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Introduction

Money is a part of our everyday lives. Wherever we look, whatever we do, the presence of money is directly or indirectly felt. Despite this, for the majority of us money remains in our subconscious, perceived as something that is just there, a necessity that is nonetheless beyond our control. We rarely stop to think about what it is, who creates it, where it comes from, or what gives it its value. And if we do stop to reflect, we tend to do so from the most capitalistic perspective, based on the most deeply-ingrained, traditional financial education, full of confusing concepts such as the gold standard, compound interest, and the relationship between savings and finance.

Money has undeniably been one of the most important and beneficial innovations in human societies throughout history. Without money, it would be impossible to conceive of the levels of well-being and economic efficiency we enjoy today. Without money, the individuals in a given society would have to systematically resort to trading some goods for others and, clearly, reciprocal agreement would have to exist between the parties to any economic exchange. This would be highly complicated and not in the least practical. Money is the instrument that facilitates the exchange of goods and services, economic specialization and the division of labour, contributing to the global efficiency of an economy and, in general, of a society. It could be argued that today's societies would be completely unworkable and inconceivable without money.

But do we know what money really is and what it represents? Are we aware that the pursuit of efficiency is perhaps the cause of the current unsustainability of our societies and our planet? Have we asked ourselves if alternative courses of action exist? And, if so, what are they and to what extent are they being implemented and consolidated?

The aim of this COURSE is to provide answers to these and other questions. The level is intended to be informative as well as academic, so that the contents are accessible to as many people as possible. The intention is to raise awareness of all that surrounds the concept of money and provide the basic knowledge with which people can freely choose how to proceed in the future.

To achieve this aim, the COURSE has been structured in three different blocks with the following contents:

- **Block 1: From monopoly to monetary diversity**. This block provides an introduction to money, what it is and what it represents, and goes on to analyse the situation of the current monetary system, in the most capitalistic sense of the term. Subsequently, the contributions made by complementary currencies to economic, social and environmental sustainability are analysed from a complex thought perspective. The primary references used were the studies of Bernard Lietaer.

- **Block 2: In a complementary currencies ecosystem**. This block introduces complementary currencies, what they are and what they represent, as well as their historical evolution and different typologies. There follows an analysis of their current situation, at national and international level, their impact on sustainable development, and their typical lifespan. The primary references used were research studies by Gill Seyfang, Noel Longhurst and Neil Hughes.

- **Block 3: Toward local, sustainable development**. This block analyses how complementary currencies can be implemented through public sector initiatives, to reactivate a local economy as well as promote social cohesion and reduce the ecological footprint of an area. The primary references used were research studies conducted by the Community Currencies in Action project (CCIA).

Recommended reading

Corrons, August (2015). «Monedas complementarias en pro de la sostenibilidad y el desarrollo». Research paper. Universitat Jaume I.

Corrons, August (2018). «Análisis de la influencia de los valores humanos y las actitudes en el proceso de adopción de redes virtuales de intercambio no monetario». Doctoral thesis. Universitat Jaume I.

Hughes, Neil (2015). «The community currency scene in Spain». *International Journal of Community Currency Research* (vol. 19, section A, p. 1-11).

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Lietaer, Bernard *et al*. (2008). *Opciones para gestionar la crisis sistémica de la banca*.

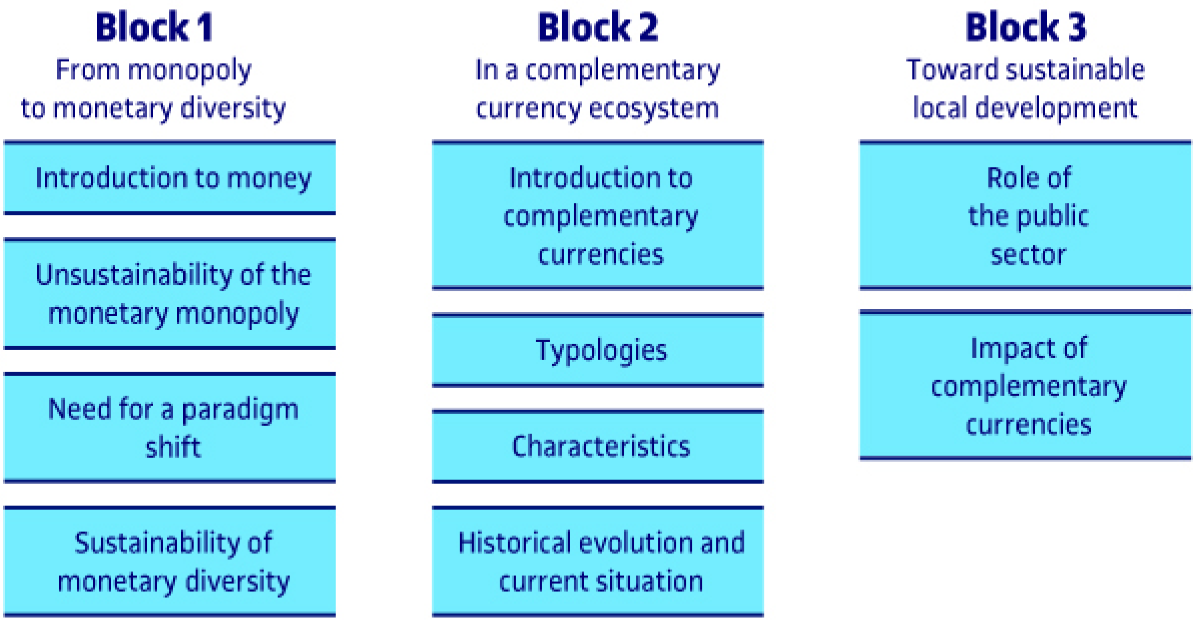
Lietaer, Bernard *et al*. «Money & Sustainability: The Missing Link». The Club of Rome – EU chapter.

Lietaer, Bernard y Kennedy, Margrit. *Monedas regionales: nuevos instrumentos para una prosperidad sustentable*. La Hidra de Lerna Ediciones.

New Economics Foundation (2015). «Community Currencies – Opportunities and Challenges for local government». Study under the project Community Currencies in Action (CCIA).

Seyfang, Gill y Longhurst, Noel (2012). «Money, Money, Money? A scoping study of community currencies». Academic papers Complementary Currencies GICC (Grassroots Innovations: Complementary Currencies) Publications.

Seyfang, Gill y Longhurst, Noel (2013). «Growing Green Money? Mapping Community Currencies for Sustainable Development». *Ecological Economics* (vol. 86, p. 65-77). Elsevier.



1. From monopoly to monetary diversity

1.1. Introduction to money

1.1.1. Money and its functions

When it comes to defining what money is, authors tend to refer to its specific functions:

- **Medium of exchange:** Money facilitates the exchange of goods and services within a community or market.
- **Unit of account:** Money is used to measure the value of items and determine exchange prices.
- **Store of value:** Money need not be used in the moment and can be accumulated or hoarded for future necessities.

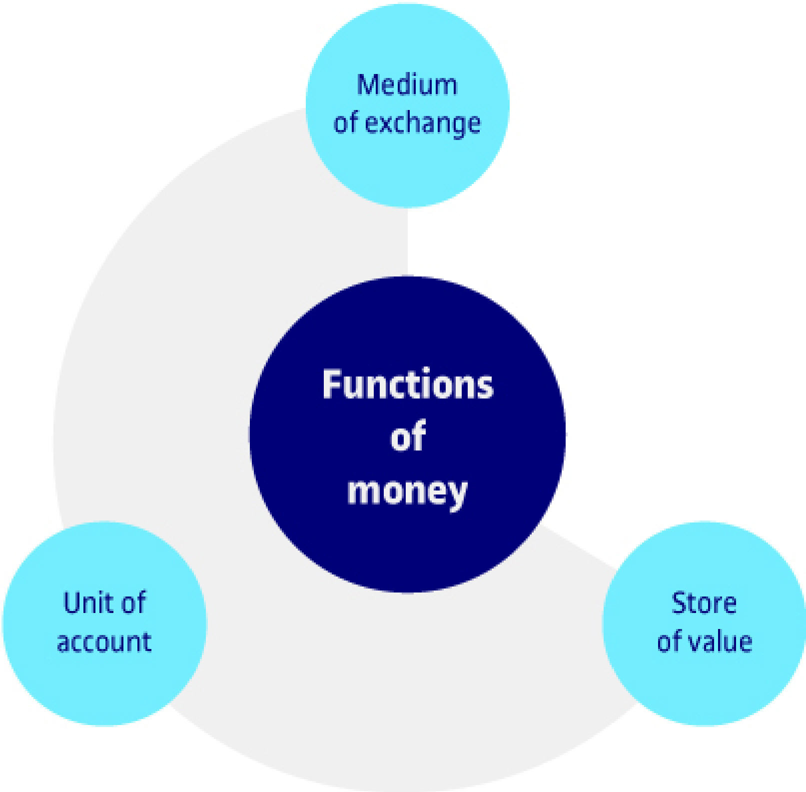


Figure 1

However, the essence of money, true to its origins, lies in the first two functions: as a medium of exchange and a unit of account. The most widely-used definition directly relates to the original concept of money as an ***"agreement among the members of a community of people to use something as a symbol of value for the exchange of goods and services"***. This definition incorporates two concepts which are fundamental to an understanding of money: the presence of a ***"community"*** of people and the ***"agreement"*** among them to accept something as a unit of exchange.

In spite of this definition, money has ceased to be an instrument of exchange for the promotion of prosperity. Instead it has become a universal end in itself, upon which people depend to determine their quality of life and satisfy their needs and wants. When the store-of-value function prevails, money generates a cumulative increase, supported by ***"interest"*** (the cost of money when it is loaned) and ***"compound interest"*** (the cost of the money implicitly included in the goods and services we acquire). When money becomes an end in itself, in a generalized way, societies become morally sick, giving rise to important social injustices, unequal distribution of financial, social and environmental burdens, a widespread lack of solidarity among citizens and the dehumanization of relationships.

Legal tender, as we know it today, promotes the use of the three different functions, but with excessive emphasis on the store-of-value function, with all its implications. Complementary currencies, on the other hand, seek to achieve the first two functions, but never the third, as will be discussed later in this COURSE. Certain complementary currency projects are even introducing the concept of ***"oxidation"*** expounded in the theories of Silvio Gesell. This refers to a negative interest rate which causes money to lose value over time, thereby discouraging hoarding and the perpetual circulation of money.

Recommended reading

- Fact sheet 01 (Susana Martín) – *What is money?*
- Fact sheet 10 (Susana Martín) – *Rate of interest*
- Fact sheet 11 (Susana Martín) – *Oxidation or the negative interest rate and Silvio Gesell*

Recommended videos

- Lesson 01 (Ranulfo Paiva) – *What is money? And why do I need to know?*
- Lesson 04 (Ranulfo Paiva) – *Different functions of money*

1. From monopoly to monetary diversity

1.1. Introduction to money

1.1.2. A brief historical outline

Before the creation of money, valuable articles with a purpose of their own were used to create equivalents and be exchanged. These articles had to meet certain criteria: they had to be durable, transportable and have their own inherent value. There were three important historical stages prior to the creation of money as we know it today:

1. The use of non-durable items as money, for example, salt (in China, Northern Africa and Mediterranean Europe) or cacao (in Mexico).

2. The use of metals as money. The durability of metals allowed them to be used as a store of value. They could also be manufactured into relatively small pieces, which made them a good medium of exchange. Gold has always been the most valuable metal. As early as the end of the third millennium BC, the Mesopotamian peoples began to use ingots of precious metals in exchange for goods. Sources also indicate that silver was being used as a method of payment around 2500 BC.

3. The use of the coin, which appeared once social organization and technology had developed to the point of employing standardized quantities of gold and silver in exchanges. The words for coin in a number of modern languages, including Spanish, Russian and Italian, are derived from the Latin ***"moneta"***, meaning piece. The first known coin was the Sumerian ***"shekel"***, from the word for a unit of measurement similar to a bushel of wheat, created around 3200 BC in the small kingdom of Lydia (an area that is now part of Turkey), from where it would spread around the world. These coins constituted the first monetary revolution in history and would eventually give rise to the present-day Western monetary system.

After the invention of the coin, there were no major upheavals in the history of money until the issue of the first paper money. Although China had begun to produce paper money about a thousand years earlier, it was only in 1661 that the Bank of Stockholm issued notes to offset the scarcity of gold and silver coins. In 1729, the American Benjamin Franklin was responsible for the introduction of paper currency as we know it. Then, in the nineteenth century, London bankers created a monetary system which would spread throughout the world and become the first global monetary system based on the gold standard.

The history of banking predates that of banknotes by several hundred years, however. The first precursor of today's banks appeared in the thirteenth century, when members of the Knights Templar religious order performed early banking services for kings and popes. During the fifteenth century, the new bankers were Italian families, who plied their trade in marketplaces rather than in castles. The word bank is derived from the Italian "banco" (desk or bench) because of the way in which marketplace benches were used as makeshift exchange counters. These bankers received gold coins, for which they issued a promissory note or bill of exchange. They invented the bill of exchange, which consisted of a document pledging payment of a certain amount of money to a certain person at a given time and place. In practice, the bankers loaned to the rich, while the existing moneylenders and pawnbrokers continued to lend to the poor.

In the nineteenth century, a bank designated the Central Bank was established in the capital of each country, and was awarded the monopoly for the issue of its national paper currency. Subsequent to the Bretton Woods Agreement, which will be discussed later in this COURSE, the Central Banks fulfilled other functions: they are the lenders of last resort to the commercial banks; they are also ultimately responsible for the control of ***"inflation"***, through the issue of money and the variation of key interest rates. Their clients are the country's other banks. All Central Banks form an association with the World Bank, the International Monetary Fund, and the Bank for International Settlements, an independent organization in Basel, Switzerland.

Recommended reading

Fact sheet 04 (Susana Martín) – *Inflation and deflation*

1. From monopoly to monetary diversity

1.1. Introduction to money

1.1.3. The gold standard and symbolic money

For a long time, the value of money was represented by gold. That is to say, each banknote symbolized a certain amount of gold which the central bank of each country held in reserve. This was known as the ***"gold standard"***.

When the gold standard is respected, paper money cannot be issued in large quantities. As a result, increased production is held in check and leads to unemployment, or else prices drop and profits are reduced accordingly. To overcome this difficulty, the banks centralized the supply of credit in each country, explaining from the outset that the symbolic currency was created to rescue trade from forced deflation by increasing the volume of business activity. Gold may not have been suitable as a currency for domestic purposes, but the symbolic currency was not able to circulate abroad and therefore the gold standard was still necessary for international trade. This is why, since the beginnings of the market system, two types of money have been necessary: one for international trade (gold), and another for each country's domestic trade.

In spite of the resources invested to avoid deflation, the gold standard led to the perpetual disruption of business activity and mass unemployment: when articles were imported and had to be paid in cash money, sales of domestic products dropped and so did prices. The gold standard could not be sustained by the very nations it was supposed to serve, since the abrupt changes in price levels would have wreaked havoc on all business activity. The symbolic national currency was therefore the safeguard, with the central bank acting as a buffer between the domestic and external economies. The banker therefore had the dual task of ensuring sound domestic finances and the external stability of the currency.

There was an attempt to return to the gold standard after the First World War, but in 1931 Great Britain finally abandoned all pretensions of linking its currency to its metal reserves. The gold era and the glory days of the Bank of England were over. The financial crisis of 1929 exposed the fact that the gold standard – the self-regulating market that included land, labour and money, world trade and financial stability, complemented by migration laws and customs tariffs – was, generally speaking, a misguided policy that contradicted the principles of economic theory. Tensions went beyond the economic sphere and stability had to be restored by political means. A choice had to be made between, on the one hand, a stable currency and healthy public finances, with the attendant reduction of social services; and, on the other, a deflated currency, which would enable a country to improve its social services, but would effectively remove it from the international economic game, as a consequence of the drop in its exchange rate. Most countries chose the first option, with destructive consequences for popular policies.

1. From monopoly to monetary diversity

1.1. Introduction to money

1.1.4. The Bretton Woods Agreement and the end of the gold standard

Following the demarcation of the gold standard, forty-five countries signed the Bretton Woods Agreement, the first global monetary agreement, under which the majority of the world's currencies would be anchored to the US dollar, and the United States undertook to convert its currency into gold at the request of any of the world's central banks, at the rate of 35 dollars per ounce of gold. This system placed the US dollar in a leading role, as the pivot on which the world system turned.

