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Protecting Purchasing Power From Skyrocketing Prices In South Sudan Through Partial Dollarization

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October 2016

Abstract: The main thesis of this paper is that the economy of South Sudan is showing characteristics of a *dollarized economy*. Within six (6) months of the adoption of a new exchange rate policy in December 2015 by the monetary authorities, the economy of South Sudan would seem to have, without official acknowledgement, entered the third phase of a "dollarization process!" That is, our economy is at the stage in which economic agents think in terms of "foreign currency" and "prices in domestic currency are indexed to the exchange rate," which is consistent with the literature on dollarization. If the economy is proven to have entered such a stage, then appropriate fiscal and monetary policy instruments would be needed to protect the purchasing power of the population from skyrocketing prices.

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I. Introduction

South Sudan is experiencing macroeconomic instability, evidenced by high inflation rates and fiscal deficits, while appropriate policy responses are not in the horizon. By way of contextualizing the current economic crisis, it is imperative that a brief historical background is provided. The Government of the Republic of South Sudan (GRSS) received during the first six months (9 July – 31 December 2011) of independence a total amount of $3.3 billion from oil revenues[2]. It could therefore be stated that the country was born with a "golden spoon" in her mouth and exemplified by very impressive average monthly oil revenues of $556.3 million. In fact, September 2011 witnessed the highest level (i.e. $675 million) of GRSS' monthly oil revenues during this period. This steady flow of oil revenues was interrupted in January 2012 when the GRSS voluntarily and suddenly decided to completely shutdown oil production in a dispute with Sudan over transit fees. This decision was the beginning, in view of this analysis, of the country's economic crisis, which is essentially a "man-made" episode.

The second decision of the GRSS that might have compounded the current economic crisis is the September 2012 Oil Agreement between Sudan and South

[2] See MPM Marketing Reports, Volume 1A, Ministry of Petroleum and Mining, Republic of South Sudan

Sudan. The Oil Agreement gave Sudan $24.1/bbl. of Dar blend crude exported through its territory. Oil production resumed in April 2013 with GRSS receiving average monthly revenues of $111.3 million (i.e. during the period of April 2013 – May 2014). The average monthly oil revenues dropped to $82.0 million during the period June 2014 – May 2015. This figure dropped to about $24.0 million during the period June 2015 – May 2016.

The third factor in the "man-made" economic crisis in South Sudan is the eruption of violent conflict in December 2013. The economy has been one of the major victims of this "man-made" crisis – high fiscal deficits as a consequence of fighting the war through inflationary financing, which is characterized by hyperinflation[3] (i.e. consumer price index increased by 77.7% from June 2016 to July 2016). These endogenous factors were compounded by an exogenous factor in the form of a drastic decline in crude oil prices in the international market. Moreover, inappropriate macroeconomic policy response has contributed to deepening the crisis. This is more so due to the fact that institutions of economic policy were already weak before the on-set of the crisis.

A good example of this weakness is the adoption **in December 2015** of a "**managed-float" exchange rate regime**, which ignored experts' advice not to apply such a policy in December on the one hand, and without minimum financial and commodity buffers on the other. Within six (6) months of the adoption of a new exchange rate policy by the monetary authorities, the economy of South Sudan would seem to have, without their knowledge, entered the third phase of a "**dollarization process**!" That is, our economy is at the stage in which economic agents think in terms of United States of America dollar (USD) and prices in South Sudanese pound (SSP) are indexed to the daily SSP/USD exchange rate. In this regard, the overall objective of this study is to:

a) Confirm the premise that the economy of South Sudan has the key characteristics of a "bio-monetary system" in which prices in SSP (i.e. domestic currency) are indexed to SSP/USD exchange rate; and
b) Recommend the most appropriate fiscal and monetary policy instruments for protecting the purchasing power of the money income of the working class from being eroded completely by skyrocketing prices.

The rest of the paper is divided into three sections. Section two provides economic theory and associated empirical literature underpinning the idea of dollarization. The emerging evidence of a "**bio-monetary system**" in South Sudan is presented in section three, while section four concludes the paper.

[3] "In countries with hyperinflation, which is usually defined as an inflation rate higher than 50% per month, the money supply increases much faster than real GDP, causing rapid increases in prices, which causes people to spend the money that they receive as quickly as possible, before it diminishes in value. Hence, a very high inflation rate will also maximize the velocity of money, which will increase the inflation rate even further." From **http://thismatter.com/money/banking/money-growth-money-velocity-inflation.htm**

II. Theory and Literature on Dollarization

The idea of "dollarization" is derived from the **money demand theory**. People demand money because of its three fundamental functions: **medium-of-exchange**, **store-of-value**, and **unit of account**. The store-of-value function of the demand for money would be of utmost interest, for researchers and policymakers alike, in the case of an economy, such as South Sudan that is experiencing high inflation. This interest is predicated on the fact that price instability characterized by high inflation rates negatively affects **money income and assets**. This is why price stability is one of the key objectives of monetary policy in any economy. Hence, sustained knowledge about the determinants and stability of the money demand function is critical in the conduct of a monetary policy.

The above paragraph has placed the idea of dollarization within the money demand theory. But, what does the empirical literature say? Stated differently, where is the empirical evidence of a "dollarized economy," which would guide our analysis of the economy of South Sudan? I would like to begin a brief review of literature on dollarization with the following passage from Kurt Schuler (2000):

> ***Dollarization occurs when residents of a country extensively use the U.S. dollar or another foreign currency alongside or instead of the domestic currency. Unofficial dollarization occurs when individuals hold foreign-currency bank deposits or notes (paper money) to protect against high inflation in the domestic currency. Official dollarization occurs when a government adopts foreign currency as the predominant or exclusive legal tender***[4].

