

A COMPLEMENTARY CURRENCY SYSTEM IN
PALESTINE: CONCEPT, IMPLEMENTATION ISSUES
AND CHALLENGES

BY

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ABSTRACT

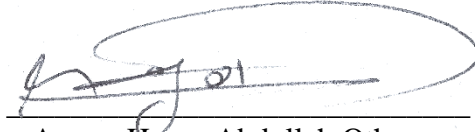
The Palestinian people, under the Paris Protocol, are debarred from issuing their own money and is forced to remain dependent on the Israeli new shekel and other externally issued currencies. The absence of a Palestinian currency deprived Palestine of the ability to set its monetary policy, causing an inflationary system. Therefore, the primary goal of this study is to undertake an economic analysis of the viability of implementing the complementary currency in Palestine. The proposed complementary currency aims to provide a reliable monetary system able to guarantee price stability. To ensure price stability over the long run, this study constructs an index for a basket of commodities as a “money of account” of the complementary currency for Palestine economy. To strengthen the relative price of “money of account” as a way to stabilise the level of the prices, there should be a link between the price and “money of account” that includes a wide variety of goods and possibly services. Therefore, the proposed complementary currency will be backed up by 16 main export products of Palestine, which they represent 75% of total Palestine exports. Selected 16 commodities are aluminium and its articles, building stone, electrical machinery, flours and cereals, footwear, furniture, fruits, medicaments, milk and dairy products, olive oil, iron and steel and their articles, paper and printed material, plastic and its articles, textile and clothing, vegetables, and wood. GARCH models are applied to test of the volatility of the index of “money of account” of the complementary currency to assess price stability of proposed complementary currency in the long run. Finally, to verify the viability of the implementation of the proposed complementary currency in Palestine, this study adopts the theory of planned behavioural with adding facilitating condition, complexity and trust to the model. The volatility analysis obtained by appropriate symmetric and asymmetric GARCH family models showed that the index of “money of account” of commodities basket is stable in the long run. The results reported insignificance of the constant, i.e. (μ) and (ω), ARCH-in-Mean and asymmetry effect, i.e. (γ_1), which indicates the absence of abnormal returns, lack of risk-return trade-off phenomenon, and the absence of the leverage effects in the index of “money of account” of commodities basket, respectively. To analyse the viability of implementing the complementary currency in Palestine, the study adopts a structural equation modelling. The findings show that attitude, subjective norms, facilitating conditions and trust have a significant positive influence on the behavioural intention. Complexity has a significant negative influence on behavioural intention. Only perceived behavioural control shows an insignificant effect on behavioural intention. This research has expanded the knowledge base of complementary currencies as a tool for price stability over the long term. The findings of this study can assist decision-makers in Palestine to develop a complementary currency based on the blockchain technology to rebuild a local economy and to provide a reliable monetary system able to guarantee price stability and lessen the costs and damages associated with various Israeli policies have been forced in Palestine. Although, this study aimed to design complementary currency’s “money of account” in Palestine; the proposed model did not discuss on the mechanism of the system and how it will be implemented technically and legally. Future research is recommended to overtake the technological implementation, such as blockchain technology and cryptocurrency, of the proposed system and legal issues.