With the growing inflation that came upon the world after the Second World War, the central banks of many countries bought dollars, mainly from Latin America, causing the United States to begin to experience inflation, which was exacerbated by the enormous amounts of paper money being printed to fund the war with Vietnam. In 1971, US president Richard Nixon reneged on the Bretton Woods Agreement, and so ended the era of a dollar linked to precious metals in favour of a floating exchange-rate regime. This measure put an end to an era of stability and the period of the greatest economic prosperity and productivity in the history of the US dollar. The dollar never again recovered the strength it enjoyed during that period.

The collapse of the international gold standard was the most important cause of the economic ruin of the West. For some, the gold standard was the faith in the monetary system; for others, it was a naive idea. But both were agreed that banknotes were valuable because they represented gold; and gold was valuable because it signified labour, according to the socialists; or because it was useful and scarce, according to the orthodox economists.

Today, the US dollar is merely a legal-tender currency, backed by government authority, by the people's faith in that authority and nothing more. Paper dollars backed by gold and the silver certificate dollar were long ago replaced by the Federal Reserve dollar. On the paper dollar itself, the phrase ***"Pay to the bearer on demand"*** has been replaced with ***"In God we trust"***.

Today, every country has a central bank in charge of issuing paper money or the national currency and distributing it to the commercial banks. By means of an agreement between the central bank and the government of the country, the central bank is conceded the right to create money in exchange for supplying the government all the funds it needs. The consequences of such a concentration of power are more than considerable, as will become clear later in this COURSE.

1. From monopoly to monetary diversity

1.2. Unsustainability of the monetary monopoly

1.2.1. Characteristics of conventional money

According to the perception of money as an institution of Western culture, today's national or conventional currencies share a series of fundamental characteristics:

- Money is dependent on a geographically demarcated nation state. The citizens of a geographical area identify with their national currency, which amounts to a shared information system. This integrates the society which identifies with it, as well as establishes a frontier against those who do not identify with it as their own.

- Money is ***"fiat"*** (by legal order), that is to say, created ***"ex nihilo"*** (from nothing). Today, for every deposit they receive, the commercial banks issue money in the form of loans to other customers, for amounts much greater than those of the original deposit, which acts as security for a very small percentage of the loans granted to other customers. As a result, the idea of ***"money as bank debt"*** is a widely recognised concept.

- With the end of the gold standard, money has become both ***"confidence and faith"***, in that the receipt of money in exchange for goods or services implies confidence that that money will be able to be exchanged for other goods or services at a future date.

- Money is scarce. In order for a monetary system based on bank debt to function, scarcity must be artificially and systematically produced and maintained. The current monetary system is not self-regulating, but requires the active intervention of the central banks if scarcity is to be maintained. The system of money in the form of debt means that every economy has to return more money than actually exists, thus generating a permanent scarcity of money.

- Money is associated with interest. Interest is not naturally or intrinsically linked to money. Rather it is a political decision taken by the central banks, with the following repercussions:

  - Interest encourages systematic competition among the participants in the system. Loans must be repaid with interest, but the only money in market circulation comes from loans, therefore people must compete to make enough money to pay the interest. All of this takes place in a system with scarce monetary resources. Thus the winners of this competition do so at the expense of the losers.

  - The supply of money has a permanent rate of growth. Interest is fixed according to the desired amount of economic growth, which can be entirely unrelated to the standard of living of the population, which may remain unchanged. Interest may therefore create financial wealth, but this may not be fairly distributed.

  - Interest generates the continual transference of wealth from the great majority to a small minority, facilitating the concentration of wealth and social inequality.

We can therefore conclude that the characteristics of money are not natural, especially taking into account the fact that money is an agreement which can be designed to order. If these characteristics are a legacy of the industrial era, which is currently giving way to the information era, perhaps we should consider conducting alternative monetary experiments more appropriate to the age.

Recommended reading

Fact sheet 06 (Susana Martín) – *Types of money: Possible classifications*

1. From monopoly to monetary diversity

1.2. Unsustainability of the monetary monopoly

1.2.2. Behaviour of the current monetary system

According to the prevailing perception of money, the economy is a closed system, unrestrained by and completely disengaged from the social and environmental externalities that it generates. This perception and the characteristics of conventional money combine to make the current system the cause of serious challenges to the sustainability of both society and the environment, including the following:

- **Environmental unsustainability** derived from the compulsive promotion of production and consumption. Economic growth, as it is currently perceived, is intensive in the consumption of generally non-renewable natural resources, the loss of which the environment is unable to assimilate. This development model is environmentally unsustainable on a finite planet such as ours.

- **Socioeconomic unsustainability** derived from the monopolistic perception of the current monetary paradigm and the issue of money mechanism. All of this promotes competitive, individualistic behaviour that favours the concentration of wealth. The economic growth model also constitutes a source of social unsustainability through the inequitable distribution of its externalities, such as the generation of waste, pollution, and the degradation of the environment and biological and sociocultural diversity.

- Among the other consequences of the functioning of the current monetary system, particularly associated with the fact that money is created through bank debt with interest, are the following five structural failings:

    - **Pro-cyclical behaviour**. Conventional modern money is created as bank debt, which exaggerates fluctuations in the economic cycle and renders it more vulnerable to disturbances. When all is going well and the forecasts are favourable, the banks offer credit on generous terms, which tends to fuel periods of inflation. When things go wrong and the future forecasts are gloomy, the banks drastically reduce their lending, which translates into periods of recession.

    - **Short-termism**. The tendency to focus attention on short-term earnings at the expense of long-term success and stability, mainly as a consequence of the difficulty of calculating long-term risk. Positive interest rates reduce future values, causing investors to opt to finance short-term projects in preference to long-term financing (which would include environmental protection, education, etc).

    - **Obligatory nature of continuous growth**. Growth is too frequently confused with progress. The first is an increase in the size or capacity of an entity, while the second refers to the idea that the world can become an increasingly better place. It cannot be automatically assumed that all growth leads to progress. In addition, money created as bank debt is created with interest and is therefore subject to compound interest, which automatically implies rampant exponential growth. And, in a finite world, exponential growth is incompatible with sustainability.

    - **Concentration of wealth**. The current monetary system includes three systemic mechanisms that lead to the concentration of wealth: interest, the money creation process and the role of lobbyists. The concentration of wealth is not merely a question of justice, economic development itself being dependent on a minimum amount of equity.

    - **Devaluation of social capital**. How can the participants in a monetary system essentially fuelled by competition, fear, mistrust and anxiety be expected to act with cooperation, responsibility, trust and social cohesion?

The unsustainability brought about by the current monetary system translates into reduced potential for the sustainable development of local, regional and national communities. These phenomena are not only caused by imperfect monetary policies, permissive regulations and unhealthy banking practices, but rather by the structural instability of the monetary and banking system itself. The system's vulnerability stems from its own structure, which is a legacy from the beginning of the industrial era. This structure lacks the agility and adaptability needed to deal with the rapid changes in the economic and social environment that characterize our post-industrial era. It lacks the necessary ***"resilience"*** , a term which we will develop further later in this COURSE. Any efforts made within the system are geared exclusively toward improving the system's efficiency in price formation and trading, the value of which will be included in the indicators used to evaluate the prosperity of the society in question. In this way, activities and goods which are not considered efficient, or which lack market value, are excluded from the system and not included in the calculation of those indicators.

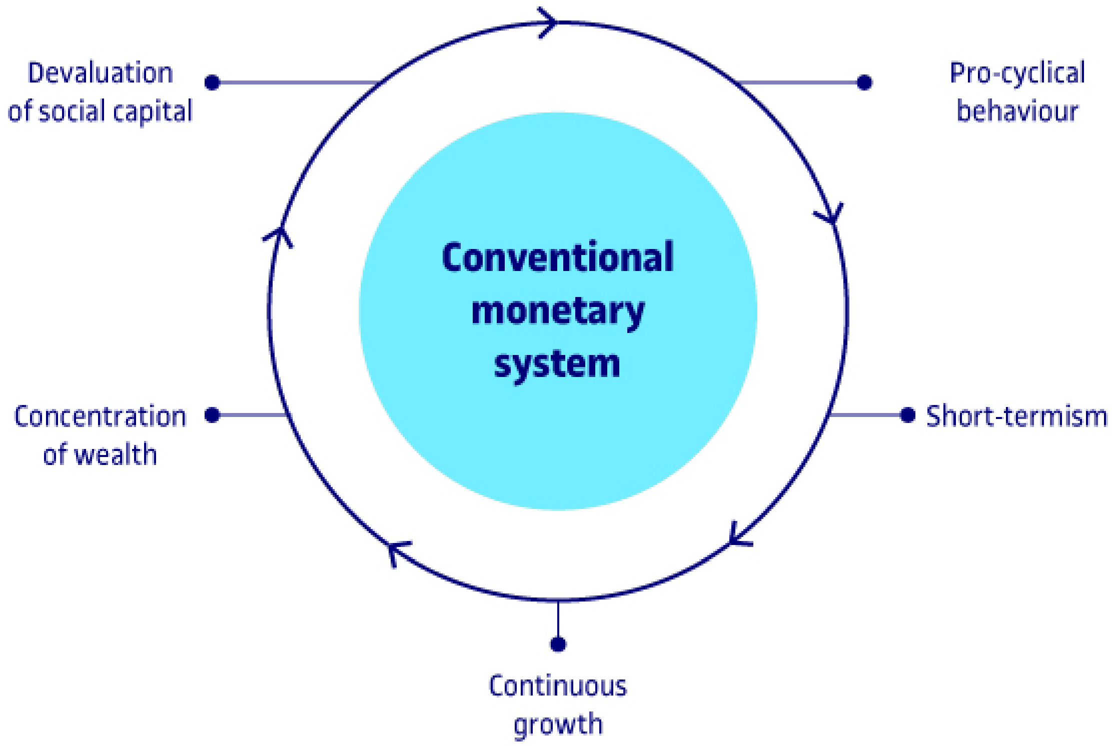


Figure 2

Recommended reading

- Fact sheet 05 (Susana Martín) – *Income distribution*
- Fact sheet 08 (Susana Martín) – *Some key aspects of money: liquidity, acquisitive power and convertibility*

1. From monopoly to monetary diversity

1.2. Unsustainability of the monetary monopoly

1.2.3. Systemic crises

Let us begin with a look at the terms banking crisis, sovereign debt crisis and monetary crisis, and the phenomena that go with them.

A **banking crisis** is produced when a number of banks in one country simultaneously go bust, requiring the authorities to significantly intervene and either nationalize or rescue the banks at the taxpayer's expense. According to the International Monetary Fund, in a banking crisis, the country's business and financial sectors experience a large number of non-payments as a result of serious difficulties in the timely reimbursement of acquired agreements. Defaults then increase abruptly and the greater part of the global banking system's capital is depleted. This situation can be accompanied by a depression in asset prices (shares and real property), strong increases in real interest rates, and a slowing of capital flows.

A **sovereign debt crisis** is produced when the financial markets estimate that a country or group of countries may be unable to meet the obligations of their national debt. Current European legislation dictates that governments must raise the money they need, either by raising taxes or getting further into debt with the banking system. Ultimately, a sovereign debt is endorsed only by a belief in the ability of the government in question to tax its citizens sufficiently to service this debt.

A **currency crisis** takes place when a nation's currency suddenly suffers a substantial drop in value in relation to other currencies.

The umbrella term **financial crisis** is used to refer to a sovereign debt crisis, a currency crisis or a banking crisis, or any combination of the three.

The financial crises suffered by humanity are not the result of cyclical weakness or faulty management, but rather of structural weakness. Part of the evidence for this statement is that there have already been more than ninety-six important financial crises in the last twenty years, and that these events have occurred under different regulatory systems and different stages of economic development. We should therefore stop using the term financial crisis and refer instead to structurally-motivated ***"systemic crises"***. In this type of crisis, the organizations involved – state, banks, central banks and the International Monetary Fund itself – have not only failed to anticipate or address the consequences, they have also failed to consider alternatives to the systemic status quo. Their solution has invariably been to return to normality at the earliest opportunity, without making any significant change to the structure of the system itself. Better solutions are needed, since the conventional solutions – nationalization of problem assets or nationalization of banks – are only treating the symptoms and not the structural causes of the crises. The kind of financial regulation currently on the political agenda will at best reduce the frequency of these types of crisis, but will not prevent their recurrence.

Recommended reading

Fact sheet 07 (Susana Martín) – *Circulation of Money: From creation to destruction*

1. From monopoly to monetary diversity

1.3. Need for a paradigm shift

1.3.1. The shift from simple thinking to complex thinking

We live according to the principles of disjunction, reduction and abstraction of Cartesian mechanistic logic. The supremacy of a cognition fragmented and divided into disciplines frequently gets in the way of our ability to connect the parts to the whole and so understand complex everyday phenomena, blinkering our view of the long-term consequences of our actions. The Cartesian view of the world as a machine (Figure 3a) is no longer compatible with our mental learning models. The enormous changes being produced from day to day on a planetary scale require modern models of thought in order to interpret the world as a whole, as a living being (Figure 3b). Complex thinking, based on non-linearity, organicity and multidimensionality, offers the most contemporary focus as an alternative to Cartesian mechanistic thought.

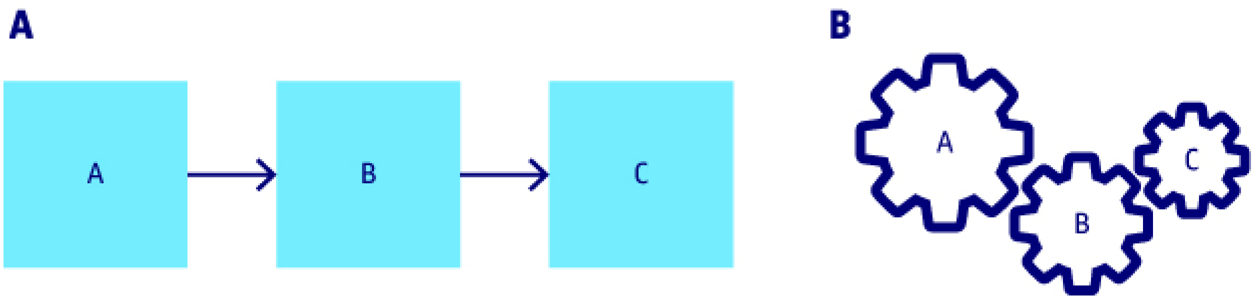


Figure 3

Complex or systemic thinking in fact enables us to understand events incorrectly termed financial or banking crises for what they really are: systemic crises that must be resolved at the structural rather than the symptomatic level. The application of this complex thinking to our lives, and to the economy, is leaving behind the old ways of understanding systems and beginning to understand them as complex systems. It is leaving behind the fragmented view and unsustainability (Figure 4a), and evolving toward the holistic view and full sustainability (Figures 4b and 4c).

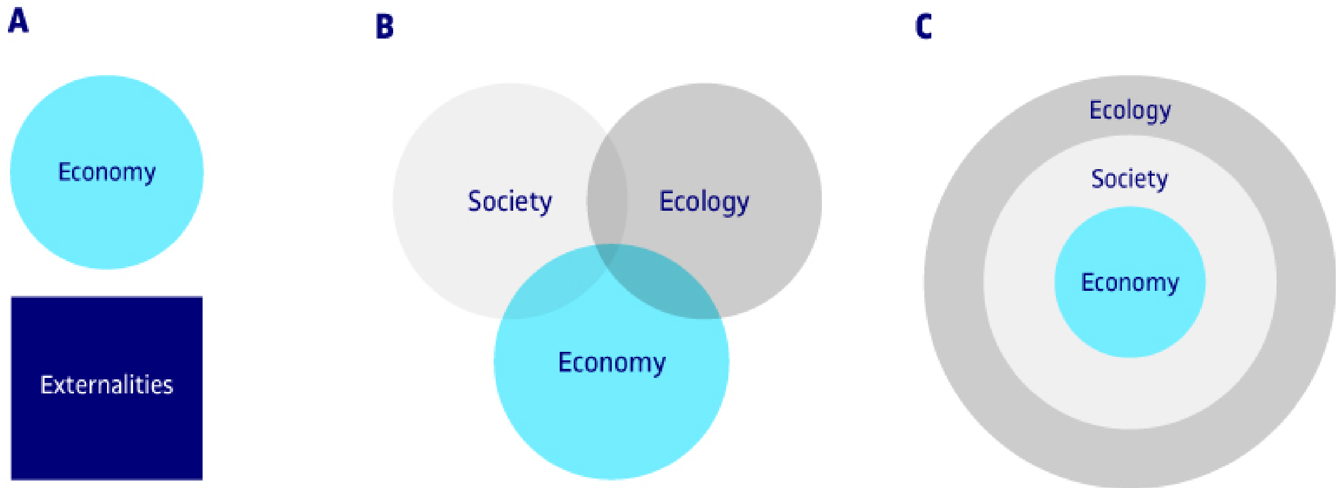


Figure 4

One of the most important changes to occur in scientific thought in recent decades has been recognizing and understanding that the nature of complex phenomena is not linear, nor is it predictable, mechanical, Cartesian or fragmentable. The intrinsic interconnection between economic, social, cultural and ecological processes makes them remarkably non-linear and significantly uncertain.