Moreover, Myriam Quispe-Agnoli (2002:4) states that: "Partial dollarization typically responds to the need to protect the purchasing power of money income and assets in domestic currency from the perverse effects of high inflation rates." Kurt Schuler (2000) had farther identified three key phases in the process of unofficial dollarization, which is the interest of this paper. And for the purposes of this paper it is important that policymakers in South Sudan understand when does the unofficial dollarization take place. In this regard, the following passage from Schuler could enhance such an understanding:

> ***Unofficial dollarization often occurs in stages that correspond to the textbook functions of money as a store of value, means of payment, and unit of account. In the first stage, which economists sometimes call "asset substitution," people hold foreign bonds and deposits abroad as stores of value. They do so because they want to protect against losing wealth through inflation in the domestic currency or through the outright confiscations that some countries have made. In the second stage of unofficial dollarization, which economists sometimes call "currency substitution," people hold large amounts of foreign-currency deposits in the domestic banking system (if permitted), and later foreign notes, both as a means of payment and as stores of value. Wages, taxes, and everyday expenses such as groceries and***

[4] See Kurt Schuler (2000): Basics of Dollarization - Global Policy Forum

electric bills continue to be paid in domestic currency, but expensive items such as automobiles and houses are often paid in foreign currency. In the final stage of unofficial dollarization, people think in terms of foreign currency, and prices in domestic currency become indexed to the exchange rate[5].

But, how do we quantitatively measure the phenomenon of unofficial dollarization described in the passage quoted above? The literature on dollarization gives two indicators[6]: a) **share of foreign currency deposits in the money supply (or total liquidity, which includes foreign currency deposits);** and b) **share of foreign currency deposits in total bank deposits**. According to the IMF (1995) an economy is considered highly dollarized if the share of foreign currency deposits in the money supply is equal to or greater than 30% and moderately dollarized if it is below 30%, but more than 16.4%. It is on the basis of these indicators that researchers have been able to determine the extent of which countries have dollarized, partially or fully (or officially and unofficially). Countries that allow a foreign currency to circulate together with a local currency are considered to be in what is called a "**bio-monetary system**!"

It should be emphasized at this juncture that the central objective of the dollarization regime is to restore economic stability and economic growth. **But, how many countries in the world have had characteristics of a dollarized economy?** Socorro Heysen (2005) of the IMF had undertaken a comprehensive survey of countries in the world[7]. There are ninety-nine (99) countries grouped by region in that survey. The share of foreign currency deposits to total bank deposits during the period 1996 – 2001 is given in Table 2.1 below for countries from 8 regions of the world.

Table 2.1: Percent Share of Foreign Currency Deposits to Total Bank Deposits

Region	Number of Countries	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
South America	9	45.8	41.6	44.6	48.1	49.2	50.9
Transition Economies	26	37.3	38.9	43.5	44.3	46.9	47.7
Middle East	7	36.5	37.2	37.7	37.5	38.2	41.9
Africa	14	27.9	27.3	27.8	28.9	32.7	33.2
Asia	13	24.9	28.0	26.8	28.8	28.7	28.2
Central America	6	23.2	23.4	24.7	24.8	25.2	27.3

[5] Ditto, page 3

[6] For more on this, see for instance - Adam Bennett (1999): Monetary Policy in Dollarized Economies; Impact of Dollarization; Kurt Schuler ( ): Some Theory and History of Dollarization; Bonga and Dhoro (2015): Currency Substitution, Dollarisation and Possibility of De-dollarisation in Zimbabwe; Myriam Quispe-Agnoli (2002): Costs and Benefits of Dollarization

[7] See Dollarization: Back to Basics, published in Finance & Development, March 2005, IMF/World Bank

Caribbean	10	6.3	7.6	6.8	6.7	6.1	6.2
Developed Economies	14	7.4	7.5	7.5	6.7	7.0	6.6

Source: From Socorro Heysen (2005) - International Financial Statistics, the IMF's Economic Data Sharing System, and statistical publications by various central banks.

Two categories of countries – Caribbean and developed economies - from Table 2.1 above, have less than 10% share of foreign currency deposits in total bank deposits and would not therefore be of interest to our analysis at this point in time. Highly dollarized countries constitute 75% of all the countries of the dollarization regime. All the fourteen (14) African countries had moved from a moderate dollarization in 1996 to a highly dollarized status by 2001. I would focus on the case of Zimbabwe, for it is an African story of a country that has officially adopted USD as a legal tender. But, let us first look at the case of Latin American countries, for this is where dollarization was popularized in the 1990s, as articulated by Georgios Karras[8]:

Despite cautious comments by the previous U.S. Treasury Secretary (Summers, 1999), enthusiasm for "dollarization," the replacement of national currencies in the Americas by the U.S. dollar, is spreading fast and for a growing number of countries. In fact, dollarization has been endorsed by both academic economists (Barro, 1999) and the business community (Wall Street Journal, 1999a, 1999b; Financial Times, 1999).

Moreover, Myriam Quispe-Agnoli (2002) in a survey of the extent of dollarization of seventeen (17) Latin American countries found the following:

a) Three countries were fully dollarized – Panama (1904), Ecuador (2000), and El Salvador (2001) have adopted United States dollar (USD) as a legal tender;
b) Seven countries were highly dollarized (i.e. partial dollarization);
c) One, which is Honduras moderately dollarized (28%); and
d) Six with share of foreign currency deposits in the money supply below 10%.

Let us now turn to the case of Zimbabwe, which abandoned its local currency and fully adopted USD as the legal tender in 2009. According to Bonga and Dhoro (2015):

> *The process of dollarization in Zimbabwe was peculiar in that it was not backed by international reserves as is normally the case with countries that have dollarized. The only foreign currency that the government had was from taxation after full dollarisation*[9].

