analyse and interpret the data for the companies, to notice the impact of the split on the corporate financial policies by noticing how much the split affected the variables and how did they change by applying the paired test who studied the variation in the ratios before and after the split, where this test studies the significance of the variables, to know if there is a consequences of the split on these variables.

In order to study the indicators and variables of the firms to analyze the consequences of Sudan split on corporate financial policy and especially the capital structure, it had to be mentioned the determinants and proxies of the capital structure that we used in this study which are: leverage, profitability, growth in NI, tangibility, liquidity, where several studies used leverage as dependent variable to study the determinants of the capital structure such as, Cevheroglu-Acar (2018), in addition to Šarlija and Harc (2012). These variables will help to analyze the impact of the split on the capital structure of the firms, through the regression analysis.

Table 1 presents the definitions and the firm indicators and some ratios, which focused on the determinants of the capital structure for these firms.

This study examines the firm’s specific determinants of capital structure for five companies from Sudan during 2008-2015. We obtain all data from annual reports of the companies and from their official websites and some data from science direct website. Therefore, our sample includes five known firms from different sectors such as “ONGC; Zain Telecom; Orca Gold; ASJB; Sudan Telecom”. Consequently, our sample consists of different variables and indicators of capital structure, of five firms over a period of eight years, which makes 40 firm-year observations in total.
Table 1
*Variables, Symbol, Proxies, and Hypothetical Relationship*

| Variable      | Symbol | Proxy                      | Variable type | Hypothetical relationship                      |
|---------------|--------|----------------------------|---------------|-----------------------------------------------|
| Leverage      | TD/TA  | Total Debt/Total Asset     | Dependent     | Trade off theory: Positive                    |
|               |        |                            |               | Pecking order: Negative                       |
| Profitability | NI/TA  | Net Income/Total Asset     | Independent   | Trade off theory: Negative                    |
|               |        |                            |               | Pecking order: Positive                       |
| Growth        | GROWTH | (End.-Beg.)/Beg.           | Independent   | Positive                                      |
| Tangibility   | TAN    | Fixed Assets/Total Asset   | Independent   | Trade off theory: Positive                    |
|               |        |                            |               | Pecking order: Negative                       |
| Liquidity     | LIQ    | Current Asset/Current Liability | Independent   |                                             |

Source: Own work, 2020/based on Cevheroglu-Acar, 2018.

**Determinants of Capital Structure**

**Leverage.** With respect to Hayes (2019), leverage results from the use of borrowed capital as a source of financing when investing to expand the company’s asset base and achieve return on risk capital, where it indicates the amount of debt the company uses to fund assets.

**Profitability.** It is the ability of a business to earn a profit. Grimsley (2019) defines profit as what is left of the revenue a business generates after paying all expenses related to the generation of the revenue, and other expenses related to the conduct of the business activities.

**Growth.** It is an increase in the value of an investment over time. Therefore, investments designed for growth do not have to provide a regular cash source. For example, in this study we measure the growth of the income from year to year and calculate its percentage change.

**Tangibility.** According to NASDAQ (2018), tangibility is a characteristic that assets can be used as collateral to secure debt. In other words, it is an asset that physically exists, for accounting purposes such as buildings, land, equipment, gold.

**Liquidity.** According to the study of Šarlija and Harc (2012), Williamson (1988) argued that the optimal level of debt of the firm is limited by the liquidity of the assets and it depends on the average usage of the debt in the particular industry.

For measuring leverage, we use the proxy of total debt over total asset. Profitability is measured through dividing net income over total asset. While the proxy for growth, it is the percentage change in net income calculated through (End.-Beg.)/Beg. Moreover, tangibility is measured with fixed asset scaled by total asset by dividing fixed assets over total assets. Finally, the liquidity is measured by dividing current asset over current liability.

In this context, several authors such as Orlova, Harper, and Sun (2020) addressed a study about the capital structure and its determinants, where they found that the complexity of capital structure is related to the need for external capital, access to debt markets and the capacity for additional borrowing. Each of these determinants has a unique impact on capital structure complexity. Another study is for Dragotă, Victor, Brașoveanu Laura, and Andreea (2008), about the capital structure determinants addressed the nature of the relationship between leverage and returns, where this study analyses the differences in financing policies for the Romanian listed companies taking into account the economic sectors. In addition, Elsas, Flannery, and Garfinkel (2014) complement the current experimental work on the capital structure, which is usually estimated by the regression models of leverage for a wide range of companies.
Regression Models