Complex systems are systems whose components are interdependent in such a way that no one component can be isolated or modified independently of the others. A complex system is characterized by a dense network of interdependencies and energy flows between its elements, which can be diverse in nature. A system is considered more complex in relation to the number of relationships and feedback mechanisms existing among its elements.

Decades of study of natural ecosystems have led to a mathematical understanding of how a network structure affects the long-term viability of an ecosystem, according to the system's ***"efficiency"*** or ability to process information, quantities of material and energy flows, and its ***"resilience"*** or ability to recover after disturbances. These studies demonstrate that nature does not act in order to achieve maximum efficiency, but rather to find the optimum point of balance between efficiency and resilience. The curve of sustainability with its emergent properties presents a certain asymmetry, showing that resilience is twice as important as efficiency to achieve the optimal point (Figure 5). Notwithstanding, all ecosystems present conditions which are still sustainable within a narrow, specific range, known as the window of viability.

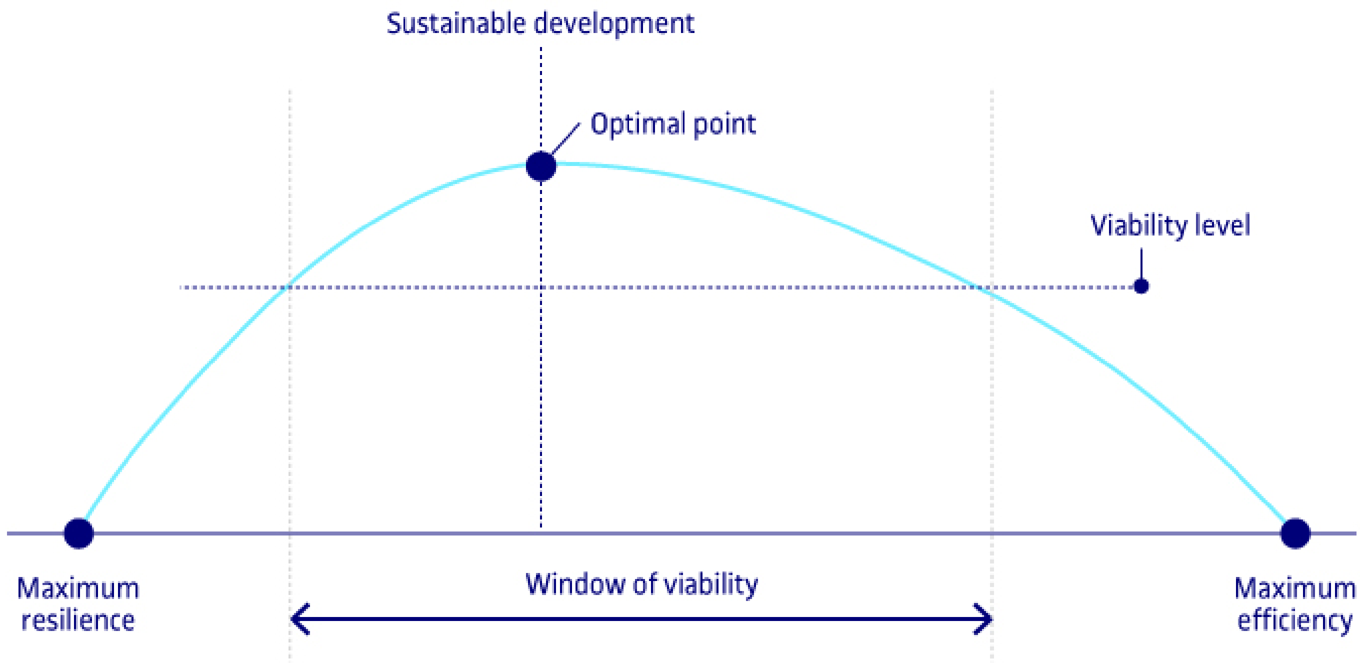


Figure 5

Recommended videos

- Lesson 05 (Ranulfo Paiva) – *Sustainability: Socioecological systems, complex systems and flow networks*
- Lesson 06 (Ranulfo Paiva) – *Efficiency and sustainability*
- Lesson 07 (Ranulfo Paiva) – *Resilience and sustainability*

1. From monopoly to monetary diversity

1.3. Need for a paradigm shift

1.3.2. The unsustainability of the current monetary system

The study of the balance between efficiency and resilience with respect to the sustainability of complex systems, despite being an analysis of natural ecosystems, is based on the pure structure of this type of system. It is therefore valid for any complex network with a similar structure, irrespective of what is being processed: biomass in an ecosystem; information in a biological system; or, indeed, money in an economic system.

The current monetary system is excessively efficient (Figure 6), in the sense that it is capable of managing extremely high volumes of information, merchandise, etc. Currency equivalent to some four trillion dollars is traded every day, against a GWP (Gross World Product) of 78 trillion dollars. However, under the conceptual framework of an economy which is part of an ecosystem of finite resources, and subject to diminishing returns, an excess of efficiency can be prejudicial. All of this would partly explain the recurring crises, given that we are situated at a point of great efficiency, yet beyond the threshold of sustainability.

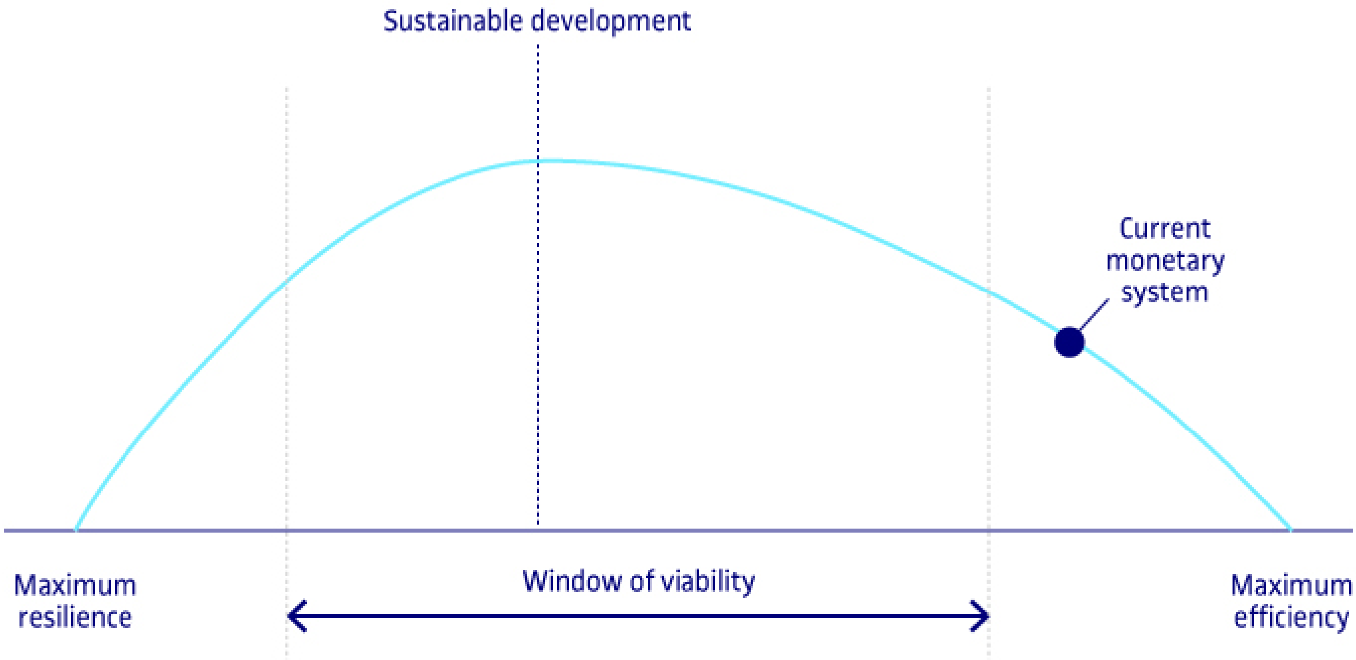


Figure 6

The current monetary system's method of operation, with its exclusive emphasis on efficiency, means that it is moving further and further away from the optimal point (Figure 7). There is a prevailing general belief that all improvement has to move in the same direction, which steers the system even further from the optimal sustainability point.

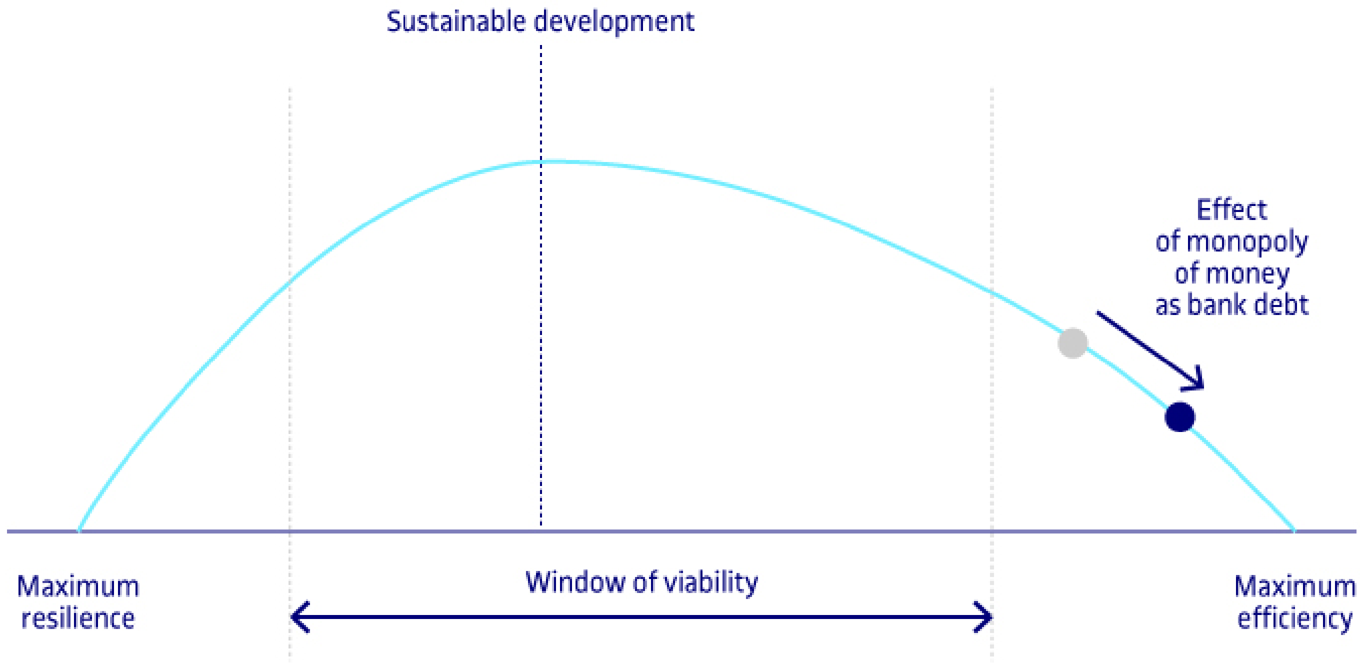


Figure 7

Under this method of operation, when the monetary system collapses (Figure 8), its efficiency is drastically reduced for a short time, thereby moving it into the area of maximum resilience. But this is only a temporary situation, which is quickly acted upon by global policies and conventions designed to steer the system back toward a point very close to where it was prior to the crisis, that is, one of excessive efficiency. The adjustments made post-crisis are produced by increasing efficiency rather than resilience, returning the system to a point of instability, because the crises are not treated as systemic, and all efforts are focused on dealing with the symptoms rather than the structural failings that produce them.

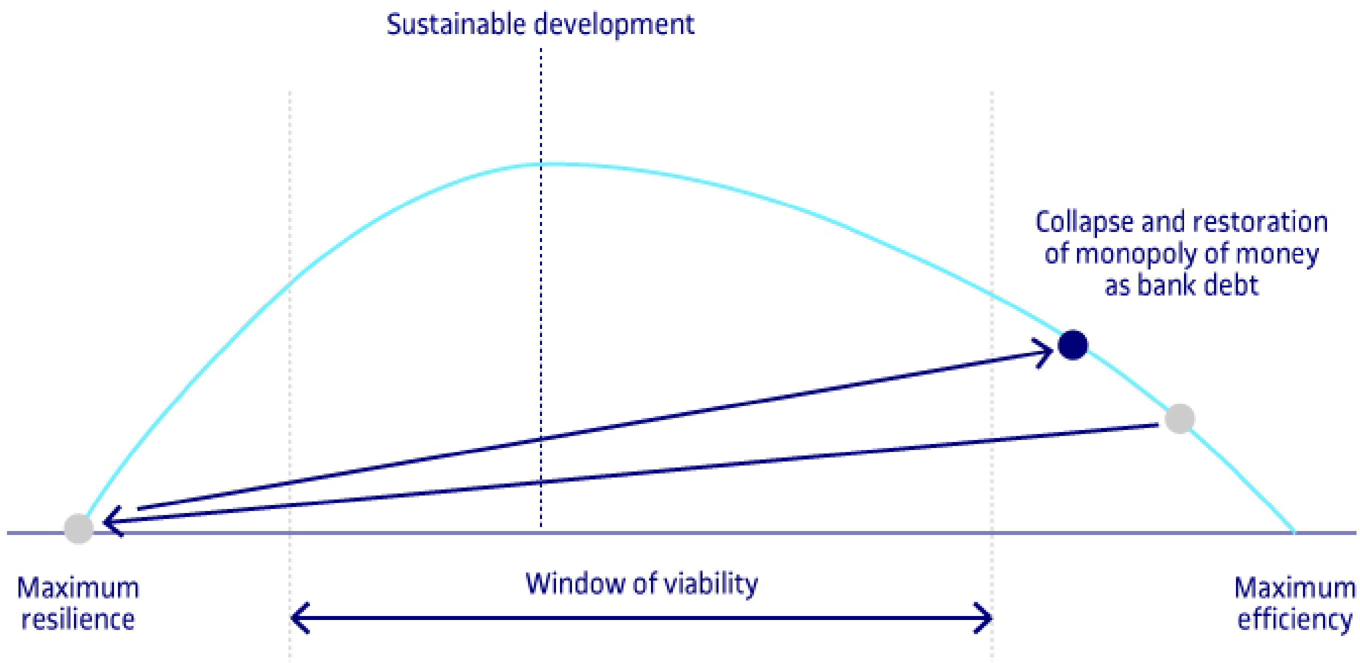


Figure 8

Recommended reading

Research paper (August Corrons) – *Complementary currencies in support of sustainability and development*

1. From monopoly to monetary diversity

1.4. Sustainability of monetary diversity

1.4.1. Key movements for change

Let us first look at the two key movements for change offering alternatives to the current monetary system, and their implications.

1. **The reform movement**. This movement contemplates changing the monetary system by political means, proposing new laws to modify the current system, but retaining as much as possible of what already exists. The current system would transition to a system of state-issued, sovereign money, with no debt, and a reserve bank based entirely on savings, with no interest. Money would not be representative of any specific asset, other than the obligation to admit it as a means of payment of an amount owed. The proposal is for fiat money based on the faith or confidence of the community, that is, not backed by precious metals or anything other than a promise to pay on the part of the issuing party. The movement proposes replacing the current monetary system, eradicating and removing the root cause of the current planetary unsustainability. Organizations affiliated to the movement include, in Spain, the Dinero Positivo association; and, internationally, the American Monetary Institute, Positive Money, the International Movement for Monetary Reform, Monetative and the Swiss Sovereign Money Initiative. Writers who subscribe to the movement include Ben Dyson, Joseph Huber and Stephen Zarlenga.