Why did Zimbabwe fully dollarize in 2009? This question would be answered by looking at the trends of the inflation rate during the period 1998 – 2009. I have heavily relied on a table given by Bonga and Dhoro (2015:31), which provides the

[8] See Costs and Benefits of Dollarization: Evidence from North, Central, and South America, Journal of Economic Integration 17(3), September 2002; 502-516

[9] See IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 6, Issue 1. Ver. I (Jan.-Feb. 2015), PP 30-38 www.iosrjournals.org

inflation rates since 1980. My choice of the year 1998 is because that was the time the Zimbabwean economy began to experience persistent high inflation rates (see Table 2.2 below).

Table 2.2: Zimbabwean Inflation Rates During 1998 – 2008

Year	Inflation Rate (%)
1998	48
1999	56.9
2000	55.27
2001	112.1
2002	198.93
2003	598.75
2004	132.75
2005	585.84
2006	1,281.11
2007	66,212.3
2008 - July	231,150,888.87
2008 - August	471,000,000,000
2008 - September	3,840,000,000,000,000,000
2008 – Mid-November	89,700,000,000,000,000,000,000

Source: **From a table given by Bongo and Dhoro (2015:31)**

The picture depicted by the inflation rates in Table 2.2 above would appear to be beyond imagination and comprehension under normal circumstances. The simplest way is to go back to basics of the demand for money. People demand money, as stated at the beginning of this section of the paper, for store of value, medium of exchange, and unit of account. In the light of these functions, the Zimbabwean national currency (also called dollar) would undoubtedly not have performed them when the inflation rate reached 231 million percent in July 2008. As if the message was not sufficiently internalized by both policymakers and economic agents in Zimbabwe, the inflation rate reached 471 billion percent just within a month and trillions by September 2008. The demand function of the Zimbabwean national currency was now sufficiently altered and currency substitution began in earnest. I would like to present the same drama conveyed by Table 2.2, in a graphic form (see Figure 1).

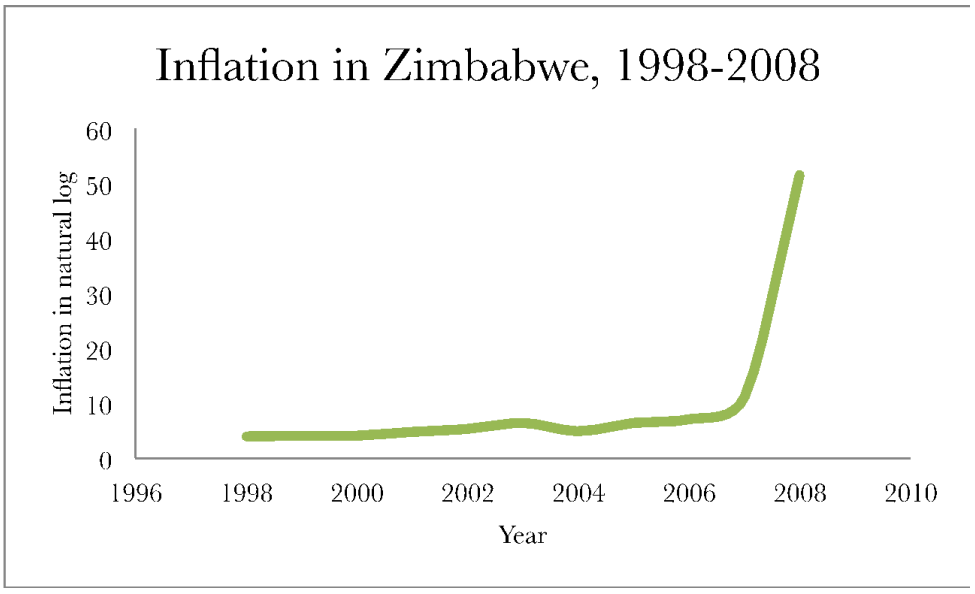


Figure 1: Inflation in Zimbabwe During the Period 1998 - 2008

The graph shown in Figure 1 above clearly demonstrates beyond doubt the point at which Milton Friedman's cardinal principle that "inflation is always and everywhere a monetary phenomenon," is observed. The national currency lost all the three functions of the demand for money as a result of hyperinflation. A new currency that could meet the demand for money functions was therefore imperative so as to ensure normal operation of the economy. Bonga and Dhoro (2015) have captured vividly the drama of the "disappearance" of the Zimbabwean national currency. They pointed out that the Reserve Bank of Zimbabwe (i.e. central bank) was: " unable to convert domestic money balances of the banking system" and "could not provide the lender of last resort function." Hence, Zimbabwe was forced to officially adopt the United States of America dollar as a legal tender.

III. Emerging Evidence of a Bio-monetary System in South Sudan

The empirical literature on dollarization "suggests that in countries with high inflation, foreign currencies are first used as a store of value, then as a unit of account and finally as a medium of exchange[10]." This process is critically important if appropriate policy responses are to be pursued in the case of South Sudanese economy. But, let us first look at when did the economy of South Sudan begin to exhibit the signs of a dollarizing economy?

3.1 Signs of a dollarized economy

The first sign is explained, in my view, by four general characteristics: a) regulatory environment; b) share of oil in the gross domestic product (GDP); c) share of oil in total export; and d) share of oil in the annual total government revenues.

[10] See, for instance, Bonga and Dhoro (2005)

It would be recalled that the Comprehensive Peace Agreement (CPA) of 2005 was premised on a one-country two-systems! One of the features of such an arrangement was a dual banking system – Islamic banking system in the north and conventional banking system in the south. The Bank of Southern Sudan (BoSS) was charged with the responsibility of establishing a conventional banking system in the south. The BoSS oversaw the establishment of foreign banks, such as Kenya Commercial Bank (KCB), Stanbic bank, Ethiopian commercial bank, Qatar National Bank (QNB), Equity bank, and so forth. People were allowed to open bank accounts in foreign currency and there were no restrictions on capital movement. There are currently 28 commercial banks operating in the country of which non-South Sudanese shareholders own the bigger ones.