Since we have panel data and time series format which includes both cross section and time dimension, we will adopt regression as econometric analysis. Therefore, empirical expression of the main model in Table 1 is as in Equations (1) and (2).

\[ \text{Leverage}_{it} = \alpha + \beta_1 \text{Profitability}_{it} + \beta_2 \text{Tangibility}_{it} + \beta_3 \text{Liquidity}_{it} + \varepsilon_{it} \] (1)

\[ \text{Leverage}_{it} = \alpha + \beta_1 \text{Profits}_{it} + \beta_2 \text{Tangibility}_{it} + \beta_3 \text{Liquidity}_{it} + \varepsilon_{it} \] (2)

According to the above model, we get the two equations, since growth and profitability cannot be included in the same regression model, because they are strongly correlated, so we have to consider two equations in this model to separate them.

Where in Equation (1) the dependent variable is the leverage ratio, where profitability, tangibility, and liquidity are the independent variables; \( i \) represents each company; \( t \) represents the year; and \( \alpha \) represents the constant coefficient. Where in Equation (2) the dependent variable is the leverage ratio, where growth, tangibility, and liquidity are the independent variables; \( i \) represents each company; \( t \) represents the year; and \( \alpha \) represents the constant coefficient. In Equations (1) and (2), \( \beta_1, \beta_2, \) and \( \beta_3 \) represent the coefficients of the independent variables. This model will take into consideration the proxy of each variable, and will analyze the correlation between the dependent variable “Leverage” with all the other independent variables.

Results and Discussions

After examining the variables and indicators and setting the regression model, we analyse them using the regression analysis in order to understand the consequences of the Sudan split on the corporate financial policies, through analyzing the variables of the capital structure proxies during the period between 2008 and 2015.

Table 2 indicates the descriptive statistics for proxies of dependent and independent variables.

Table 2

| Description                  | Obs. | Minimum | Maximum | Mean   | Std. Deviation |
|------------------------------|------|---------|---------|--------|----------------|
| Leverage = TD/TA             | 40   | 0.0529  | 0.6610  | 0.2598 | 0.1672456      |
| Profitability = NI/TA        | 40   | 0.0240  | 0.2390  | 0.0638 | 0.0388352      |
| Growth = (End.-Beg.)/Beg.   | 40   | 0.0250  | 0.5414  | 0.2200 | 0.1453693      |
| Tangibility = FA/TA          | 40   | 0.0307  | 0.8700  | 0.3264 | 0.2966195      |
| Liquidity = CA/CL            | 40   | 0.0100  | 4.0000  | 1.0676 | 0.6953535      |
| Valid N (list wise)          | 40   |         |         |        |                |

Source: SPSS Software, 2020.

The descriptive statistics of leverage proxies show that, on average firms in Sudan use approximately 26% debt. Average profitability is around 6.3% when measured by NI/TA (Net Income/Total Asset). However, the average growth is about 22%. We also notice that the average of tangibility is about 32.6% when measured by FA/TA. And the average liquidity is 1.06 when measured by CA/CL. Our descriptive statistics examine the impact of Sudan split on the capital structure during the period 2008-2015 by analysing the following variables considered as determinants of the capital structure.

After examining the descriptive statistics, next we interpret the results of the correlations below. Table 3 shows the correlations between the variables over the period 2008-2015.
Table 3

| Correlations | Leverage | Profitability | Growth | Tangibility | Liquidity |
|--------------|----------|---------------|--------|-------------|-----------|
| Pearson Correlation | 1        | -0.448**      | 0.477** | 0.465**     | -0.090    |
| Sig. (2-tailed) | 0.004    | 0.002         | 0.002  | 0.579       |           |
| N             | 40       | 40            | 40     | 40          | 40        |
| Profitability | 0.044    | 0.002         | 0.473  | 0.205       |           |
| Pearson Correlation | -0.448** | 1             | -0.467** | -0.117     | -0.205    |
| N             | 40       | 40            | 40     | 40          | 40        |
| Growth        | 0.002    | 0.002         | 0.585  | 0.610       |           |
| Pearson Correlation | 0.477**  | -0.467**      | 1      | -0.089      | 0.083     |
| N             | 40       | 40            | 40     | 40          | 40        |
| Tangibility   | 0.002    | 0.473         | 0.585  | 0.855       |           |
| Pearson Correlation | 0.465**  | -0.117        | -0.089 | 1           | -0.030    |
| N             | 40       | 40            | 40     | 40          | 40        |
| Liquidity     | 0.579    | 0.205         | 0.610  | 0.855       |           |
| Pearson Correlation | -0.090   | -0.205        | 0.083  | -0.030      | 1         |
| N             | 40       | 40            | 40     | 40          | 40        |

Note. **. Correlation is significant at the 0.01 level (2-tailed). Source: SPSS Software, 2020.