2. **The transformation movement**. This movement proposes change to the monetary system based on the emergence and development of social, cooperative and collaborative economy experiences, and their alternative mediums of exchange. The proposal is for a monetary system based on multiple currencies, each of which represents the promise of a producer of goods, products or services, to deliver a real asset in exchange for the currency. The system would use different types of money according to its function: conventional money primarily as a store of value, and alternative mediums of exchange exclusively as mediums of exchange and payment. This movement proposes to coexist with the current monetary system, complementing it and minimizing its negative effects. Organizations affiliated to the movement include, in Spain, the Instituto de la Moneda Social (Social Currency Institute); and, internationally, Community Currencies in Action, the Research Association on Monetary Innovation and Community and Complementary Currency Systems, the International Journal of Community Currency Research, the Complementary Currency Resource Center, the New Economics Foundation and Community Currency Magazine. Writers who subscribe to the movement include Bernard Lietaer, Gill Seyfang, Thomas Greco, Michael Linton, Edgar Cahn, David Boyle, and the late Margrit Kennedy.

It is important to highlight the clear difference between the three functions of money (medium of exchange and payment, store of value, and unit of measurement of the value of things) in relation to each of the movements for change. This is because there is an essential contradiction between the first two functions: if money is a store of value, it is withdrawn from circulation, and therefore serves no purpose as a medium of exchange and payment. The stance of the transformation movement is that the two functions should be separate, with the creation of two different types of currencies. This is because the transformation movement perceives money, on the one hand, as a measurement of the value of things, but fundamentally as a medium of exchange and payment, and not as a store of value. The opposite is true for the reform movement, which continues to apply the three functions of money to the one currency.

In this COURSE, we analyse alternative currencies and the transformation movement in detail, as well as all the potential implications of the introduction of monetary diversity.

1. From monopoly to monetary diversity

1.4. Sustainability of monetary diversity

1.4.2. The shift from monopoly to monetary diversity

As with all monopolies, the current monetary system has its defects: use of the currency, though less than satisfactory, is obligatory; and, at the same time, endeavours to find better ways of satisfying existing needs are obstructed.

The solution to this requires, among other things, the diversification of institutions and types of currency, and the introduction of others designed specifically to increase the supply of money in its primary function as a medium of exchange, rather than for savings or speculation. Complementary currencies of this type are designed purely to connect what would otherwise remain unused resources and unmet needs within a community, region or country. Monetary innovations exist to solve each and every sustainability challenge we face. And the time is now or never, with all the technological advances taking place today.

As we have mentioned elsewhere in this COURSE, legal-tender money promotes the use of its three different functions, but with excessive emphasis on the store-of-value function, with all the associated implications. Complementary currencies, on the other hand, seek exclusively to fulfil the first two functions, never the third. The introduction and use of complementary currencies can therefore solve, in part, the five structural failings also mentioned earlier:

1. Complementary monetary systems increase the number of transactions when the official economy enters in recession, and vice versa, acting as a complement to conventional banking and easing the pro-cyclical tendency of money creation.

2. Silvio Gesell's theory proposed the launch of a decaying currency that progressively loses its value to prevent hoarding. A decaying or negative-interest currency, from the financial point of view, completely transforms the panorama, since it increases future values instead of reducing them, and therefore encourages long-term thinking.

3. Complementary currencies typically overcome the dilemma of the continuous growth obligation, since they charge no interest and therefore do not generate the effects of compounding. The management entities of complementary currencies tend to be associations and cooperatives which, in contrast to the commercial banks, do not lend money to maximize their own profit and therefore do not depend on continuous growth to survive.

4. The abolition of interest rates also prevents the unfair redistribution of wealth. Where complementary currency systems do charge a rate of interest, the function of the interest is purely to cover operating costs, not to generate profit.

5. Complementary currencies are designed to foster cooperation among their users, and their limited use discourages hoarding, thereby promoting social cohesion.

Recommended reading

Fact sheet 02 (Susana Martín) – *Conventional money vs. people money*

Recommended videos

- Lesson 02 (Ranulfo Paiva) – *Different types of money and different communities*

- Lesson 03 (Ranulfo Paiva) – *Various standardized items to create money*

1. From monopoly to monetary diversity

1.4. Sustainability of monetary diversity

1.4.3. The sustainability of monetary diversity

The conventional economic idea accepts de facto the monopoly of national currencies as indisputable. By contrast, evidence points to the conclusion that monetary sustainability requires a diversity of currency systems to enable numerous and diverse channels of monetary exchange and connection. Efficiency is undoubtedly reduced, but at the same time transactions are facilitated that otherwise would not take place, thanks to a diversity and connections that otherwise would not exist, and thus the response capacity of the economy in general is increased.

Complementary currencies can have an effect at any time, whether pre-emptive of (before) or reactive to (after) a financial collapse or crisis per se.

Prior to a collapse (Figure 9), the effect will be to draw the system progressively nearer to the area of viable sustainability, due to decreased efficiency and the converse increased resilience.

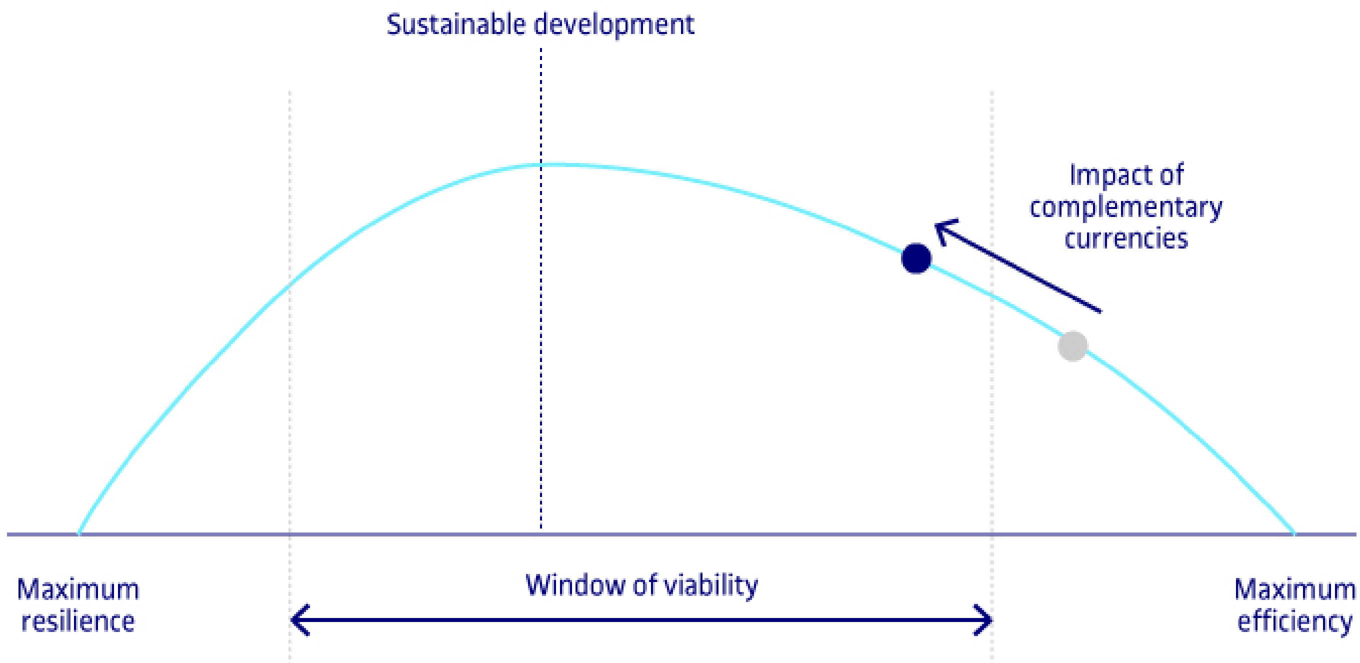


Figure 9

Subsequent to a collapse (Figure 10), the effect of the complementary currencies will be analogous to any natural system: the system will progressively recover its efficiency with little loss of resilience, all the time drawing nearer to its optimal sustainability point.

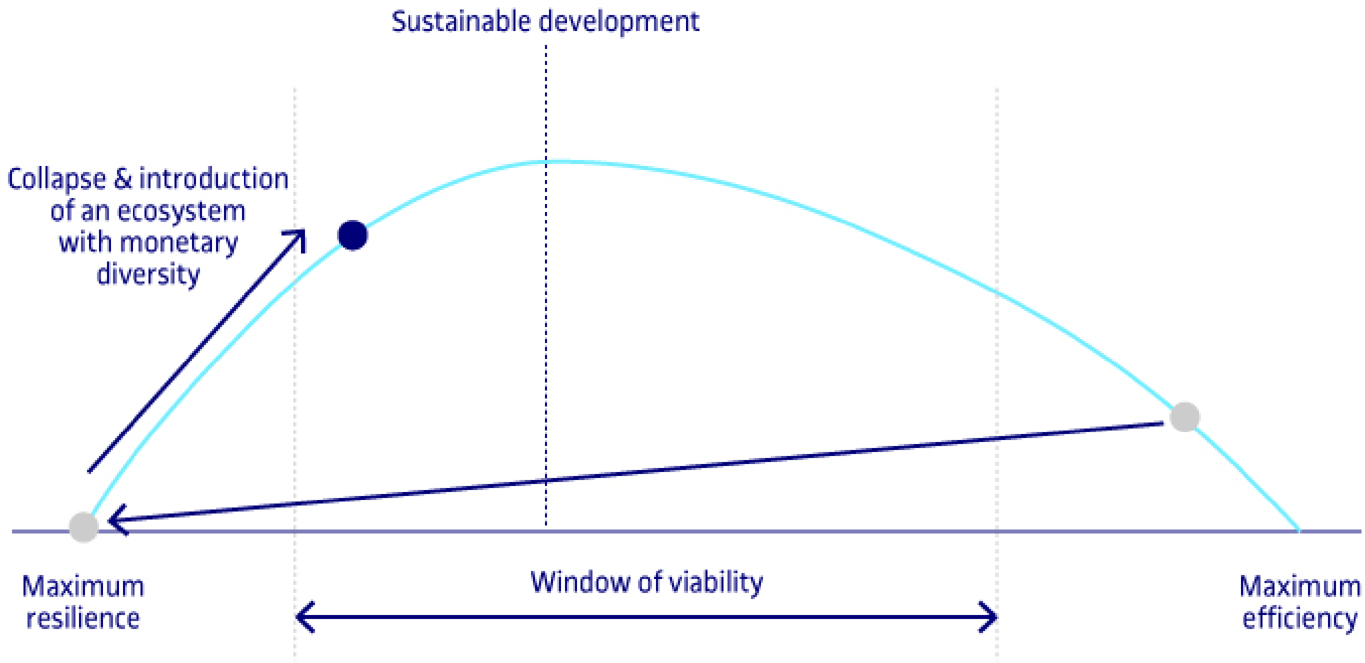


Figure 10

A more sustainable monetary system would therefore tend to be an ecosystem with a broad variety of currencies and agents with different regional scope, all coexisting simultaneously (Figure 11). This new arrangement would go beyond money as bank debt monopolized by nations and financial giants. Rather, it would be an intelligent strategy of diversification and interconnectivity that would increase sustainable development at the same time as strengthening the resilience and therefore the sustainability of the monetary ecosystem itself.

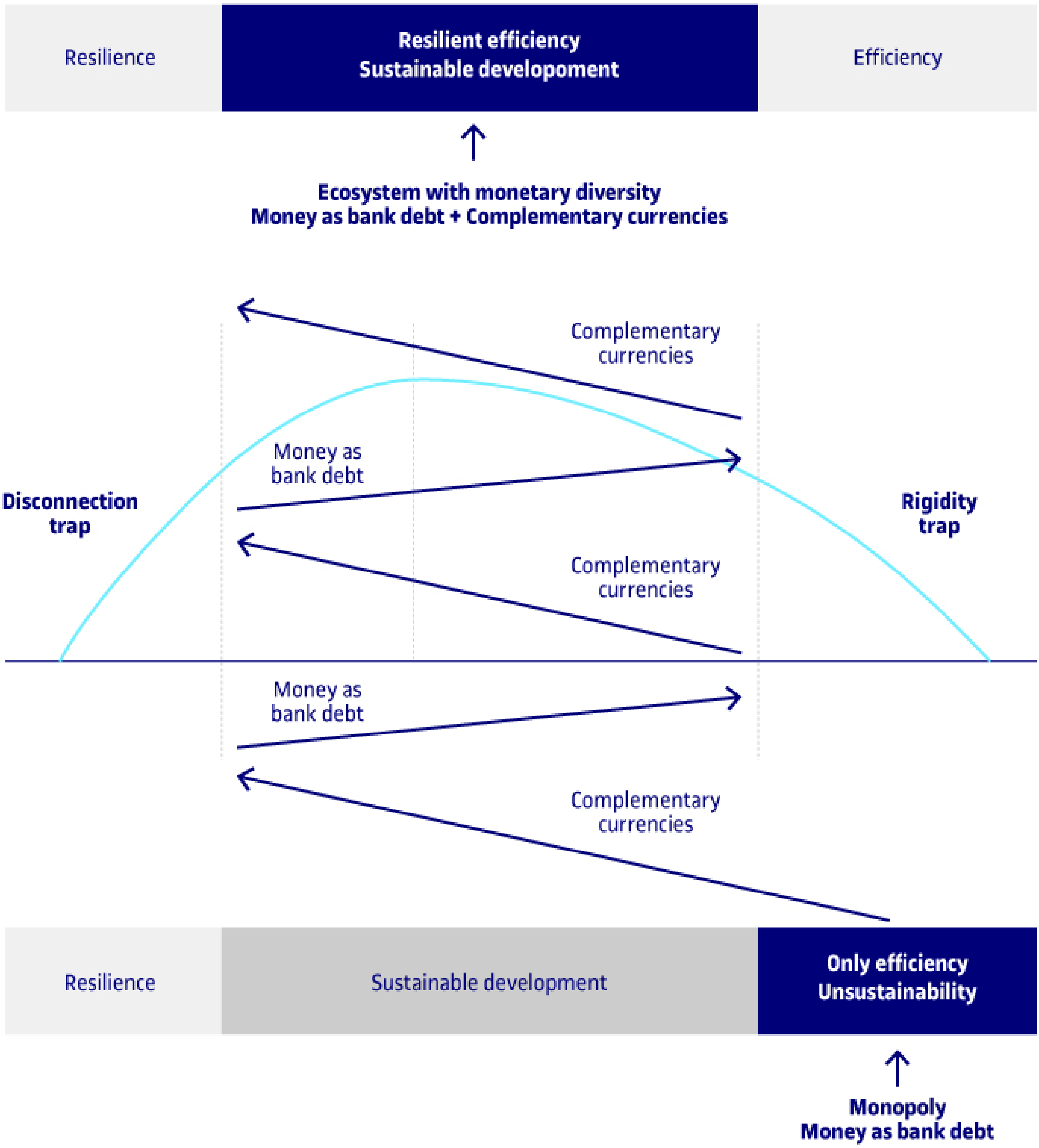


Figure 11

Recommended reading

- **Paiva, Ranulfo** (2015). *Como crear nuestro dinero y construir sostenibilidad*.
- **Paiva, Ranulfo & Córdoba, Karla** (2015). *Nuevo dinero para la sostenibilidad*.

1. From monopoly to monetary diversity

1.4. Sustainability of monetary diversity

1.4.4. A shift in values

In order for the change associated with the transformation movement to be genuine and sustainable over time, the introduction of complementary currencies would need to go hand in hand with a shift in values. Values, as precursors of beliefs, attitudes and therefore conduct, ensure the continuity of human actions almost independently of their environment.