I have mentioned in section one of this paper that South Sudan, as a country, was born on 9 July 2011 with a "**golden spoon**" in her mouth. Oil constituted more than 75% of the gross domestic product (GDP); more than 95% of government total revenues; and about 98% of exports. It is worth mentioning here that oil revenues are denominated in the United States of America dollar. Stated differently, South Sudan in this sense was highly dollarized, though unofficial, at independence. It is, however, possible that policymakers in general, and monetary authorities in particular might not have been aware of this phenomenon. This is evidenced by the liberal way USD was allocated to commercial banks and forex bureaus. For instance, the Bank of South Sudan (BSS) used, during the first six months of independence, to sell weekly about USD75 million to commercial banks (e.g. a commercial bank was allocated up to USD5.0 million) and forex bureaus - a forex was able to buy up to USD2.5 million).

The second sign of dollarization phenomenon is the high ratio of foreign currency deposits in the total bank deposits (i.e. combined local currency and foreign currencies, which are mostly dominated by USD). Table 3.1 below gives this ratio for 26 out of 30 commercial banks operating in South Sudan[11]. The other indicator of the extent of dollarization is the share of foreign currency deposits in the money supply (or total liquidity, which includes foreign currency deposits).

Table 3.1: Share of USD in Total Bank Deposits in The Banking Sector in South Sudan

Name of Financial Institution	Deposits			
	SSP (000)	USD (000)	Total Deposit (SSP & USD (000)	% USD in total Bank deposits
1. Afri Land First Bank	104,201.7	36,604.7	140,806.4	26.0
2. Alpha Bank	86,366.1	582.904.3	669,270.4	87.1
3. Buffalo Commercial Bank	187,008.8	34,029.3	221,038.6	15.4
4. CfC Stanbic Bank	443,533.0	2,147,181.9	2,590,714.9	82.9
5. Charter One Bank	258,074.0	186,980.0	3,987,094.8	46.0
6. Co-operative Bank	377,965.4	1785.7	5,119.5	35.0
7. Ebony National Bank	56,476.3	5,174	61,650.4	8.4
8. Eco Bank	181,823.2	1,343,412.4	1,525,235.6	88.1

[11] Four banks – Afriland first bank, Agricultural bank, People's bank, & St. Teresa rural development bank – didn't have foreign currency deposits

9. Eden Commercial Bank	239,206.2	164,467.3	403,673.5	40.7
10. Ethiopian Commercial Bank	193,589.2	207,438.5	401,027.7	69.8
11. Equity Bank	1,541,507.6	3,566,459.8	5,107,967.4	69.8
12. International Commercial Bank	49,639.4	22,690.9	72,330.3	31.4
13. Ivory Bank	1,630,242.0	249,657.2	1,879,899.2	13.3
14. Kenya Commercial Bank	3,299,031.0	7,846,736.0	11,145,767.4	70.4
15. Kush Bank	169,894.4	86,273.4	256,167.8	34.0
16. Liberty Commercial Bank	168,006.0	3,621.8	171,627.8	2.1
17. Mountain Trade and development Bank	36,175.0	20,649.2	56,824.2	36.3
18. National Credit Bank	37,469.4	12,471.4	49,940.7	25.0
19. Nile Commercial Bank	122,642.4	18,994.2	141,636.6	13.4
20. Opportunity Bank	15,384.2	1,987.2	17,371.5	11.4
21. Orbit Bank	3,592.1	11.2	3,603.2	0.3
22. Phoenix Commercial Bank	139,119.5	4,880.1	143,999.6	3.4
23. Qatar National Bank (QNB)	2,154,674.0	1,832,420.8	3,987,094.8	46.0
24. Regent Bank	33,33.8	1,785.7	5,119.5	35.0
25. Royal Express Bank	7,885.6	7.0	7,892.6	0.09
26. South Sudan Commercial Bank	83,757.0	67,434.0	151,191.0	44.6
Total	**11,590,597.3**	**18,721,379.9**	**30,311,977.2**	**61.8**

Source: Constructed by the author from data obtained from the banking sector

It is obvious from Table 3.1 above that 12 commercial banks are highly dollarized. Their share of foreign currency deposits in total bank deposits ranges between 31.4% and 88.1%. I would estimate the foreign currency deposits in the money supply to be about 61.8%, which confirms that South Sudan economy falls within the category of economies that are highly dollarized. Such a picture has serious implications to the design, application, and management of monetary policy. This is because SSP, on which monetary policy in South Sudan is anchored on, constitutes only 32% of the money supply.

The third and final sign, which shows that South Sudan economy is experiencing the phenomenon of dollarization, is the behavior of economic agents. They (i.e. economic agents) now think in terms of USD as by way of protecting their money income and assets. Moreover, prices in SSP are indexed to the exchange rate (i.e. to SSP/USD rate). A quick survey of four categories of businesses (**hotels, travel agencies, restaurants, and retailers**) in Juba found that they all index their prices to the daily SSP/USD exchange rate prevailing in the parallel market for foreign exchange. In this regard, inflation in South Sudan is essentially driven by the exchange rate volatility. Figure 2 below vividly captures this relationship. This is consistent with the quantitative theory of money, which postulates that money supply and prices generally move in tandem.