ملخص البحث

يُجرّم الشعب الفلسطيني – بموجب بروتوكول باريس – من إصدار أمواله الخاصة ويضطر إلى الاستمرار في الاعتماد على الشيكال الإسرائيلي الجديد وعملات الدول الأخرى. فغياب العملة الفلسطينية حرم فلسطين من القدرة على وضع سياستها النقدية؛ مما تسبب في نظام تضخمي، ولذلك، فإن الهدف الأساسي لهذه الدراسة هو إجراء تحليل اقتصادي لإمكانية تطبيق العملة التكميلية في فلسطين. تهدف العملة التكميلية المقترحة إلى توفير نظام نقدي موثوق به قادر على ضمان استقرار الأسعار، ولضمان ذلك على المدى الطويل قامت هذه الدراسة ببناء مؤشر لسلة من السلع باعتبارها "أموال حساب" للعملة التكميلية للاقتصاد الفلسطيني؛ ولتعزيز السعر النسبي "لأموال الحساب" كطريقة لتحقيق الاستقرار في مستوى الأسعار، يجب أن يكون هناك ارتباط بين السعر و "أموال الحساب" التي تشمل مجموعة متنوعة من السلع وربما الخدمات، لذلك سيتم دعم العملة التكميلية المقترحة من خلال 16 منتج رئيس تصدره فلسطين، والتي تمثل 75٪ من إجمالي صادرات فلسطين. وهذه السلع هي: الألمنيوم ومصنوعاته، وحجر البناء، والآلات الكهربائية، والطحين والحبوب، والأحذية، والأثاث، والفواكه، والأدوية، والحليب ومنتجات الألبان، وزيت الزيتون، والحديد والصلب ومصنوعاتها، والورق والمواد المطبوعة، والبلاستيك ومنتجاته، والمنسوجات والملابس، والخضروات، والخشب. تم تطبيق نماذج GARCH لاختبار تقلب مؤشر "أموال الحساب" للعملة التكميلية لتقييم استقرار الأسعار للعملة التكميلية المقترحة على المدى الطويل. أظهرت النتائج أن مؤشر "أموال الحساب" لسلة السلع مستقر على المدى الطويل. كشفت النتائج عن عدم أهمية الثابت، وARCH-M، وأثر عدم التماثل، مما يشير إلى عدم وجود عوائد غير طبيعية، وعدم وجود ظاهرة مقايضة المخاطرة والعودة، وغياب تأثيرات الرافعة المالية في مؤشر "أموال الحساب" لسلة السلع، على التوالي. للتحقق من جدوى تطبيق العملة التكميلية المقترحة في فلسطين، تبنت هذه الدراسة نظرية السلوك المخطط مع إضافة كل من الظروف الميسرة والتعقيد والثقة إلى النموذج. تبنت الدراسة نمذجة المعادلة الهيكلية حيث أظهرت النتائج أن السلوك والمعايير الذاتية والظروف الميسرة والثقة لها تأثير إيجابي كبير على النية السلوكية. أما التعقيد له تأثير سلبي كبير عليها. ويظهر التحكم السلوكي المدرك فقط تأثيراً ضئيلاً على النية السلوكية. وقد وسع هذا البحث قاعدة المعرفة للعمولات التكميلية كأداة لاستقرار الأسعار على المدى الطويل. يمكن أن تساعد نتائج هذه الدراسة صانعي القرار في فلسطين على تطوير عملة تكميلية لإعادة بناء الاقتصاد المحلي وتوفير نظام نقدي موثوق به قادر على ضمان استقرار الأسعار، وتقليل التكاليف والأضرار المرتبطة بالسياسات الإسرائيلية المختلفة التي فرضت في فلسطين. لم تناقش هذه الدراسة آلية نظام العملة التكميلية وكيف سيتم تنفيذه تقنياً وقانونياً، لذلك توصي الدراسة بإجراء أبحاث مستقبلية من الناحية القانونية والتطبيق التكنولوجي، مثل تقنية سلسلة الكتل والعمولات المشفرة، للنظام.

APPROVAL PAGE

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DECLARATION

I hereby declare that this thesis is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Basheer Hussein Motawe Altarturi

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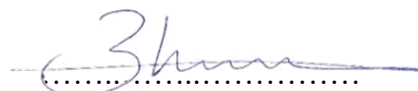
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This thesis is dedicated to my parents.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Bordo stated that the price levels of real and nominal exchange rates were stable at the classical gold standard period,¹ where average inflation ranges from 0.08% to 1.1% (Bordo, 1986). Since World War I, 1914, money devalues due to the change of system from the classical gold standard system. Because of that, the world plunges into a series of downward spiral involving inflation, recession, devaluation, an unstable currency, and other economic calamities. Hyperinflation was experienced by countries such as Hungary, Germany, Poland, and Russia. Another wave of hyperinflation in the 1940s is experienced by Hungary and Greece in 1946 and 1944 respectively. It was theorised that the Great Depression in the 1930s has led to the imminent World War II (Chown, 1994).