To achieve such a shift, our patriarchal societies would need to become matriarchal. Patriarchal societies (associated with the monetary monopoly) provide the perfect conditions for industrial revolution, yet they promote cycles of expansion and crisis, concentration of wealth and the destruction of community. Matriarchal societies (associated with the monetary ecosystem of the transformation movement), on the other hand, are patriarchal with respect to long-term affairs, but use different types of currency for local exchanges. At the same time, they promote a centuries-long stability, building and supporting communities and generating well-being for their peoples.

The Taoist concept of yin and yang can be applied to make the following comparison between the legal tender money we are accustomed to and the new approach of the transformation movement: from the pursuit of certainty to tolerance of uncertainty; from central authority to mutual trust; from belief in hierarchies to belief in inequality; from competition to cooperation; from analytical reasoning to intuition and empathy; from logical, linear thought to emotional, non-linear thought; from cause and effect to synchronicity; from reductionism (the parts explain the whole) to holism (the whole explains the parts); from 'big is beautiful' to 'small is beautiful'; from the predominance of technology to the predominance of emotional intelligence; from physical and financial capital (yang economy or efficiency) to natural and social capital (yin economy and resilience); and from business transactions to community exchanges.

If conventional currencies promote values of self-promotion and -preservation, such as central authority, hierarchies, competence, cause and effect, reductionism and technology, the opposing values instilled by complementary currencies are characteristic of openness to change and self-transcendence, including mutual trust, equality, cooperation, synchronicity, holism and emotional intelligence.

Recommended reading

Corrons, August (2017). «Análisis de la influencia de los valores humanos y las actitudes en el proceso de adopción de redes virtuales de intercambio no monetario». Doctoral thesis. In: https://www.tdx.cat/bitstream/handle/10803/461173/2018_Tesis_Corrons%20Gimenez_August.pdf?sequence=1&isAllowed=y.

2. In a complementary currency ecosystem

2.1. Introduction to complementary currencies

2.1.1. The concept of complementarity

The concept of complementary currencies was coined by Bernard Lietaer to refer to:

> “monetary systems created outside the confines of a country’s official currencies, and which encourage regional economic, social and environmental initiatives, such as the assignment of value to assets and resources that are unavailable within the ordinary circles or circuits of exchange due to scarcity of the official currency”.
>
> Bernard Lietaer

Complementary currencies are frequently called **alternative**, **community**, **local**, **cooperative** or **social**, whether for reasons of tradition or to reflect the objectives of the initiative in which they are used. These qualifiers can be specifically defined as follows.

- **Alternative** because they function in place of legal-tender money in certain contexts, providing an alternative.
- **Community** because they can function in communities of people or entities who interact directly with each other and wish to establish their own means of exchange.
- **Local** because they can circulate in geographically defined areas, whether a town, a borough, etc.
- **Cooperative** because they encourage values such as gratitude, mutual assistance and altruism, in other words, cooperation between people.
- **Social** because they can be created, issued and controlled by social groups, and encourage the cohesion of societies.

In this COURSE we have opted to use the qualifier ***“complementary”*** as that which best reflects one of the key characteristics of this type of currencies: their complementarity in relation to the legal tender money, which they have no intention of ever completely replacing. The other qualifiers are implicit in the general notion of complementary currencies, in that they all, to a greater or lesser degree, encourage the alternative, the communitarian, the local, the cooperative and the social.

2. In a complementary currency ecosystem

2.1. Introduction to complementary currencies

2.1.2. A brief historical outline

Only in contemporary history have the three functions of money been contained in a single official currency at national level. Throughout most of history, different forms of money have fulfilled these functions separately for centuries without any impediment.

From a generic perspective, we can trace back to humanity's earliest barter systems to find the methodology of social monetary systems. For thousands of years, different human communities have created their own currencies for the purpose of meeting the needs of their members and safeguarding themselves against economic instability. Since then, and up to the present day, complementary currencies have gone through various incarnations, and can be found in many countries of the world. National and supranational currencies have evidently obstructed their development, though we should not lose sight of the fact that some complementary monetary systems are based on currencies that need to be redeemed for national currency.

> Complementary currencies were used in ancient Egypt, for example, where their existence was intimately connected to the economic prosperity of the ancient North African civilization. Monetary systems of this type were also used in the Middle Ages and in the feudal system. One emblematic example of a local currency is the fact that the so-called ***"Breakteats"*** were used for centuries to finance the construction and pay the builders of the great cathedrals of Medieval Europe.

There are many documented experiences of the use of complementary currencies in conjunction with conventional money, from the 1930s on: the Wära in Germany, the Wörgl in Austria, and others in the Nordic countries, Denmark, the Netherlands, Spain, France, Italy, Switzerland, Bulgaria, Romania, Canada, Ecuador, Mexico, and China. These currencies responded to the need for alternative currencies to enable families to buy provisions to feed their families during the Great Depression that began in 1929, though the majority were outlawed by their countries' governments after they had been in operation for a time. Only one has survived to the present day: the Wir in Switzerland.

Half a century later, in 1983, Michael Linton came up with LETS or ***"Local Employment and Trade System"***. First launched in Canada, LETS are among the most widely used complementary monetary systems in the world. The system soon spread to the United Kingdom, New Zealand and Austria, followed by America, Australia and Europe. Similar systems appeared independently in other countries: SEL or the ***"Système d'Échange Local"*** in France, the ***"Fureai Kippu"*** in Japan, and the very popular ***"Time Dollars"*** and ***"Ithaca Hours"*** in the USA.

The combination of conventional money and complementary currencies works as successfully in economically powerful countries as it does in those that are economically dependent, such as Brazil, Thailand, Indonesia and Senegal. Many complementary currencies have appeared at times of economic crisis when paid work and money are scarce. This was the case in Argentina, where the economic collapse of 2001 led to the apparition of alternative credit systems, or complementary currencies. Within a short time, hundreds of thousands of users were using them, and the phenomenon spread to other countries in the region. In the context of economic crisis, exploring alternatives is not restricted to the low-income classes. The large capitalist corporations also take advantage of different ways of attracting and preserving their customers. Frequent-flyer miles are not strictly an alternative currency, but they attract increasing numbers of customers to airline loyalty programmes. Though the capitalist corporations' money alternatives may resemble complementary money, in the sense that something other than conventional money is being used to make purchases, there is a clear and important difference at the conceptual level: the first was devised according to the rules of capitalist competition, to 'lock in' customers, while the second is designed to offer the consumer alternatives to the scarcity of money and market monopolization, among other things.

2. In a complementary currency ecosystem

2.2. Typologies

2.2.1. The different typologies

Let us look first at the four different typologies of existing complementary currencies, according to the categories defined by Gill Seyfang and Noel Longhurst in 2013. This classification defines complementary currencies as interventions intended to strengthen local cooperation, offer additional liquidity and motivate environmental initiatives, in pursuit of a three-way balance of social, economic and environmental activities.

1. **Mutual exchange**. These are monetary systems which are created by their own members and based on trust. Members advertise goods and services according to 'wants' and 'offers' in a directory, while a central accounting system records the transactions that take place. The currency per se is created in the moment of the transaction, whereby both 'buyer' and 'seller' are committed to the system. These systems are based on trust, under which one member's spending equals a debt to the other members. They usually exist in a civil society context, often with little encouragement from governments or other funding sources. One of the best known mutual exchange systems is the Local Exchange Trading System (LETS).

2. **Service credits**. These initiatives are similar to mutual exchange systems, but restricted exclusively to the exchange of services. The currency unit is based on time, and the system operates via a central exchange that links services wanted and offered. Everybody's time is worth the same under these exchange systems, irrespective of the service provided. Service credit is earned by helping other people and organizations, and can be spent on services offered by other members. Service credit systems, or time banks, are set up in neighbourhoods and communities, often by volunteers, some of whom are sponsored by institutions. These systems often focus on a specific sector, such as health care, education or justice, and their primary objectives are to encourage inclusion, cohesion and the building of social capital.

3. **Local currencies**. These are monetary systems which are geographically defined and circulate within a certain region. Their objectives are to promote economic activity in the region by supporting local economy and speeding up exchange and circulation, thus encouraging the associated multiplier effect and preventing 'leakage' of money from the area. Local currencies are not intended to supplant either the legal tender currency or interregional trade. While many local currencies have actual paper money, others only use technological platforms, including debit cards and mobile telecommunications. In recent years, the public sector has begun to become involved with local currency initiatives, having perceived an opportunity for public sector policies that generate local wealth and increase monetary circulation, at the same time as they empower local business and the local population.

4. **Barter markets**. These are a hybrid of mutual exchange and local currencies systems. They consist of an infrastructure which enables participants to exchange goods and services within the framework of a site-specific event, such as a market, fair or festival. They are associated with civil society cooperative economy initiatives, with a strong emphasis on promoting sustainable development by reusing goods. Barter markets are designed to overcome the scarcity of legal tender money and facilitate exchanges among a group of users. They tend o be associated with the concept of 'prosumers', meaning that the participants have to be both producers and consumers.

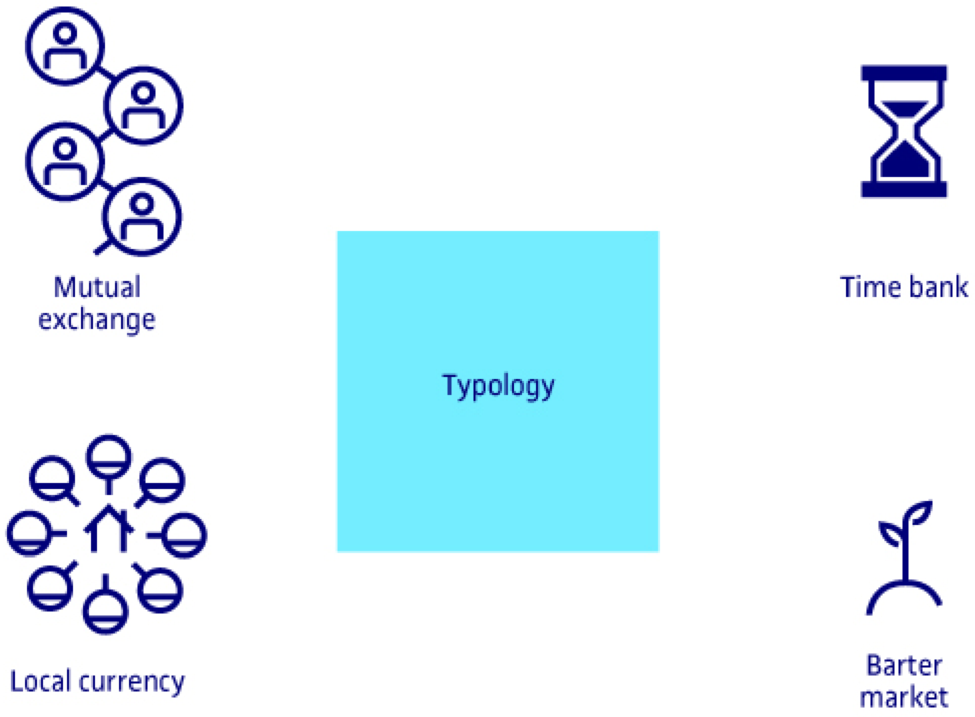

Mutual exchange
Typology
Time bank
Local currency
Barter market

Figure 12

2. In a complementary currency ecosystem

2.2. Typologies

2.2.2. Service credit systems

Service credit systems or time banks are the most prominent of the complementary currency systems, accounting for 50.2% of initiatives worldwide.

The fundamental monetary unit is time. Participants obtain a time credit for every hour they spend helping someone, irrespective of the service they provide. These credits can be stored for future use, transferred to another person, or used to buy services from other participants. Service credit systems represent a radical rejection of market valuations of labour, since everybody's time is worth the same amount of credit.

Service credit systems encourage the building of social capital, inclusion and cohesion by rewarding support among neighbours, social care and community-based activities, and work on reciprocal volunteer programmes.

Early examples of the ***"Fureai Kippu"*** type of service credit systems were found in Japan as long ago as 1973, but these cannot be considered the prime instigator of this type of system. It was Edgar Cahn who really developed the idea of time banks in America in 1986, aiming to utilize untapped skills and resources in deprived neighbourhoods to rebuild communities and restore dignity to the socially excluded. The model spread quickly across the United States, and from there to the UK in 1997 through the efforts of David Boyle and the New Economics Foundation (NEF). Since then, strong, important UK and USA networks have developed new methodologies, improved best practices and supported new projects in other countries, including Italy, Spain, Portugal, New Zealand, Finland, Canada and Japan.

Recommended reading

Fact sheet 13 (Julio Gisbert, Josefina Altés) – *Time Banks*

2. In a complementary currency ecosystem

2.2. Typologies

2.2.3. Mutual exchange systems

Mutual exchange systems are the second most common type of complementary currencies in terms of numbers of initiatives, representing 41.3% of the total.

Mutual exchange systems are created by the act of buying or spending: one person's credit equals another's debit, so accounts always add up to zero. Both the value and utility of the currency are maintained by trust in other members to meet their commitments or 'debts'.

These systems may or may not operate within a defined geographical area, and offer their users interest-free credit, which can be spent within the trading circle of businesses or users signed up to the programme. Members advertise their wants and offers in a directory, and transactions are accounted for on a record sheet showing the participants and the amount of the transaction, by manual or technological means. Some projects link the value of their currency to the national currency; others prefer a time-based system (like the time banks), and some even mix time and currency values.

All the evidence suggests that, despite the fact that mutual exchange systems are clearly aimed at supporting local economies, it is the social and community-building benefits that have the greatest impact as a result of the social networks generated.

The best-known examples are LETS, the first of which was the brainchild of community activist Michael Linton on Vancouver Island, Canada, in 1983. The original idea was to create 'emergency money' during the recession. LETS, generally emerging out of civil society, soon spread through Canada, the UK, New Zealand and Australia via green activist networks during the 1980s and 90s. Growth of LETS peaked in the UK at the end of the 1990s, but it would be another few years before the same happened in the rest of Europe. Adaptations of LETS exist in France, Hungary, Germany, Austria, Switzerland and Australia, and similar models have emerged in South Africa, Japan and Canada. LETS have inspired and given rise to new forms and hybrid systems in other countries. The ***"Community Exchange Services"*** or CES model, for example, is inspired by LETS, providing an electronic platform for mutual exchange. This system originated in South Africa but has since spread worldwide and been used by many existing mutual exchange systems.

The characteristics and advantages of these LETS systems can be summed up by the following:

- All legitimate transactions are made possible so that a trading community will never experience a lack of credit.
- Credit is assigned, on a democratic and decentralized basis, by participants according to their own regulations and levels of mutual trust.
- Participants can save because they avoid paying interest and bank transaction charges.
- Participants can avoid the adverse effects of external factors such as monetary inflation, restrictive bank credit policies or world economic or financial instabilities.

Notwithstanding, there are a number of factors to keep in mind when launching a LETS:

- It is important to avoid the fundamental error of generating excessively high expectations and clinging to the initial design of the system, which must be flexible and adapt to the local socioeconomic context.
- Ensure that people are adequately introduced into the system, explaining to new members how the system works and confirming that they understand.
- Manage the system in a professional manner, producing advertising materials and well-designed directories, and organizing events and trips for members to get to know each other.
- Offer a sufficient variety of skills to cover people's needs (food production, repair services, recycling and reusing, etc).
- Have a well-defined spirit, building consensus on the mechanism and objectives of the system.
- Advise all members of the limitations of the LETS system (only non-professional goods and services that would not be sold for legal-tender money are eligible).
- Looking after active members, intervening where necessary to prevent members with highly sought-after talents and skills from accumulating too much positive credit, to the extent they become tired of offering the service and leave the system.

Recommended reading

- Fact sheet 12 (Noemí González, Israel Sánchez, Marcos Rivero) – *Systems of exchange (LETS)*
- Fact sheet 15 (Susana Martín) **–** *Mutual exchange systems and intertrading*
- **Paiva, Ranulfo** (2015). *This is the mutual credit clearing system*.

2. In a complementary currency ecosystem

2.2. Typologies

2.2.4. Local currencies

These complementary currencies occupy third place in terms of numbers of initiatives worldwide, representing 7.1% of the total.

Local currency systems are designed to circulate exclusively within the confines of a specific geographic region, increasing the local economic multiplier and supporting local companies. In some cases, all of this can be achieved by converting the national currency into local exchange vouchers that can only be used in certain areas or with participating companies. Once issued, the vouchers circulate freely until converted back into national currency. Alternatively, the vouchers can be obtained through benefits programmes or direct public-sector funding.