In this part the most important factor is the Pearson Correlation, since this factor decides whether if there is a positive or negative relationship between the variables, and the value usually between -1 and +1. If the value of the Pearson Correlation is zero or near to zero, there is no relation. If the value of Pearson Correlation is between 0 and +1, there is a positive and strong relationship. If the value of Pearson Correlation is between 0 and -1, there is a negative and strong relationship.

According to Table 3, we can notice a lot of indications. If we look at the Pearson Correlation, we will notice that some variables such as Leverage have a positive relationship with the growth and tangibility. On the other side, leverage has a negative relationship with profitability and liquidity. This means that there is a relationship between the variables regardless of whether it is negative or positive. As for the study, it was important to find a relationship between these variables that prove the impact of the Sudan split has a direct impact on the corporate financial policy, especially the capital structure of the Sudanese firms.

Table 4 shows the correlation coefficient R^2 between the dependent variable and independent variables, for Equation 1, for the period 2008-2015.

Table 4

| Coefficients R^2 | Model for Equation (1) | Unstandardized Coefficients | Standardized Coefficients |
|------------------|------------------------|-----------------------------|---------------------------|
|                  | B                      | Std. Error                  | Beta                      | t             | Sig.          |
| (Constant)       | 0.357                  | 0.065                       |                           | 5.508         | 0.000         |
| Profitability    | -2.043                 | 0.570                       | -0.474                    | -3.585        | 0.001         |
| Tangibility      | 0.266                  | 0.086                       | 0.402                     | 3.103         | 0.004         |
| Liquidity        | -0.043                 | 0.032                       | -0.178                    | -1.346        | 0.187         |

Note. Dependent Variable: Leverage = TD/TA. Source: SPSS Software, 2020.

Table 5 shows the correlation coefficient R^2 between the dependent variable and independent variables, for Equation 2, for the period 2008-2015.
Table 5

| Model Equation (2) | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|--------------------|-----------------------------|---------------------------|---|-----|
| (Constant)         | 0.014                       | 0.052                     | 0.271 | 0.788 |
| Growth             | 0.743                       | 0.132                     | 0.646 | 5.642 | 0.000 |
| Liquidity          | 0.390                       | 0.076                     | 0.588 | 5.158 | 0.000 |
| Tangibility        | -0.031                      | 0.027                     | -0.130 | 0.245 |

Note. Dependent Variable: Leverage = TD/TA. Source: SPSS Software, 2020.

After applying the correlation coefficient, we can extract the value of the variables or proxies in the model, at the below equations. And as we mention before, some of variables have a negative relationship with the leverage, while others have a positive relationship. But what is important is that there is direct relation between leverage and other independent variables.

According to the correlation model in Table 4, we get the following equation:

Eq. 1: \( \text{Leverage}_{it} = \alpha + \beta_1 \text{Profitability}_{it} + \beta_2 \text{Tangibility}_{it} + \beta_3 \text{Liquidity}_{it} + \epsilon_{it} \)

Equation (1): Leverage\(_{it}\) = 0.357 + (-2.043) + 0.266 + (-0.043) + \(\epsilon_{it}\).

According to the correlation model in Table 5, we get the following equation:

Eq. 2: \( \text{Leverage}_{it} = \alpha + \beta_1 \text{Growth}_{it} + \beta_2 \text{Tangibility}_{it} + \beta_3 \text{Liquidity}_{it} + \epsilon_{it} \)

Equation (2): Leverage\(_{it}\) = 0.014 + 0.743 + 0.39 + (-0.031) + \(\epsilon_{it}\).

Table 6 shows the regression analysis results according to the hypothesis.

Table 6

| Model | Sum of Squares | df | Mean Square | F       | Sig. |
|-------|----------------|----|-------------|---------|------|
| Regression | 0.587       | 4  | 0.147       | 10.212  | 0.000p |
| Residual  | 0.503       | 35 | 0.014       |         |      |
| Total    | 1.091       | 39 |             |         |      |

Notes. a. Dependent Variable: Leverage = TD/TA; b. Predictors: (Constant), Tangibility = FA/TA, Liquidity = CA/CL, Growth = (End.-Beg.)/Beg., Prof. = NI/TA. Source: SPSS Software, 2020.