Gold Standard was used under the Bretton Woods era from 1914-1971, where it was replaced by fiat or paper currency and a floating exchange rate system (Meltzer & Robinson, 1989). Immediately after the collapse of Bretton Woods, almost all countries fall into lousy inflation. Palestine was not excluded from this due to circulating and accepting the Israeli currency as a legal tender in its territory, where World Bank (1990) statistics shows that Israel suffered hyperinflation reached 370% the late 1970s and early 1980s as will be explained in detail in the problem statement. From then on, for more than four decades, the world witnesses more than 300 financial

¹ The classical gold standard period started in the 1870s when several countries choose to buy and sell gold at fixed price, and it ended prewar year in 1913. Although many countries fixed their currencies to gold in the 1920s, the rules of the system differed and the commitment was weaker (Meltzer & Robinson, 1989).

crisis and panic across the globe, with one of the worst meltdowns during the August 2007 financial crisis (Owolabi, 2013).

Now, central banks manage the supply of money to seek financial stability by implementing Keynes' theory on the interest rate and Friedman's theory on the economic quantity of money, they, however, failed to bring stability to the economy. This failure is due to the shifting of the "medium of exchange" from an object with intrinsic value, such as gold and silver, to fiat money including coins and banknotes and deposits, involves "debt organised into currency" (Carroll, 1964). Bank deposits represent an essential feature of the fractional reserve business model upon which all banks operate. The act of borrowing and lending is the core of money creation. "The actual process of money creation takes place primarily in banks" (Federal Reserve, 1992), in which the process of lending creates money and the depositor money multiplier is how banks introduce credit into society.

Banking system integrates the borrowing and lending process, and so oust the equity financing by debt financing. As an example, when a bank lends to a customer, both parties balance sheets will have a positive flow of money. Also, both agents' balance sheets will expand with money (customer receives the asset, commercial bank incurs liability) and debt (vice-versa to the situation prior) was simultaneously created. For scholarly discussion, the quantities of loan banks could grant limited to the amount of base money and reserves. In due time, banks denationalised the issuance of money and eventually subrogated commodity money with debt.

The study of debt and its relation to the economy is not a big issue to be studied among economist scholars. Apart from a few (Bernanke & Gertler, 1995; Kiyotaki & Moore, 1997; Meera & Larbani, 2006), macroeconomists prefer to ignore debt (Borio, 2014) and have toiled in proving the relevancy of keeping debt in an outdated legacy

system (Cecchetti, Mohanty, & Zampolli, 2011). In the other end of the spectrum, empiricists argued that debt plays a pivotal role in shaping the ups and downs of an economy (Kashyap, Stein, & Wilcox, 1993; Morris & Sellon, 1995; Reinhart & Rogoff, 2011; Schularick & Taylor, 2012). The inability of macroeconomics to predict and explain current economic crisis has shifted the paradigm and more emphasis to revolutionise the financial sector, and that brings the notion that more study on debt needs to be carried out to reposition its significance in current economic issues.

To prove how debt greatly influences major economic crises, we can take a look at history. The Great Depression in the 1930s happened not only because of the reduction of the monetary base (inflation), but the contraction of credit plays a role too (Bernanke, 1983). Another circumstance is 2008-2009 The European Union debt crisis that has shown a significant link between financial crises and the debt variable, which has increased sharply (Reinhart & Rogoff, 2011). There is a robust linkage between changes in debt to changes in macroeconomic activities both in crisis and neutral periods (Friedman, 1982, 1983). The monetary factor plays an essential role in fluctuations of economies. Fisher (1933) attributed deflation due to debt liquidation. Minsky propagated the financial instability hypothesis to three types of borrowers (Minsky, 1982).

Therefore, what started as a creation of money plunges into a series of downward spiral involving inflation, recession, devaluation, an unstable currency and then a sovereign debt crisis. These cycles of global economic meltdowns have given rise to local self-help schemes and local money, as stated by Ingham (2004). For instance, Lietaer (2001) said that the deflation and fiscal contractions circa 1920-1930, there was a boom in the product, especially Western Europe and Northern America. The local media was used as an exchange during the Depression for underlying economic

transactions. The next wave was witnessed in the 80s and has overgrown well into the golden decade of the 1990s. Many scholars and experts argue that this is not just a reaction to the economic downturn, but it is a challenge against globalisation.