The purpose of these local currencies is to complement the national currency and increase the speed of local exchange, but not to supplant the national currency or interregional trading. Special attention is paid to security aspects, to the point that many systems avoid counterfeiting by using conventional currency printers to produce their paper money.

This category includes the Hours currencies, the first of which were the Ithaca Hours, launched in Ithaca, New York State, in 1991. Similar initiatives followed in the USA, Canada and other countries, the majority linked to ecological and alternative groups, who used the local currency to boost local economic activity. The Regio-geld ('regional money') initiatives in Germany focus more on local economic development and have a solid exchange network. Brazil's community development banks seek to boost local economic activity in low-income communities as part of a cooperative economy movement for economic development and citizen empowerment.

The UK'S Transition Currencies model has been growing since its first appeared in 2007 and today has several different currencies. Though not linked by any formal network, members of the individual local systems share their learning and experimentation with electronic payment mechanisms to increase user uptake. These currencies are all associated, to a greater or lesser degree, with the degrowth of cities in transition, and seek to increase the recovery capacity of the local economy.

In recent years, the public sector has begun to become involved with local currency initiatives, having perceived an opportunity for public sector policies that generate local wealth and increase monetary circulation, at the same time as they empower local business and the local population.

Recommended reading

- Fact sheet 09 (Lluís Muns) – *The economic multiplier at local level*
- Fact sheet 19 (Andreu Honzawa) – *Local and complementary currencies as public policy*

2. In a complementary currency ecosystem

2.2. Typologies

2.2.5. Barter markets

These complementary currencies occupy the fourth and final place in terms of numbers of initiatives worldwide, representing 1.4% of the total.

Barter markets are a hybrid of mutual exchange and local currencies systems, providing a new infrastructure that enables participants to exchange goods and services within the framework of a site-specific event, without the need for conventional currency. The users of barter markets join a local club, whereby they obtain the local currency in what is effectively an interest-free loan. These currencies are not convertible into official currency.

Barter markets first emerged in Bernal, Buenos Aires, as a sustainability initiative instigated by an environmental NGO in 1995. They emerged within the context of deindustrialization and fiscal crisis, spread rapidly during the Argentine economic crisis of 1999 to 2002, and became a way of life for a broad demographic group. However, internetwork rivalry had a crippling effect on the Argentine barter clubs, which suffered a catastrophic crisis of credibility in 2002. Some barter systems still exist in Argentina and similar models have been adopted in Venezuela and Mexico, where they have remained closely associated with solidarity economy concepts. Informal barter markets also operate in other countries of South America, as well as in Quebec, a region with a strong social economy movement. In Canada, however, greater emphasis is placed on support for sustainable development by reusing goods, while the Mexican and South American systems are motivated by economic solidarity ideology.

2. In a complementary currency ecosystem

2.3. Characteristics

2.3.1. Key scope areas

Depending on the typology and initial design configuration, complementary currencies can promote social, economic and environmental activity to a greater or lesser degree. They may therefore have a more or less holistic perspective, according to the degree of equilibrium between the three scope areas of activity.

Social activity

- For some authors, the principal objective of complementary currencies is to improve the social well-being of the communities in which they circulate. Community members receive psychological benefits such as recognition, sense of belonging and self-esteem through social interaction, as opposed to individualism and material consumerism. This can occur in various ways: for example, in acts of solidarity among neighbours which encourage a sense of community and the building of mutual trust. Initiatives like these encourage the participation of socially excluded groups and are especially useful in areas where communities have become fragmented and there is mistrust between social groups.

- Since everyone has something to offer, including skills with little value in the formal labour market, complementary currencies enable the empowerment of socially excluded groups, boosting self-esteem, trust, social participation and well-being. These aspects, even the small interactions involved in more economically-motivated transactions, add up to the growth of community spirit and friendship networks.

- Prosocial behaviour is a social behaviour whereby people voluntarily act for the benefit of others, usually without any benefit to themselves. Complementary monetary systems can give rise to prosocial behaviour inspired by the principles of altruism, solidarity and mutual assistance.

Economic activity

- Complementary currencies are cited by many organizations as an instrument to build local circuits of economic value that prevent wealth from flowing out of the community, have a multiplier effect on the local economy and promote the localization of processes.

- Informal work, skills exchanges, volunteering and domestic work, all crucial to market economy, can be effectively valued, recognized, compensated and even exchanged thanks to complementary currencies. All of this can help to counteract the exploitation of labour via formal employment and help to build economic relationships in which cooperation and exchange play a valuable part.

- Alternative currencies also provide a complementary medium of access to goods and services to people who are financially excluded or unable to find formal employment. In addition, complementary currencies can support sustainable economic development by providing small, local, community-loyal companies with mutual credit systems that enable them to trade with each other without the need for conventional money. Some of these currencies even specifically support social companies and businesses with a sustainability focus.

Environmental activity

- Complementary currencies have a positive environmental impact on the ecological footprint: more local consumer models are created to take the place of imports, thus reducing the amount of energy needed for transportation. They also facilitate the exchange of resources and provide a market for the sale of goods produced locally with local and even reused resources.

- Some complementary currencies stimulate more environmentally-friendly behaviour, for example, they can be used to incentivize citizens to take part in recycling programmes, purchase more sustainable products, or use public transport. Complementary currencies can also encourage the development of new green technologies such as renewable energies, increasing capital investment by issuing currency as a reward for energy production.

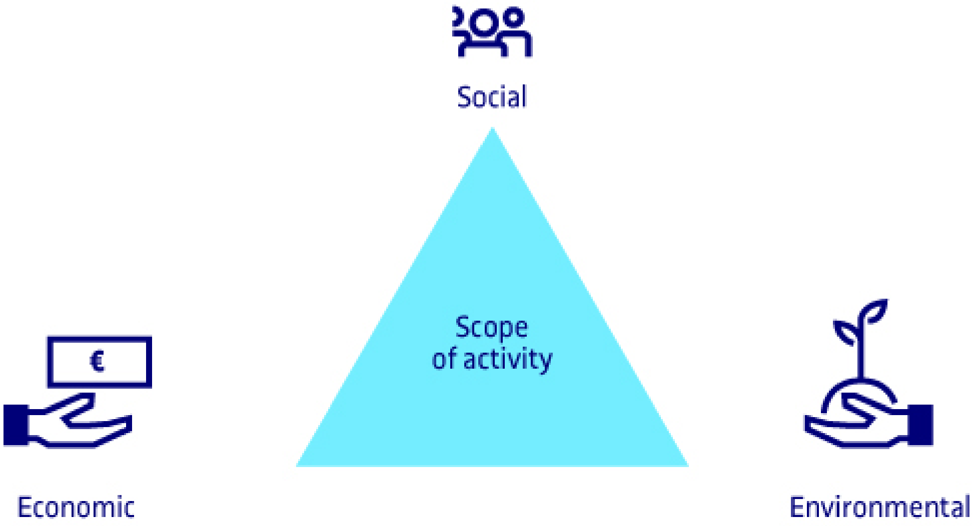


Figure 13

Recommended reading

- Fact sheet 03 (Enric Montesa, Josep Albinyana) – *Money and environmental sustainability*
- Fact sheet 17 (Susana Martín) – *Labour issues: Should salaries be paid in social currency?*
- Fact sheet 18 (Enric Montesa) – *Social and complementary currencies in business*

2. In a complementary currency ecosystem

2.3. Characteristics

2.3.2. Issue process

Irrespective of the typology and primary scope of the activity in which they are engaged, complementary currencies can be created or issued in different ways.

- **Currencies based on shared credit**. Among these currencies we find mutual exchange systems, service credit systems and barter markets. In these cases, the currency represents an exchange owed to other members of the same community, calculated as a credit or positive balance to the member that provides the product or service, and a debit or negative balance to the member that receives it.

- **Currencies backed by legal-tender money**. The simplest and most solvent method to implement, these currencies rely on a generalized confidence in the value of conventional money. To start the process, the monetary issue must be acquired or backed with a fund of legal-tender currency. The new currency can then be used within a clearly-defined geographical area, usually local or regional, by the economic actors participating in the system. One of the viability criteria for businesses is that these currencies can subsequently be exchanged for legal tender currency, though often with a percentage penalty to enhance the sustainability of the system.

- **Trust-based currencies**. These currencies are based on exchange values created without any kind of backing and introduced into a circuit to be used as a medium of exchange of goods and services. All participants receive the same amount, whether as an initial sum upon registration, at regular intervals as a basic income, or other arrangement.

- **Currencies backed by goods**. The issue of these currencies is backed by a certain commodity, which must be available in sufficient quantities. Electric energy, a company's unsold stock, or a collective's agricultural produce are a few examples. These systems are rare in Spain, and generally fall outside the scope of intervention of public-sector actors.

- **Currencies issued as debt**. The currency is issued as a bond for funding certain projects. The currency acts as a document for deferred payment of an initial deposit in legal-tender money, and is circulated among the actors who accept the promise to pay the debt. The amount of the initial deposit can eventually be recovered in legal-tender money or 'spent' on goods or services. These kinds of currencies can make sense for the funding of initiatives by heavily indebted local authorities needing to deal with cash flow deficits or community projects.

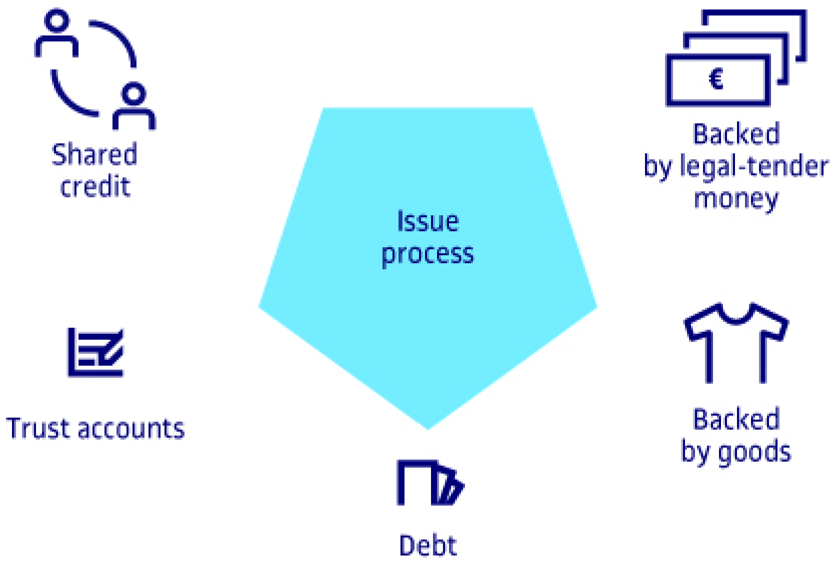


Figure 14

Recommended reading

- Fact sheet 14 (Susana Martín) – *Currency backing*

- Fact sheet 22 (Susana Martín) – *Bitcoin*

2. In a complementary currency ecosystem

2.3. Characteristics

2.3.3. Hybrid designs

The four typologies of complementary currencies (mutual exchange, service credits, local currencies and barter markets) and their characteristics in terms of scope of activity (social, economic and environmental) and issue process (shared credit, backed by legal-tender currency, trust-based currencies, backed by goods, issued as debt) are not mutually exclusive; on the contrary, combinations are perfectly possible.

If we are aiming for a genuinely sustainable model, we will need to set our sights on a hybrid complementary monetary system. Among other features, this would need to combine two or more typologies at the same time; be socially, economically and environmentally effective; and use the issue process best suited to its objectives. There is no standard model for complementary currencies, therefore no two projects are exactly alike. Projects can be remarkably similar, but the precise socioeconomic climate of the environment into which they are introduced will determine the nature of each project and make it unique. Hybrid models are the result of the combination of different categories and characteristics, and are tailor-made to fit the project's objectives, the agents involved and the available resources, among many other factors.

Recommended reading

- Fact sheet 16 (Susana Martín) – *The process of developing a complementary currency*
- Fact sheet 20 (José Luis Fernández) – *Results Evaluation: Getting away from GDP criteria*

2. In a complementary currency ecosystem

2.4. Historical evolution and current situation

2.4.1. The current international situation

In 2013, Gill Seyfang and Noel Longhurst conducted a study which measured and evaluated the situation of complementary currencies on an international basis. This is one of only a few studies whose global perspective has made it possible to generate homogenized results. Despite the fact that the data shown is for 2013, the study's comparative analysis produces a relative overview of the complementary currencies phenomenon internationally.

For the purposes of the study, the authors sought to identify complementary currency groups with at least five active projects within one country in 2013. Emergent initiatives with fewer than five active projects were therefore not included in the analysis, and nor were business exchange systems (complementary currencies of a purely capitalistic nature) or loyalty programmes based on incentives for the purchase of sustainable goods and services or recycling.

According to these constraints, a total of 38 nationally-based currency groups were found to exist in 23 countries, across six continents, representing a total of 3,418 local projects or initiatives. The term currency group refers to a group of at least five active projects, of the same type, in the same country in 2013. Each initiative is catalogued as one of the four complementary currency typologies previously presented in this COURSE: mutual exchange systems, service credit banks, local currencies and barter markets.

The most common complementary currency typology is the service credits type, with 1,715 projects (50.2% of the total) across eleven countries and four continents, followed by the mutual credit systems, with 4,412 projects (41.3% of the total) across fourteen countries and five continents. Local currency systems are the third group of complementary currencies, consisting of 243 projects (7.1% of the total) in six different countries and four continents. The last group is formed by the barter markets, representing 48 projects (1.4% of the total) across four countries and two continents.

Europe has the greatest number of projects, with 2,333 initiatives (68.3%). Over half of these (54.1%) are mutual exchange systems, 44.4% are service credit banks and just 1.5% are local currencies. Asia follows, with 16.6% of the complementary currency projects. More than two-thirds of these (68.7%) are service credit banks, 23.4% are local currencies, and the rest are mutual exchange systems. North America is the third most populated region in terms of complementary currencies, with 9.8% of projects worldwide, of which the majority (79.3%) are service credit banks, mostly in the USA. South America represents 2.7% of the world's complementary currency projects, dedicated exclusively to local currencies (64.5%) and barter markets (35.5%). Australia and New Zealand account for only 1.7% of the world's initiatives, 57.9% of which is represented by mutual exchange systems and 42.1% by service credit banks. Finally, the countries of Africa use only mutual exchange systems, which account for 0.9% of the international total.