Table 3.2: Inflation and Exchange Rate During the First 8 months of 2016

2016	Official Exchange Rate (SSP/USD)	Parallel Market Exchange Rate (SSP/USD)	Inflation Rate (%) BSS source		Inflation Rate (%) NBS source	
			Annual	Monthly	Monthly	Annual
January	19.794	29.700	436.23	22.3	22.3	165.0
February	27.414	36.150	517.19	18.6	18.6	202.5
March	33.403	35.000	600.83	16.2	16.2	245.2
April	30.547	39.350	683.32	13.7	13.7	266.4
May	30.547	30.350	635.32	7.1	20.6	295.0
June	49.050	40.906	1,027.73	61.8	24.7	309.6
July	51.086	62.500	1,826.38	77.7	77.7	661.3
August	57.680	72.980	2,197.06	20.3	20.3	729.7

Source: Constructed by the author from Monthly Statistical Bulletin of BSS

Fig. 2. Inflation and exchange rates during the first 8 months of 2016

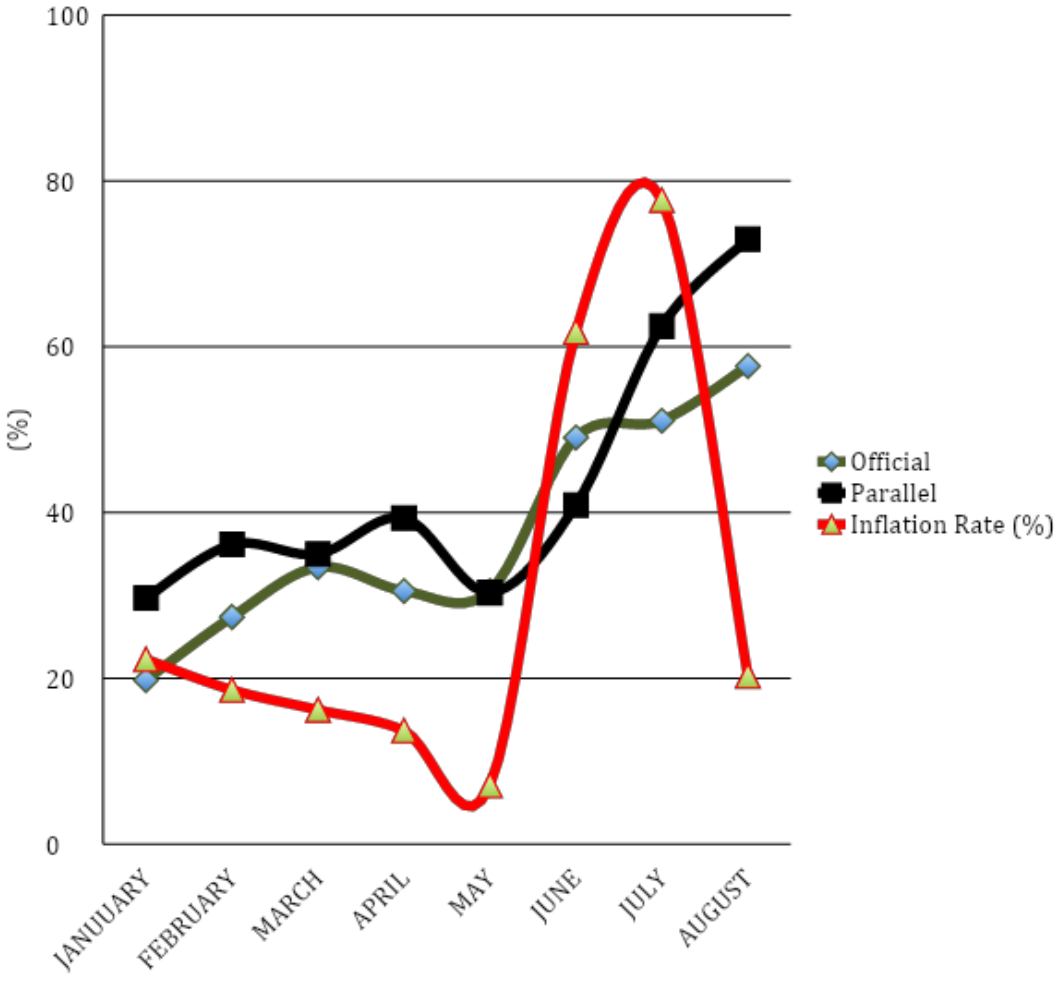


Figure 2 indicates that inflation follows the movement of exchange rate[12]. Four points on the X-Axis are of particular interest to our analysis. The first point is that in March 2016 exchange rates in the two markets converged and began to move downward in tandem with inflation in anticipation of the establishment of Transitional Government of National Unity (TGoNU). However, the exchange rates diverged in April when Dr. Riek Machar the then First Vice President-designate did not show up in Juba on 12 April 2016 as was envisaged. The second point is in May when the parallel and official exchange rates converged again and began to move downward in tandem with inflation after the establishment of TGoNU.

July marks the third point of interest with respect to the movement of inflation and exchange rates. The inflation rate bypassed the hyperinflation threshold of monthly rate of 50% when it increased by 77.7% from June to July reflecting the unfortunate turn of events on July 8, 2016. Finally, inflation increased by 20.3% from July to August 2016 at a much slower pace relative to June and July 2016. This fourth

[12] The SSP/USD exchange rate is expressed in % to enable us to avoid comparing apples and oranges on the Y-Axis. That is, by constructing the two rates (inflation and exchange rates) on the Y-Axis over 8 months on the X-Axis

point reflects return of confidence in political stability due to the African Union (AU) decision to support IGAD-Plus call for the deployment of a Regional Protection Force (RPF) in South Sudan.

3.2 Partial dollarization as an appropriate policy response

The economy of South Sudan is already showing an important lead indicator (symptom if you wish to call it so) of the Zimbabwean scenario, which I have pointed out in section two above. That is, the Reserve Bank of Zimbabwe was "unable to convert domestic money balances of the banking system." BSS is reported to be running short of SSP notes, and to the extent that it is unable to honor commercial banks' request for cash withdrawal from their deposits with the central bank (see Attachment A)[13]. This is a serious development that is likely to have dare consequences if it is not addressed urgently with evidence-based policy options. It could, for instant, lead to a "run on the banks" as people in panic withdraw money from the banking sector. Another possibility is the loss of confidence in the SSP as a medium of exchange, which could lead to a total collapse of the national currency as a legal tender.