\( \alpha = 0.000 < 0.05 \) or 5%; There is a low probability that H0 is true, so reject H0 (data are significant).

H0: not significant; H1: significant.

Paired Samples Test

The below table applies the paired sample test which is a statistical technique used to compare if there is a change in corporate financial policies before and after the Sudan split. This test studies the significance of the variables before and after the split, to know if there is a consequence of the split on these variables, where Table 7 analyzes the variables before and after the split indicating the consequences of the split on these variables.

According to the results of the Table 7, we can notice the following:

Pair 1 shows that leverage is significant where \( P = 0.000 < 0.05 \) [reject H0] which means that the split has a direct impact on the leverage.

Pair 2 shows that profitability is not significant where \( P = 0.076 > 0.05 \) [failed to reject H0] which means that the split does not affect much on the profitability.
Pair 3 shows that growth is significant where $P = 0.000 < 0.05$ [reject H0] which means that the split has a direct impact on the growth.

Pair 4 shows that tangibility is significant where $P = 0.023 < 0.05$ [reject H0] which means that the split has a direct impact on the tangibility.

Pair 5 shows that liquidity is not significant where $P = 0.395 > 0.05$ [failed to reject H0] which means that the split does not affect much on the liquidity.

According to Table 7, we can notice that leverage, growth, and tangibility were strongly affected through the split, where profitability was less affected through the split. However, liquidity was not affected directly through the Sudan split. So, after applying the regression analysis for the model, we can conclude that the determinants of the capital structure were affected in different portions, through analysing of the ratios of the proxies over the years, which leads us to one conclusion, that is the political decisions such as the split of Sudan have affected the corporate financial policies, especially the determinants of the capital structure.

Table 7

| Paired Samples Test |
|---------------------|
| Paired differences  |
| Mean | Std. Deviation | Std. Mean | Error | 95% confidence interval of the difference | t | N | Correlation | Sig. |
| Mean | Std. Deviation | Std. Mean | Error | Lower | Upper | | | | |
| Pair 1 | Leverage Before Leverage After | -0.0776707 | 0.1169181 | 0.0261437 | -0.1323901 | -0.0229513 | -2.971 | 20 | 0.829 | 0.000 |
| Pair 2 | Profitability Before Profitability After | 0.0045826 | 0.0453541 | 0.0101415 | -0.0166438 | 0.0258089 | 0.452 | 20 | 0.406 | 0.676 |
| Pair 3 | Growth Before Growth After | 0.0067735 | 0.0724638 | 0.0162034 | -0.0271406 | 0.0406876 | 0.418 | 20 | 0.884 | 0.000 |
| Pair 4 | Tangibility Before Tangibility After | -0.1623979 | 0.2551535 | 0.0570541 | -0.2818134 | -0.0429824 | -2.846 | 20 | 0.506 | 0.023 |
| Pair 5 | Liquidity Before Liquidity After | -0.0292756 | 0.8352357 | 0.1867644 | -0.4201780 | 0.3616267 | -0.157 | 20 | 0.201 | 0.395 |

Source: SPSS Software, 2020.

Conclusions and Limitations

In this study, we examine the Sudan split and its consequence on the corporate financial policies and especially the capital structure’s determinants offered by the financial theories and previous database, in which a regression analysis was adopted to study the impact of this split on the variables, and the relation between them.

We build a regression model based on these previous proxies and analyze the results in order to notice the change in the proxies of leverage, profitability, growth, tangibility, and liquidity. Our results show that profitability and liquidity are significant determinants of the capital structure while growth and tangibility are not significantly related with the leverage. Besides, we find that profitability and liquidity are negatively associated with leverage. However, we find that tangibility and growth have a positive relationship with leverage.

Finally, after presenting all this data, analyses, and the relationship between the variables, it is certain that the impact of the split differs from one company to another, and this is the case with regard to indicators of the capital structure. As the impact ratio on the indicators varies among them, what we care about in this study is
one clear fact, which is the effect of the secession of Sudan on the corporate financing policy, which supports the H1 hypothesis, which assures that the Sudan split has a direct impact on the corporate financial policies.

This study has two main limitations. First, this study required a lot of time and effort due to the lack of data for many companies, especially since previous studies are not many, so it required us to access the annual reports of companies and some reliable sources in order to extract most of the financial ratios. Second, we exclude firms having missing data on any variable in years between 2008 and 2015. These limitations cause economic and methodological concerns as well as prevent us from providing a comprehensive picture of the corporate capital structure in Sudan.

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