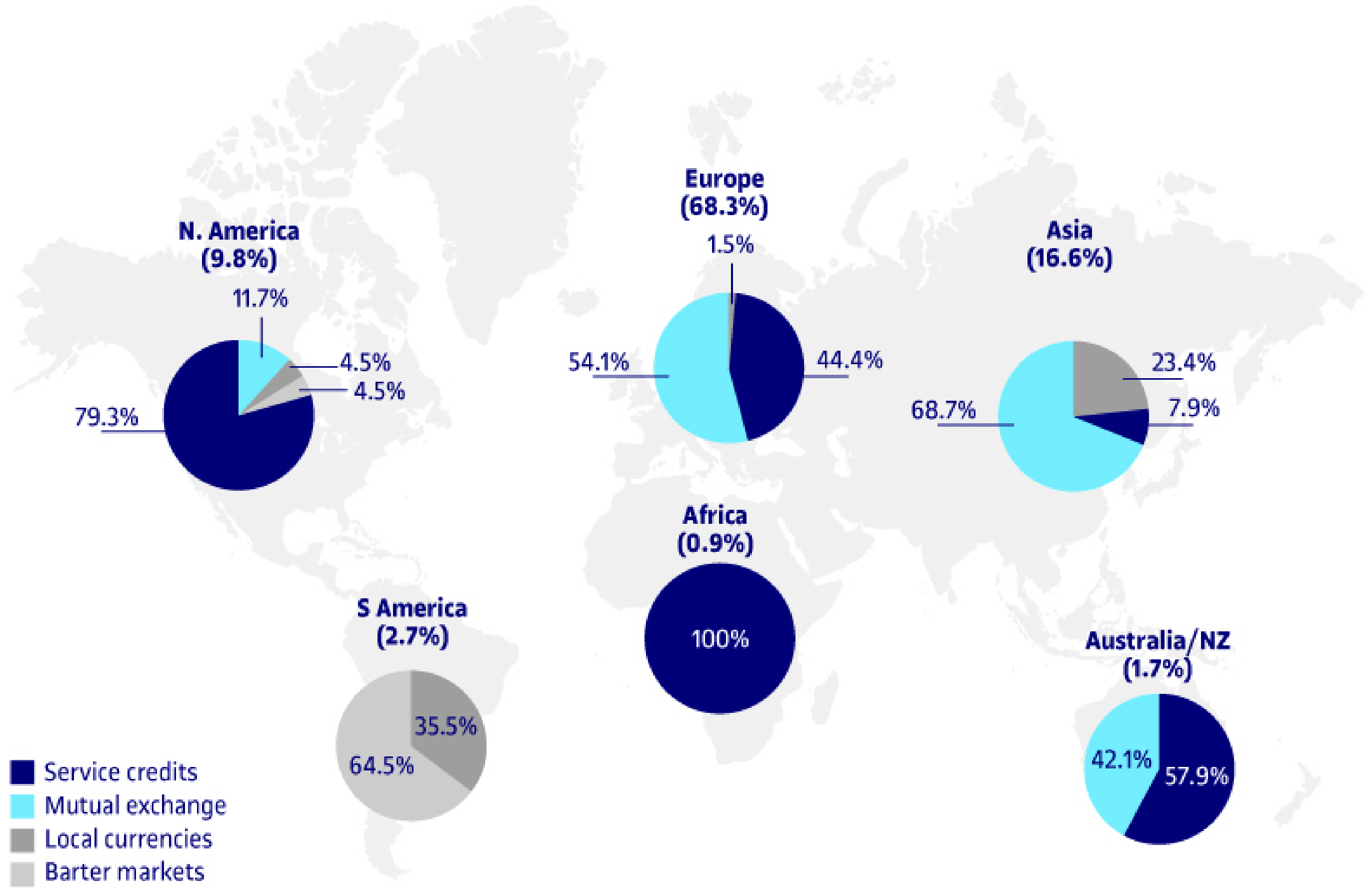


Figure 15. Geographical distribution of community currencies, by region and type.

Recommended reading

- Fact sheet 21 (Susana Martín**)** **–** *WIR: A complementary currency model for companies*
- Fact sheet 23 (Susana Martín) – *Banco Palmas in Brazil*
- Fact sheet 25 (Yasuyuki Hirota) – *Chiemgauer (Bavaria, Germany)*
- Fact sheet 26 (Domenico Pellettieri) – *The Bristol Pound*
- Fact sheet 27 (Tito M. Daniel) – *Corporate exchange systems: Sardex (and RES)*

2. In a complementary currency ecosystem

2.4. Historical evolution and current situation

2.4.2. International historical evolution

The four typologies of complementary currencies have travelled from one country to another during approximately the last three decades, adapting and evolving along the way.

We can see below the current situation of the 38 nationally-based currency groups identified in the study conducted by Seyfang and Longhurst in 2013, indicating whether they are growing, stable, or peaked in terms of the total number of member projects. The study reveals that, generally speaking, the majority (52.6%) of the groups identified are growing, 21.1% are stable, and 26.3% have experienced a downturn in growth. These figures are irrespective of the typology or location of the currency.

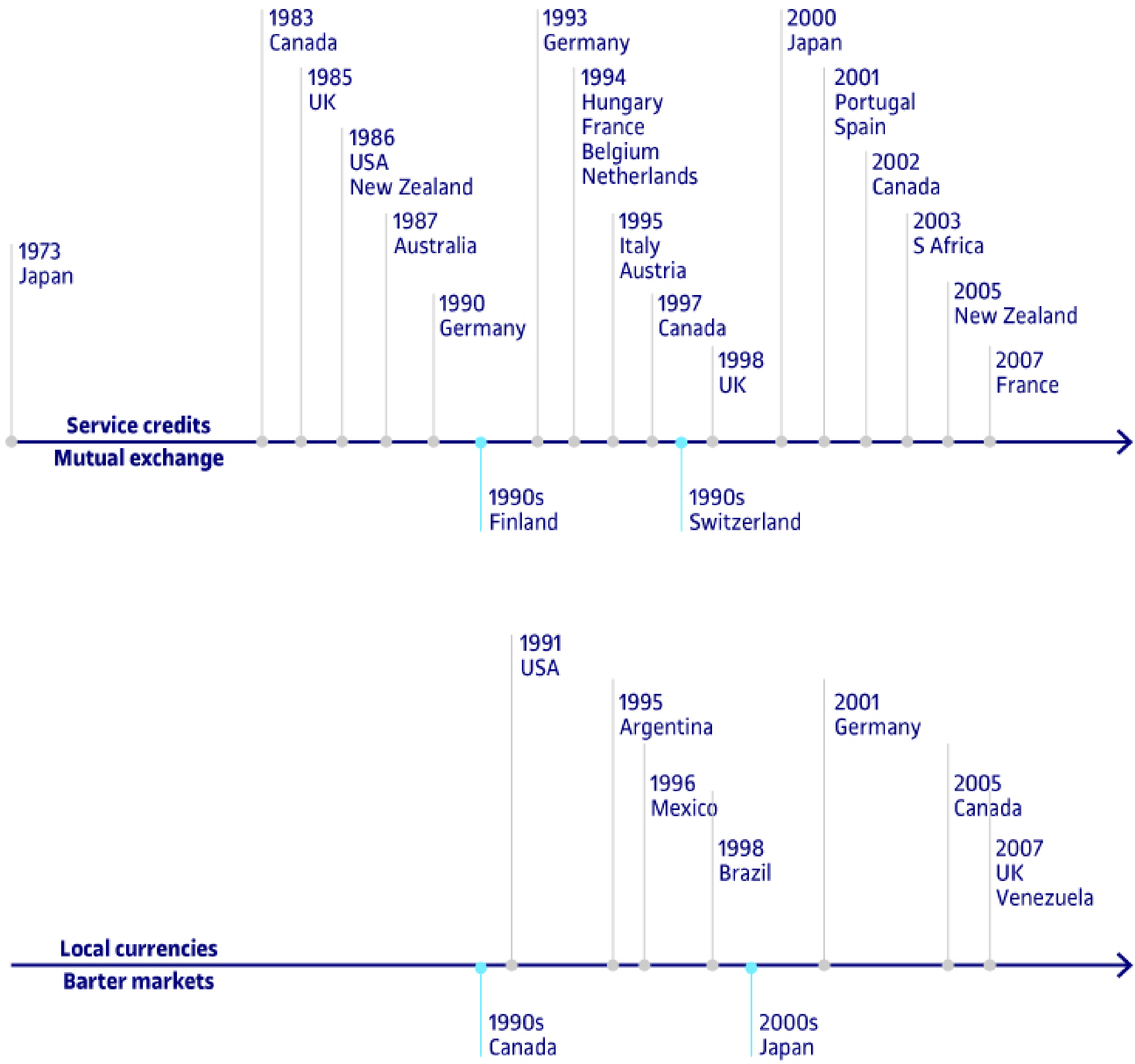


Figure 16. Timelines showing geographical diffusion of community currencies.

Analysis of the development trajectory of the 38 nationally-based groups organized by continent reveals some region-specific characteristics. The majority (66.7%) of the North American groups, for example, are experiencing growth. The proportion of European groups experiencing growth is slightly smaller (55.6%), in parallel with an impressive figure of groups which are stable (27.8%). Asia and Australia and New Zealand show a greater proportion of nationally-based currency groups in decline (75% and 66.7%, respectively), with South America revealing a similar number in each of the three growth categories.

The analysis of the development trajectory of the 38 nationally-based groups according to complementary currency typology offers another perspective, however. Of the four typologies, service credit systems are experiencing the greatest growth, with ten of the twelve national groupings in the growth phase (83.3%), and the remainder in the stable phase. The evolution of mutual exchange systems is more evenly distributed, with 43.8% of the 16 groups in the growth phase and the same proportion in decline; 12.5% are stable. The six local currency networks reveal a similar panorama, with 33.3% in each of the three growth categories. Of the four national barter market networks, one is growing (25%), two are stable (50%), and the fourth has already peaked (25%).

2. In a complementary currency ecosystem

2.4. Historical evolution and current situation

2.4.3. Current national evolution

At the end of 2014, Neil Hughes carried out research in which he analysed the current situation of complementary currencies in Spain *(Figure 15)*. He proceeded to count the number of existing initiatives according to several national databases and was able to list a total of 372 initiatives: 290 of these were service credit banks, 71 were mutual exchange systems, and eleven were barter markets. Each of these initiatives was pinpointed to its corresponding autonomous community, revealing a country-wide phenomenon. The most active region is Catalonia, with a total of 97 initiatives in operation: 71 service credit banks, 23 mutual exchange systems, and three barter markets. Catalonia is followed in the ranking by Andalusia and Madrid. As discussed previously, service credit systems are the most common typology found in Spain. Of the 290 service credit banks listed, 223 are dependent on the local authority. It is important to point out that, at the time this study was conducted, no local currency initiatives were identified, though there is widespread knowledge of their existence today and we have clear evidence of their operation, in Barcelona and Santa Coloma de Gramanet, for example.

Figure 17

Three historical periods have been linked to significant upturns in the use of complementary currencies. The first was during the Spanish Civil War, the second at the end of the twentieth century with the emergence of the first local authority service credit models, and the third as a result of the 2008 economic crisis. The greatest growth of this type of initiative has been seen in the period since 2008. In particular, mutual exchange systems have demonstrated the most significant growth, growing from four in 2009 to more than 70 at the end of 2014.

The origins that have inspired the different typologies are very different, however. The service credit systems, for example, are inspired by the Italian experience, while the mutual exchange systems are based on initiatives in Brazil and the UK's Transition towns. A broad range of economic, environmental and social objectives were identified, including the battle against social exclusion, localization of the economy, creation of social capital and promotion of sustainability. Without doubt, the 2008 crisis was a crucial factor in the evolution of complementary currency systems in Spain. The lack of available money produced by a combination of lending and austerity policies was the major catalyst for the recent growth of service credit and mutual exchange systems, as well as other innovative solutions and proposals. In terms of economic and social relevance, the recent creation of the initiatives and their limited capacity seem to corroborate other previous studies that question the impact of such initiatives on social well-being. High unemployment and poverty, for example, are multidimensional problems requiring solutions based on a great deal more than alternative instruments of exchange. Nonetheless, and despite their limitations, the Spanish initiatives are playing an important educational and political role. By questioning the principles that underpin economic transactions in contemporary capitalist society, such as the maximizing of interest and profit, complementary currency initiatives are fundamental to finding new ways of doing things. Complementary currencies are rooted in progressive values such as social justice and environmental sustainability, and send a message to society that alternatives to capitalistic social relations are possible.

While they may not offer lasting economic alternatives to a strong official currency system, complementary currencies are useful money systems to aspire to for a more localized, sustainable future. Examples are found in Catalonia and Madrid *(Figure 18)*, where the social market economy and circulation of ecoredes (ecoxarxes) has experienced significant growth in the last few years. Similarly, the 15M movement is playing an important role, using service credit banks to help to weave community fabric in Spanish cities, at the same time boosting individual self-esteem, reciprocity, self-organization and social horizontality. Initiatives such as the Association for the Development of Time Banks (ADBT), the Health and Family Association (ASF), the integrated cooperatives beginning to spread beyond Catalonia (CIC), and the expansion of the social market networks, all augur well for the future of complementary currency systems in Spain.

Figure 18

Recommended reading

- Fact sheet 24 (Jordi Flores) – *Ecoxarxes Catalonia: a model of intertrading*
- Fact sheet 27 (Josep Lluís de la Rosa) – *Corporate exchange systems: RES (and Sardex)*
- Fact sheet 28 (Susana Martín) – *Demos, a social currency for basic income*
- Fact sheet 29 (Lluís Muns, Andreu Honzawa) – *Santa Coloma de Gramanet*
- Fact sheet 30 (Susana Martín) – *Eurocat: A Catalan currency to complement the euro*
- Fact sheet 31 (Ton Dalmau) – *“La Turuta” social currency*

2. In a complementary currency ecosystem

2.4. Historical evolution and current situation

2.4.4. Life cycle characterization

The body of experience available from a number of complementary currency projects indicates that the useful life of such initiatives is typically short. It is clearly the case with initiatives such as LETS in the UK and local currencies in the USA. Evaluations of LETS in the UK, for example, have demonstrated their potential, but have also identified the internal and external barriers that prevent them from achieving the desired impact. These initiatives, though effective, have produced only marginal benefits, and have therefore disappointed those hoping that complementary currencies could have a significant impact if implemented on a broader basis. In this respect, we could be witnessing the natural life cycle of experimental initiatives developed in the community: good ideas attract attention in the early stages, increasing numbers of users show an interest and, provided it has the funding to create networks and train users, the project grows. Subsequently, unable to achieve the critical mass required for its wider implementation, the project stagnates, gradually declining as participants leave to join another initiative that seems to hold more promise. Lifespans typically do not exceed four or five years.

Some initiatives remain in a state of permanent evolution or growth, however, sometimes for years, as is the case of the Swiss Wir. It would therefore be wrong to conclude that all complementary currencies must follow the typical 'boom – bust' trajectory. Some systems have even recovered after a decline, as with the Argentine Trueque. It is also true that the recent growth of these initiatives is partly in response to the world economic crisis we have been suffering the effects of since 2008, and partly thanks to the adoption of new online platforms that make management of some systems easier, more secure and more agile. It is interesting to note that some of these contemporary systems are visibly distancing themselves from purely alternative cultures and lifestyles, presenting themselves as models for mainstream initiatives to achieve sustainability policy goals. This is the case with the kind of transition currencies that have emerged mainly in the UK. While these are small projects still in the expansion phase, emergent complementary currency experiments are likely to follow their example, rather than that of the old models associated with radical social movements and groups opposed to the current system.

3. Toward sustainable local development

3.1. The role of the public sector

3.1.1. The need for sustainable local development

Complementary currencies are a local development tool which can be used in the context of fragile economies experiencing reduction in local spending in favour of superstores and loss of euro income capacity. However, they can also be useful in higher-income and -employment areas with important underused resources and inefficient management systems. Local authorities may find that issuing or facilitating complementary currencies can help to generate synergy among its different responsibilities: boosting local business, providing assistance to collectives at risk of social exclusion, fostering local employment and improving neighbourhood relations, as well as offering support to the collaborative network, including selective waste collection, waste management and prevention of dumping. Complementary currencies present a number of challenges and opportunities in the fostering of sustainable local development. Sustainable development is holistic, takes account of social, economic and environmental issues, and satisfies the needs of the present generation without compromising the capacity of future generations to satisfy theirs.

As discussed previously in this COURSE, there is no standard model for complementary currencies, therefore no two projects are exactly alike. Projects can be remarkably similar, but the precise socioeconomic climate of the environment into which they are introduced will determine the nature of each project and make it unique. Hybrid models are the result of the combination of different categories and characteristics and are tailor-made to fit the project's objectives, the agents involved and the available resources, among many other factors.

In all cases, and in relation to the potential geographical limitations of the area into which the local authority wishes to introduce a complementary currency project, it should be noted that the aim of a hybrid currency system is always to achieve sustainable local development through social, economic and environmental revitalization and transformation, and is never motivated by aspirations of sovereignty.

3. Toward sustainable local development

3.1. The role of the public sector

3.1.2. The role of local government

Local government authorities are fundamental actors in the social, economic and political life of societies. Around 60% of the decisions taken at European level impact directly on local authorities at all levels, and 70-80% of European public investment initiatives are put into practice by local government authorities. This demonstrates the growing importance of local government authorities in the economy and in day-to-day life. Since 2008, however, they have had to take policy decisions to significantly reduce their budgets, while the needs of the societies on the receiving end of these cuts have not gone away. On the contrary, a growing, increasingly older population has increased demand on local authority services, especially in the social and health sectors, and local businesses have found it difficult to survive in times of austerity and unemployment, all of which has generated socioeconomic challenges for local government.

Support from public institutions for complementary currencies may be a potential solution to public budget cuts and offer a means of improving public services and policies beyond what money can buy. During the last decade, an increasingly significant number of local governments have led the way in the design and implementation of complementary currencies and addressing key socioeconomic and environmental challenges. In particular, complementary currencies have impacted on four high-priority areas for local governments:

1. Democratization and improved service provision.
2. Support for local economies and small and medium-sized businesses.
3. The battle against inequality and social exclusion.
4. And reduction of environmental impact.