South Sudan, however, is not like Zimbabwe with respect to the sources of foreign exchange, especially USD. The government of Zimbabwe earned foreign currency through taxation, but after full dollarization (Bonga and Dhoro, 2015). The Transitional Government of National Unity (TGoNU) of South Sudan earns, however, foreign exchange (i.e. USD) directly from its share of the sales of crude oil in the international market. According to the estimates given by the Ministry of Finance and Planning, TGoNU is envisaged to receive gross oil revenue to the tune of USD669 in the FY2016/2017. Although this amount is significantly lower relative to what the government used to get before the shutdown of oil production in January 2012. It would nevertheless enable South Sudanese policymakers to adopt officially a partially dollarized system. Two elements – store of value and unit of account - of the money demand function would constitute the proposed **partially dollarized system** for South Sudan.

3.2.1 Payment of wages and salaries of the public sector in USD

The purchasing power of the money income, especially wages and salaries, has been eroded within six months of the adoption of a new exchange rate regime, which have in turn triggered skyrocketing prices with annual inflation rate standing at 700% at end-September 2016. Let us, by way of illustration, take a monthly salary of a member of the National Legislative Assembly (NLA), which is SSP9,800. This amount was equivalent to USD 3,322 before the realignment of the exchange rate in December 2015. It was equivalent to USD326.67 (i.e. dropped by 91.2%) in June 2016, and farther dropping to USD140/month (i.e. by 96%) at end-September 2016.

[13] A senior official of BSS did confirm this information to the author, but gave different reasons for the inability to "convert domestic money balances of the banking system." One of the reasons he gave was that economic agents, especially the army, are keeping SSP notes in their houses! This is contrary to empirical evidence, which shows in the case of Zimbabwe that "the velocity of money increased as people opted to spend immediately rather than hold on to depreciating cash." Bonga and Dhoro (2015:32).

There is a great likelihood that it would be less than USD90/month at end-December 2016.

The above example of the salary of a member of NLA (parliament) only tells a story of the status of money income of the elite. Looking at a monthly income of SSP300 for those on minimum wage would capture a true picture of the drastic erosion of the money income of ordinary people. This amount was equivalent to USD101.7/month in December 2015, dropped sharply to USD10/month (i.e. a drop of 91.2%) in June 2016, and to only USD4.3/month (i.e. dropped by 96%) at end-September 2016. Although the percentage drop in the monthly money income is the same for a member of NLA and a person on minimum wage, the latter would bear more the brunt of skyrocketing prices than the former. This is because they both buy their goods and services from the same market. Moreover, the disparity (i.e. gap) is still acute in that what the member of NLA gets is 10 times that of minimum wage.

The situation of money income depicted by the preceding two paragraphs is contrasted with the behavior of prices of goods and services, which took opposite direction. I would illustrate the madness of rising prices by looking at two goods – diesel and water. A liter of diesel was six pounds (SSP6.0/liter), which was equivalent to USD2.0 in mid-December 2015. The official rate is now SSP22.0/liter or USD0.31 (or 31 US cent) at end-September 2016. The price of a liter of diesel has risen in terms of SSP by 266.67%. It has, however, declined in USD terms by 84.5%. The price of a small bottle of mineral water used to be one pound (i.e. SSP1.0), which was equivalent to USD0.34 (or 34 US cent) before the realignment of the exchange rate. The price of the same bottle of mineral water is now SSP10 (or 14 US cent), which is an increase of 900% (or decline of 59% in terms of USD). The two examples I have given here are just to make our story simple. But, the overall picture is captured by the annual inflation rate, which stood at 700% at end-September 2016.

The severity of the impact, on the population, of a combination of drastic drop in money income by 96% and sharp increases in the prices of goods and services represented by an annual inflation rate of 700% could not be over emphasized. In a situation of rising inflation the purchasing power of money income is normally protected through indexing income to inflation. But, this is not practical in an environment of weak institutions and a monthly double-digit inflation. There is, however, a simple and practical way of protecting the purchasing power of money income, which is being eroded daily by skyrocketing prices.

The simple way, in my view, is for South Sudan's policymakers to be guided by best practices in economic policy management. Empirical evidence on the success of dollarization as a way of protecting the purchasing power of money income is now easily accessible and economic policymakers should make use of it in fixing the economy of South Sudan. This point might be comprehendible if we look at the following passage from Socorro Heysen (2005):

Institutional factors play an important role in determining why some countries with a history of macroeconomic instability are dollarized and others are not. Some countries may seek to contain the decline in savings that can result from

inflation by authorizing the use of a foreign currency; others may try to resist dollarization by promoting financial indexation schemes or resorting to capital controls. That said, the lack of deep financial markets to support a liquid market for indexed instruments and the simplicity, transparency, and credibility of dollar instruments may tilt the balance in favor of partial dollarization in some countries.[14]

In the light of the above passage, TGoNU could start the process of partial dollarization by paying its public sector employees in USD beginning from the day of the approval of FY2016/2017 budget by TNLA. This would make policymakers to think in terms of USD and could therefore begin to behave as rationale economic agents.

But, would TGoNU be able to secure USD for payment of wages and salaries? This would require a critical look at the sources of revenue and expenditure stipulated in the FY2016/2017 budget.

Total gross revenue in the draft budget is SSP58.13 billion (or USD830.5 m) of which SSP46.83 b (or USD669 m) is from oil revenue. I would like to focus on TGoNU's oil revenue for this is denominated in USD and is received on monthly basis, which makes it more predictable than any other source of income for the government. The net oil revenue for TGoNU is, however, about 15.5% of total gross oil revenue. But, who takes the remaining 84.5% (i.e. USD565.6 m) of TGoNU's gross oil revenue? The answer is: Sudan (80.33%), Nilepet (3.23%), and oil producing states and communities (0.94). Sudan takes the lion's share (80.33%) through September 2012 Oil Agreement with South Sudan, which gave her USD24.1/bbl. of Dar blend crude that is transported and shipped through Port Sudan. Included in USD24.1/bbl. is USD15.0/bbl. as a transitional financial assistance (TFA) to Sudan, which TGoNU must renegotiate now if it wishes to prevent the collapse of the economy of South Sudan. There is a strong argument against the continuation of TFA in the light of economic difficulties South Sudan is going through.