Ingham (2004), moreover, argued that specific liberal economics school of thoughts had viewed credit tools and exchange rates as the catalyst for economic prosperity. It is based on the notion that doing transaction based on national currencies brings the transaction cost higher and causes instability in the global market. Following this train of logic, it will make sense and more efficient to have one global economy with one “medium of exchange”.

Hayek (1976) further expounds that by having a single currency shared across the globe promotes real competition amongst currencies until one stable currency is chosen. With impending economic globalisation and the fast-moving financial technology, the issue at hand has been relooked into with great interest because of the world is getting more integrated through technology and blurring the relationship between the state, economy, and currency (Hart, 2000; Cohen, 2001; Helleiner, 2003).

In this era, talks of streamlining money, be it electronic and physical has resurfaced and brings hope for the whole global market with foreign labour (Banuri & Schor, 1992). Per Mundell’s influential theory, global economic relations have set the world on a path to have a single optimum currency area (Mundell, 1961).

The rhetoric of the end of fiat money is stretched even further with the argument that many of the economic transitions are efficient atomised, such as digital bartering, and paper money is now made redundant. It is believed that Internet technology is so rampant that it nearly removes the inconveniences of bartering that happens due to lack of mutual and agreeable trade between parties. Offers and agreements could be matched using powerful algorithms, whether in a full or negotiating term. When economic

transactions are decentralised, banks and fiat money is losing its perceived value and could be rendered redundant. Money is now not narrowly defined as paper currency.

An interesting case study on the relationship between money and sovereignty is through the European Monetary Union. This ongoing experiment of ‘one currency policy’ plays an essential role in how we see money as a neutral “medium of exchange” in a transaction (Bell & Nell, 2003; Goodhart, 1998). The advocacy of a single currency that is controlled by participating members rather than depending on a central banking authority system is a popular stance by communitarian, socialists, and populists since the early twentieth century.

It is believed that ‘community money’ may be able to tap into human and social capital that is rendered as inefficient due to the low monetary income by individual members of the society that is triggered by a capitalist economy and the current banking system. The idea is that money is just a tool, but the real resources and wealth lies in natural surroundings like material and technical resources. Lacking a “medium of exchange”, which unemployment and the loss of income brought about, these recline sluggish in times of recession. Like analyses of global e-money, the crucially essential questions concerning “money of account” and money as an exit, ‘spontaneously’ without any need of a state or authority. For instance, Hart believes that electronic transactions will dominate economic life, and that “the sheer volume, speed and spatial dispersion of these transactions will ultimately defeat the revenue collecting bureaucracies” (Hart, 2000). Without the existence of tax, the community is then forced to break-down into smaller units, which strengthens the notion that information technology will regress the definition of personal credit by replacing fiat money with re-personalisation of economic life (Hart, 2000, p. 323).

Local exchange trading schemes and Authentic Local Currencies, also known as Time Dollars in the USA, are two prominent complementary currency systems (Bowring, 1998; Hart, 2000; Lietaer, 2001; Powell, 2002; Williams, 1996). For some scholars, information technology raises the chance that the local community might link between each other to form secure networks that define economic boundaries better than nationalistic borders. It is argued that the Internet has the prospect to transform the local into the global (Hart, 2000).

As a response to the issues brewed by fiat money, there are ongoing talks to return to the gold payment system or revamping the current monetary system. With that, gold, silver, and other conventional commodity currencies, i.e., complementary currencies, has been garnering interest from the public of late. With the public being more interested in the commodity-based payment system, banks are gradually being replaced with another financial tool. In spaces with the high unemployment rate, the community has proven that they have improved quality of living with the implementation of such a system. They are becoming more self-reliant instead of depending on welfare, which is reminiscent of the 1930s where the initiative is the norm in countries in Western Europe and North America, where the Depression period was more prevalent than other countries.

With that, complementary or alternative currencies could be a tool to cushion the impact caused by the economic crises in the conventional money system. It will be far-fetched to believe that national currencies will disappear to be replaced with an alternative system. Instead, the alternative currency system could go hand in hand with the existing conventional system, where it fulfils the role and fills in the gap of the current system.