In all cases, the four areas are not mutually exclusive. Currencies which improve the provision of services, for example, frequently also help to reduce social exclusion and inequality. Similarly, currencies which support local enterprise and small and medium-sized businesses also help to reduce environmental impact through the relocalization of the chains of production and distribution.

The level of involvement of local government authorities ranges from providing support to assuming the leadership of complete currency projects, as detailed below.

- **Leadership**. Setting into motion a complementary currency, as leading operator as well as promotor.
- **Integration**. Being involved in the project without bearing the primary responsibility for its execution, incorporating the currency into its own systems by using it to pay providers, using it for public procurement, tax collection and part-payment of local government employee salaries.
- **Association**. Being on an equal footing with other organizations committed to the launch of the currency, offering expertise to help execute the project, for example, with ITC, fundraising and administrative procedures, as well as developing or investing in training, and providing help and support for evaluation procedures.
- **Sponsorship**. Financially sponsoring a group or organization to develop a complementary currency project.
- **Participation**. Participating in the use of the currency, without necessarily providing support or incorporating it into its own systems, but allowing people or businesses to pay for services with the currency without recirculating it, offer little-demanded services, or assume it as non-profit, all of which provides important validation for the currency, broadens the range of options for users and instils confidence in the project.
- **Support**. Fully supporting use of the currency, helping to give it validity and credibility, without any direct involvement.

3. Toward sustainable local development

3.1. The role of the public sector

3.1.3. A series of recommendations for improved results

In order to achieve high levels of involvement, local governments need to take a number of key factors into account.

- **Clear vision**. Local governments must be clear about the results they hope to achieve if they are to design effective complementary currencies. A clear vision enables the people implementing the idea to better understand the purpose and select the most suitable currency type for the design. A clear vision helps to determine the key actors and define the objective and scale of the currency.

- **Co-design**. Co-design with the potential stakeholders is essential to reinforce involvement and add value in the early stages.

- **Business case**. A good business case needs to be produced in order to attract support and demonstrate social value. Focusing on objectives more than on results is fundamental for an understanding of long-term impact.

- **Top-to-bottom and bottom-to-top development and support**. A complementary currency requires highly-qualified management personnel and committed human resources dedicated to its adoption. Procedures and performance must be adapted to accommodate the complete integration of a currency system. Heads of service need to promote the programme internally to help their personnel acclimatize to different ways of working.

- **Political and personnel involvement**. A strong involvement at political and management levels is essential for the success of any local government programme. Political approval will be required for the adoption of any complementary currency, but successful implementation will also depend on personnel involvement.

- **Evaluation from the outset**. Robust impact evaluations are needed in order to sustain ongoing commitment to the currency. These should be included at design stage and introduced from commencement of the programme.

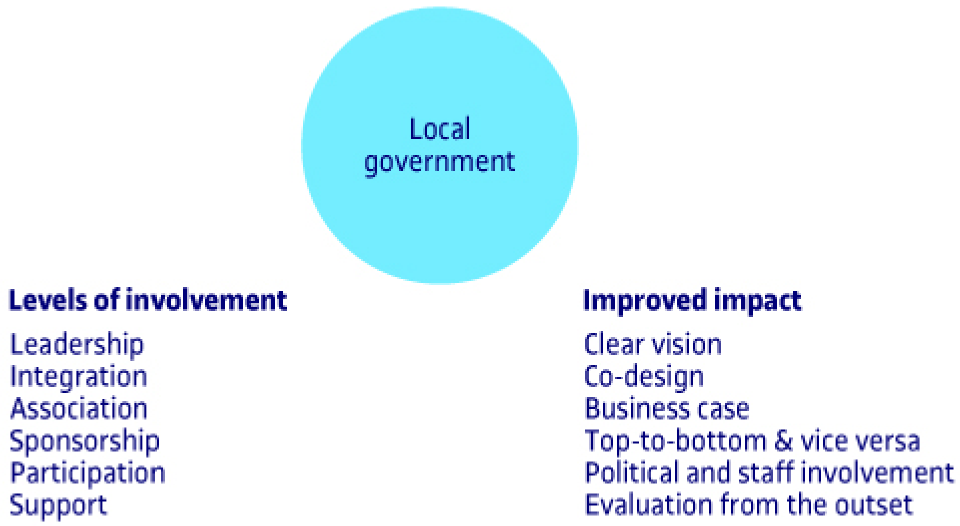


Figure 19

3. Toward sustainable local development

3.2. Effects of complementary currencies

3.2.1. Impact on local development

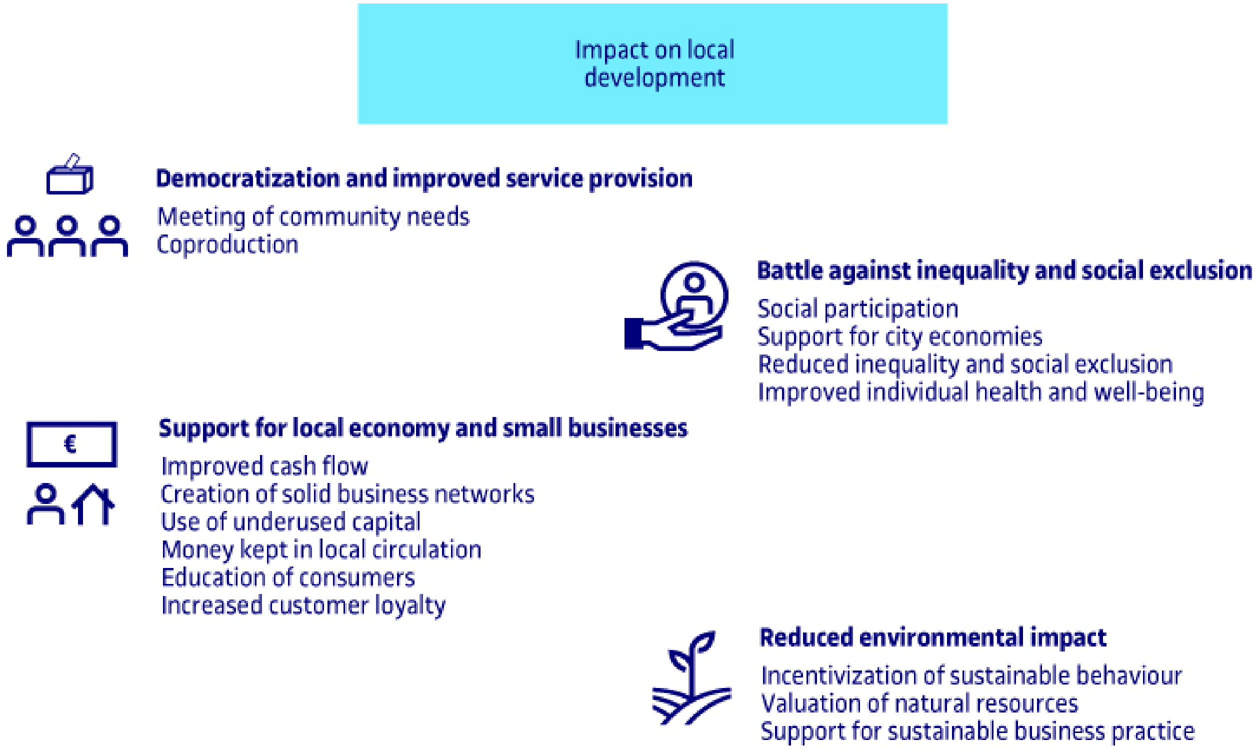


Figure 20

3. Toward sustainable local development

3.2. Effects of complementary currencies

3.2.2. Democratization and improved service provision

Local governments can use complementary currencies as instruments of public policy. The financial transactions involved in the provision of public services are becoming increasingly predominant and the relationship of the citizen to these services is increasingly reduced to that of a consumer rather than an active citizen, irrespective of the type of service, whether leisure-, education- or health-related. Complementary currencies can alter the dynamics and restore a sense of society to these increasingly monetized relations.

- **Meeting community needs**. When people have to get involved, using their own time and resources, to cover services abandoned because of budget cuts, inequality becomes extreme. Complementary currencies foster proactive actions serve to empower people and can be adopted to create more active communities and common spaces. They offer practical answers to a broad spectrum of public policies, endeavouring to make public services more useful and inclusive without trying to replace or reduce them. They enable people to connect with each other in a more active way, while meeting the needs of the community.

- **Co-production**. Complementary currencies can have a positive effect on relations between public services and their users, creating a new form of service provision. In the context of the public sector, co-production is increasingly being employed in the design, commissioning and provision of services. Instead of trying to address people's needs, co-production focuses on people's resources – their time, skills and expertise – and creates an egalitarian relationship with users, who are both designers and providers of services. This focus is the opposite of the traditional top-to-bottom, centralized public service model which views users as passive receptors of services. Co-production, aided by the use of complementary currencies, has gained political ground as a potential alternative to budget cuts. Complementary currencies provide a tool with which to free the potential of co-production and incentivize the general public to contribute to public services by putting forward new ideas and opportunities for the effective provision of services, reinforcement of independent community initiatives, recognition of talents and activities undervalued by the market economy, and creation of their own dynamics of interaction and exchange.

3. Toward sustainable local development

3.2. Effects of complementary currencies

3.2.3. Support for local economies and small and medium-sized companies

A diversified financial system geared to the needs of local economies is an essential requirement of a healthy economy. Commercial areas with a mix of different types of local businesses create an economy that is more resilient to external shifts, as well as being more gratifying for resident and visitors alike. Complementary currencies can counteract the domination of the giant corporations by supporting these diverse small and medium-sized businesses and educating consumers in terms of their freedom of choice. These currencies incentivize sales, improve productivity and help businesses to be more resilient to changes in the economy.

- **Improved cash flow**. They can help small and medium-sized businesses to finance each other, giving and receiving credit, goods and services within the business network, thus reducing the need for cash (reserving it for operating expenses) and dependence on conventional banks.

- **Creation of sound commercial networks**. Complementary currencies give businesses the opportunity to create networks between them, providing a platform from which to advertise their work to other members and generate increased sales, with buyers searching for business opportunities within the network itself. Businesses can specify their ethical criteria in the exchanges they conduct (for example, reducing the ecological footprint or maintaining local production) or simply recognize the commercial benefit of increased exchange. This interaction among businesses fosters long-term relationships between small and medium-sized companies in the same sector.

- **Use of underused capital**. Most businesses do not operate at their full capacity. The commercial benefits of connecting underused assets with unmet needs are self-evident. Complementary currencies enable businesses to make underused assets available to other businesses in exchange for currency that will subsequently be used to purchase goods and services from still more businesses. A good example of this are the empty seats in cinemas, which could be offered for payment in complementary currency at the last minute; the cinema could then use the currency to buy goods or services from other members of the network.

- **Keeping money circulating locally**. Injecting money into an area is of little use if the money then 'leaks' out. This is precisely what happens with legal-tender money. Currencies specific to a geographical area offer the possibility of keeping money circulating in the local area for longer. If a critical mass of businesses and individuals using the complementary currency is reached, a mutual reinforcement network can be created among local buyers and sellers. More individuals are persuaded to buy with the currency as increasing numbers of small and medium-sized businesses decide to accept the currency. These small and medium-sized businesses will then be able to reuse the benefits of the complementary currency, using it to conduct exchange transactions with other businesses or as staff bonuses. The use of money that can only be spent within the local economy creates a virtuous circle of spending and reinvestment.

- **Educating consumers**. Complementary currency projects can stimulate reflection and discussion on how money works and the impact it has on the local economy. A greater understanding of the socioeconomic dimensions of consumer behaviour can have direct benefits on the local economy by swelling customer numbers for participating businesses.

- **Increased customer loyalty**. Complementary currency projects can boost customer loyalty based on shared values, which translates into more small and medium-sized businesses signing up to the project as customers search the network for participating businesses where they can spend their local money.

3. Toward sustainable local development

3.2. Effects of complementary currencies

3.2.4. The battle against inequality and social exclusion

Performing voluntary tasks in the community requires the volunteer to have free time and sufficient money to cover their needs, which not everybody has. Complementary currencies can help to overcome inequalities of free time and money by redistributing resources in a more equitable way.

- **Social participation**. The exclusion of certain groups from social life weakens community relations. Complementary currencies can invigorate the social fabric and ensure that all groups of people have the same opportunities to become involved in the community. Complementary currencies alone may not be able to resolve social, economic and political inequalities, which are structural issues requiring structural changes, but they can help in the battle against some of the causes and effects of social exclusion. Volunteering offers many advantages to people from socially excluded and economically disadvantaged groups in the community. Volunteers have the opportunity to create new relationships and develop an appreciation of their own worth. The talents and skills of local residents are mobilized in work which is of great value to the rest of the community.

- **Support for the care economy**. Networks and relationships based on trust within a community are the basis of social life and nourish the roots of the formal money economy and money markets. The value of this kind of unpaid work – families helping with child care, neighbours looking out for neighbours, the performance of domestic chores, household accounting – is not generally recognized as part of the formal economy. The care economy consists of all the daily tasks involved in maintaining and feeding society, and all the lives involved in performing those tasks, without which life as we know it would be unsustainable. Much can be done to support and reinforce this economy, for example, by valuing and recognizing the importance of the care economy's contribution, without having to put a specific price on it. This is another area in which complementary currencies can demonstrate their worth.

- **Inequality and social exclusion**. Complementary currencies do not eradicate inequality and social exclusion, but they are a valuable tool in the battle against these issues. One of the most important tools in reducing inequality is empowerment. Complementary currencies can help to achieve the redistribution of certain forms of power. Empowerment and sense of self-worth go hand in hand. Complementary currencies facilitate voluntary activities that allow participants to gain experience motivated by intrinsic and extrinsic rewards, such as self-esteem, and the opportunity to apply skills acquired through paid work and formal education. Complementary currency projects are able to address educational, learning and employment inequalities, allowing the less advantaged to gain skills sought by employers and even achieve equality of condition with the more privileged.

- **Improved individual well-being and health**. Well-being takes into account how people feel, function and evaluate their lives. Complementary currencies can contribute significantly to improving personal well-being by providing opportunities for social contact and bolstering self-esteem, in addition to offering socialization and learning opportunities to groups excluded from the world of work. Higher levels of well-being are generally associated with other positive results, such as improved physical health.

3. Toward sustainable local development

3.2. Effects of complementary currencies

3.2.5. Reduction of environmental impact

A healthy environment is also critical to people's well-being. Complementary currencies play an important role in endeavours to value the planet's finite resources, overcome the doctrine of infinite economic growth and incentivize more sustainable behaviours.

- **Incentivization of sustainable behaviour**. Complementary currencies can be designed with ecological objectives in mind and drive changes in patterns of consumption and behaviour that save energy, reduce waste, promote green food products or stimulate investment in renewable energy initiatives.

- **Valuing natural resources**. Complementary currencies, which reflect the planet's natural capacities, can promote more sustainable consumption and generate funds to invest in renewable energy projects.

- **Support for sustainable business practices**. Complementary currencies encourage businesses to adopt more sustainable practices. These can be based on incentive and reward systems: consumers buying more sustainable products are rewarded with discounts on future purchases, and businesses are incentivized to sell to each other with the promise of increased sales. Alternatively, they can be based on the traceability of chains of production and distribution, encouraging local providers to join the programme, offering new opportunities to businesses and consumers to spend their money locally, and so reducing the carbon emissions generated by goods transportation.

Bibliography and other resources of interest

Bibliography

Articles from the International Journal of Community Currency Research (IJCCR)

Articles and presentations by the 4th International Conference on Social and Contemporary Currencies

Bibliography of Community Currency Research (CC-Literature)

Community Currency Knowledge Gateway

Complementary Currency Resource Center

Spanish Social Currency Institute (IMS)

Research Association on Monetary Innovation and Community and Complementary Currency Systems (RAMICS)

Resources of interest

Spanish databases listing some of the existing complementary currency initiatives:

- 4th International Conference on Social and Complementary Currencies
- CES (Spanish Economic and Social Council) database
- Integral CES database
- List of service credit or time banks (15M)
- Collaborative map of service credit or time banks
- Collaborative map of social currencies (Living without employment)

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