Turning to the expenditure side of the FY2016/2017 budget, we find that the total essential agency spending is SSP28.23 b (or USD403.34 m). If spending on interest and ARCISS were added, then the total essential spending would be SSP33.34 b (or USD477.0 m). I would base my analysis of the expenditure items (i.e. spending blocks[15] or total essential spending) of FY2016/2017 on Table 3.2 below.

Table 3.2: Spending Blocks of FY2016/2017 in both SSP and USD

Spending Block	In SSP	In USD	Comment
1. Wages, salaries, & pensions	14.02 b	200.23 m	This spending block will have to be protected through payment of wages & salaries in USD. Where would this amount come from? It will come from TGoNU's

[14] From Socorro Heysen (2005) - International Financial Statistics, the IMF's Economic Data Sharing System, and statistical publications by various central banks

[15] Hon. Aggrey Tisa Sabuni introduced the concept of blocks in the FY2013/2014 budget when he was minister of finance

			gross oil revenue, which implies prioritizing spending block 1 over other spending blocks. The amount of USD200 m could also be reduced through the following steps: a) USD49.8 m for ministry of foreign affairs, which could be reduced by 50% in light of the economic difficulties. Some cost-benefit analysis will have to be done with respect to our embassies. b) Cleaning up the payroll of the security sector by introducing biometric system to weed out ghost workers/soldiers from the payment system.
2. Transfers to States & Counties and annual subscriptions to regional and international organizations	6.45 b	92.1 m	
3. Operating & capital	7.8 b	110.01 m	Payment will be in SSP
4. Total Essential Agency Spending (1+2+3)	28.27 b	403.34 m	
5. Interest	155 m	2.21 m	
6. ARCISS	5.0 b	71.43 m	
7. Total Essential Spending (4+5+6)	33.425 b	476.98 m	

Source: Constructed by the author from FY2016/2017 Budget Proposal

The only spending block whose expenditures will be paid in USD is block 1 (i.e. wages & salaries) in table 3.2 above. This would mean injecting USD16 million monthly into the economy through individual employees of the public sector instead of through a handful of BSS staff via the auction of USD in the inter-bank market for foreign exchange. Besides protecting the purchasing power of money income of public sector employees, such a system would create/generate the most needed effective demand for goods and services produced in South Sudan, at least in the medium-term. That is, this effective demand would in turn create a real supply response through the production of goods and services in our economy. Moreover, the NGO community, foreign diplomatic missions to South Sudan, and UN agencies are already paying the wages and salaries of their local employees in USD.

The demand for LCs by the business community would be unnecessary. This is because legitimate importers of goods and services would bring them based on the prevailing market conditions. They could sell their products and get paid in SSP and then buy USD from the banking sector to bring more goods and services, especially since there are no capital controls in South Sudan. But, most importantly some of our agricultural products (e.g. poultry farming) would respond within six months of the

introduction of the payment of wages and salaries of public sector employees using USD.

3.2.2 USD as the unit of account

The second element of a partial dollarization system recommended for South Sudan is to use USD as a unit of account together with the SSP as I have presented in table 3.2. The SSP will, however, remain as the legal tender and the medium of exchange of all the transactions within the South Sudanese economy. The USD will be used as the unit of account with respect to taxation of international trade.

3.3 Pros and cons of dollarization

It should be stated at this point that the overall objective of dollarization is to restore economic stability and growth to an economy facing macroeconomic instability and high inflation. This objective should guide our analysis of costs and benefits of dollarization. Empirical literature shows beyond doubt that the benefits of dollarization outweigh its costs. What is discussed here, however, in the case of South Sudan is partial dollarization and not a full one. That is, South Sudan could adopt a partially dollarized system as a temporary measure, while building resilient institutions and capacities for economic policy management. Let us briefly discuss costs and benefits of dollarization; bearing in mind that what is being proposed for South Sudan is a partial dollarization.

3.3.1 Benefits of dollarization

I would like to present the benefits of dollarization in a policy matrix format for ease of discussion.

Table 3.3: General Benefits of Dollarization

Benefit	General Comment
1. Stability & growth	Protection of money income and assets is achieved through reduction in inflation. This is because the "risk of depreciation of domestic currency is reduced," especially when exchange rate volatility is key driver of high inflation rates as is the case in South Sudan.
2. Development of sound financial sector/system	A stable capital market would emerge, which could reduce capital outflows and ensure "balance of payments that is less prone to crisis."
3. Credibility of economic policy	**"Political will"** is a scarce commodity in many countries that experience persistent macroeconomic instability, which is underpinned by deficit-financing (or inflationary-financing). And when policymakers accept the key objective of monetary policy, which is price stability, they are essentially accepting discipline in fiscal policy that would in turn enhance confidence in economic policy formulation & execution.
4. Conducive environment for investment	Economic climate is more credible

3.3.2 Costs of full dollarization

There are only two main costs of full dollarization. The first is the loss of power for printing money to finance fiscal deficit. The second is when the country gives up its "national monetary autonomy and seigniorage as well as an effective lender of last

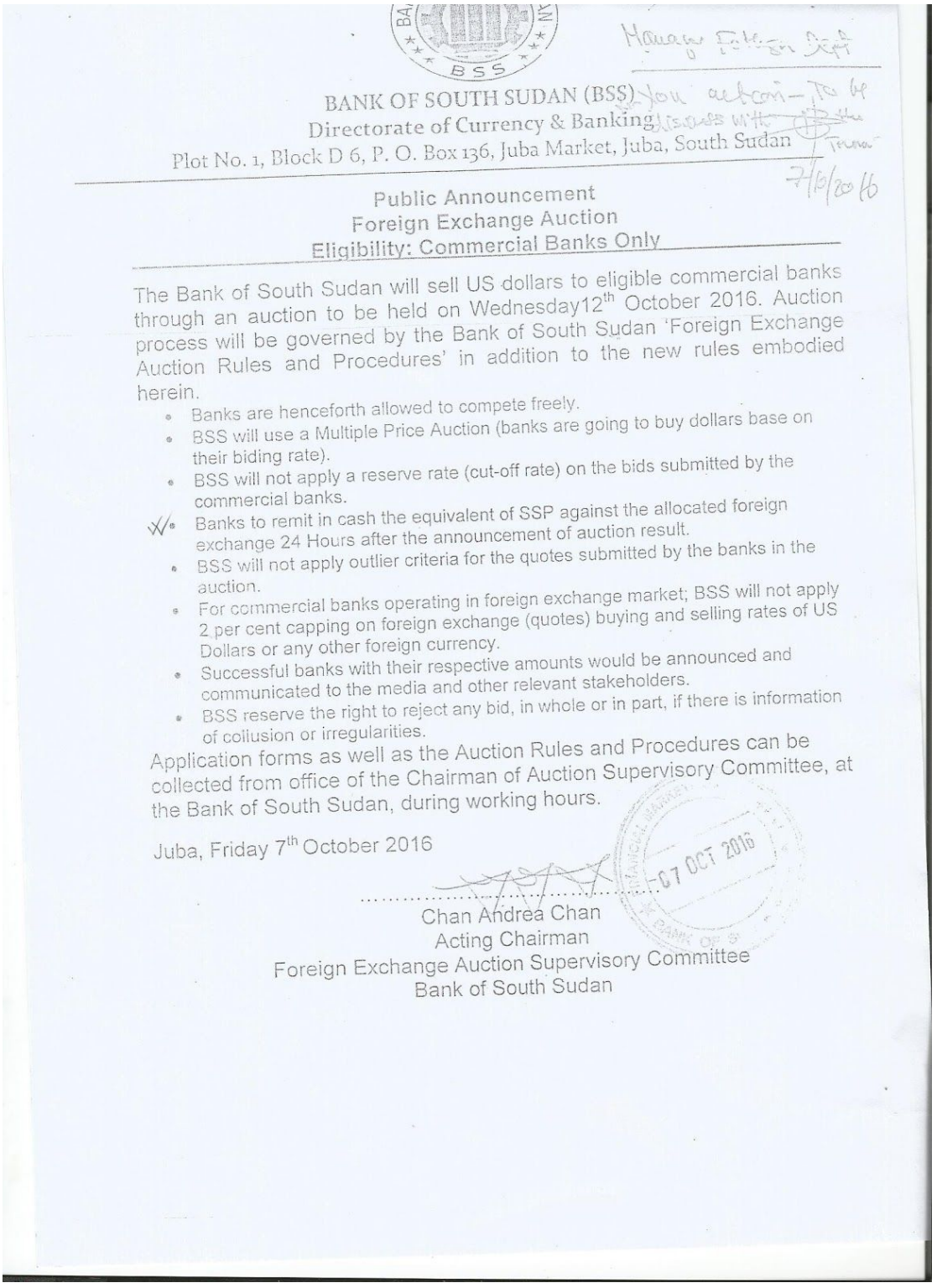
resort for domestic banks[16]." These would not, however, be applicable in the case of a partially dollarized system envisaged for South Sudan. The Bank of South Sudan will continue to have the full functions of a national monetary authority.

IV. Conclusion

This paper has constructed indicators of dollarization and found that the economy of South Sudan is highly dollarized. Moreover, the behavior of economic agents in South Sudan is consistent with theory and empirical literature on dollarization. People think in terms of "foreign currency" and "**prices in domestic currency are indexed to the exchange rate."** Hence, South Sudan has an opportunity to avoid the Zimbabwean track if it could embark now on a process of partial dollarization as by way of restoring on the one hand the purchasing power of money income, and on the other economic stability and growth to the economy.

[16] See Dollarization: Pros and Cons, by Benjamin J. Cohen (2000), http://www.polsci.ucsb.edu/faculty/cohen

Attachment A: BSS Public Announcement



BANK OF SOUTH SUDAN (BSS)
Directorate of Currency & Banking
Plot No. 1, Block D 6, P. O. Box 136, Juba Market, Juba, South Sudan

Public Announcement
Foreign Exchange Auction
Eligibility: Commercial Banks Only

The Bank of South Sudan will sell US dollars to eligible commercial banks through an auction to be held on Wednesday12th October 2016. Auction process will be governed by the Bank of South Sudan 'Foreign Exchange Auction Rules and Procedures' in addition to the new rules embodied herein.

- Banks are henceforth allowed to compete freely.
- BSS will use a Multiple Price Auction (banks are going to buy dollars base on their biding rate).
- BSS will not apply a reserve rate (cut-off rate) on the bids submitted by the commercial banks.
- Banks to remit in cash the equivalent of SSP against the allocated foreign exchange 24 Hours after the announcement of auction result.
- BSS will not apply outlier criteria for the quotes submitted by the banks in the auction.
- For commercial banks operating in foreign exchange market; BSS will not apply 2 per cent capping on foreign exchange (quotes) buying and selling rates of US Dollars or any other foreign currency.
- Successful banks with their respective amounts would be announced and communicated to the media and other relevant stakeholders.
- BSS reserve the right to reject any bid, in whole or in part, if there is information of collusion or irregularities.

Application forms as well as the Auction Rules and Procedures can be collected from office of the Chairman of Auction Supervisory Committee, at the Bank of South Sudan, during working hours.

Juba, Friday 7th October 2016

07 OCT 2016

Chan Andrea Chan
Acting Chairman
Foreign Exchange Auction Supervisory Committee
Bank of South Sudan